**GOVERNMENT OF THE REPUBLIC** **OF** **MALAWI**

***Accelerating Malawi’s Economic Growth***

**ROADS AUTHORITY**

**Bidding Document for the Procurement of Works**

**Volume 1**

**THUCHILA BRIDGE**

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| Subject Of Procurement | Completion of the Construction of Thuchila Bridge along M03 Road at Nkando Trading Centre in Mulanje District |
| Procurement Reference Number | **RA/DEV/BR/MJ/2024-25/06** |
| Procurement Method | **National Competitive Bidding** |
| Date of Issue of Bidding Document | **30th July 2024** |

**Schedule of Bid Documents**

**VOLUME 1**

**Bidding Document**

**VOLUME 2**

**Drawings**

**VOLUME 3**

**General Conditions of Contract**

**(FIDIC Red Book, 2017 Edition)**

**VOLUME 4**

**SATCC Standard Specifications**

**For Road and Bridge Works**

**(Reprinted July 2001)**

Volumes 3 and 4 are not issued to bidders as it is assumed that Contractors are in possession of the General Conditions of Contract and Standard Specifications. Bidders are requested to make their own arrangements to obtain Volumes 3 and 4 from the respective publishers should they not already be in possession of copies.

**Volume 1**

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| Section 1: Instructions to Bidders |

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| **Section I. Instructions to Bidders** | | | |
| 1. General | | | |
| 1. Scope of Bid | | | |
| * 1. The Procuring Entity indicated in the Bid Data Sheet (BDS), invites bids for the construction of Works, as described in Section 6, Work Requirements. The subject and procurement reference number are provided in the BDS.   2. The successful Bidder will be expected to complete the Works by the Intended Completion Date specified in the SCC. | | | |
| 1. Source of Funds | | | |
| * 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. | | | |
| 1. Eligible Bidders |
| * 1. A bidder shall:      1. have the legal capacity to enter into a contract;      2. 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      3. have fulfilled their obligations to pay taxes according to the tax laws of their country of registration.   2. In order to demonstrate compliance with the criteria in ITB Sub-Clause 3.1, a Bidder shall submit with its Bid either:      1. its certificate of Contractor Registration from the National Construction Industry Council demonstrating its registered supplier status; or      2. appropriate documentary evidence demonstrating its compliance.   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.   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.   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.   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.   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. | | | |
| 1. Qualification of the Bidder | | | |
| * 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. | | | |
| * 1. In the event that pre-qualification of potential bidders has been undertaken, only bids from pre-qualified bidders will be considered for award of Contract. These qualified bidders should submit with their bids any information updating their original pre-qualification applications or, alternatively, confirm in their bids that the originally submitted pre-qualification 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. | | | |
| * 1. If the Procuring Entity has not undertaken pre-qualification 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: | | | |
| * + 1. 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;     2. total monetary value of construction work performed for each of the last five (5) years;     3. 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;     4. major items of construction equipment proposed to carry out the Contract;     5. qualifications and experience of key site management and technical personnel proposed for the Contract;     6. reports on the financial standing of the Bidder, such as profit and loss statements and auditor’s reports for the past five (5) years;     7. evidence of adequacy of working capital for this Contract (access to line(s) of credit and availability of other financial resources);     8. authority to seek references from the Bidder’s bankers;     9. 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     10. proposals for subcontracting components of the Works amounting to more than ten (10) percent of the Contract Price. | | | |
| * 1. 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: | | | |
| * + 1. the Bid shall include all the information listed in Sub-Clause 4.3 above for each joint venture partner;     2. the Bid shall be signed so as to be legally binding on all partners;     3. all partners shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms;     4. 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     5. the execution of the entire Contract, including payment, shall be done exclusively with the partner in charge. | | | |
| * 1. To qualify for award of the Contract, bidders shall meet the minimum qualifying criteria specified in Section 3, Evaluation and Qualification Criteria. | | | |
| * 1. 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. | | | |
| 1. One Bid per Bidder | | | |
| * 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. | | | |
| 1. Cost of Bidding | | | |
| * 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. | | | |
| 1. Site Visit | | | |
| * 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.   2. Details of any Pre-Bid Meeting or Site Visit to be held by the Procuring Entity are given in the BDS. | | | |
| 1. Bidding Documents | | | | |
| 1. Content of Bidding Documents | |  |
| * 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 including Bill of Quantities * 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) – Supplementary Information   **PART 3 Conditions of Contract and Contract Forms**   * Section 7 General Conditions of Contract (GCC) * Section 8 Special Conditions of Contract (SCC) * Section 9 Contract Forms | | | | |
| 1. Clarification of Bidding Documents | | | | |
| * 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. | | | | |
| 1. Amendment of Bidding Documents | | | | |
| * 1. Before the deadline for submission of bids, the Procuring Entity may modify the bidding documents by issuing addenda.   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.   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. | | | | |

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| 1. Preparation of Bids |
| 1. Language of Bid |
| * 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. |
| 1. Documents Comprising the Bid |
| * 1. The Bid submitted by the Bidder shall comprise the following, in the format indicated in Section 4, Bidding Forms, where appropriate:      1. Bid Submission Form;      2. Bid Security;      3. Priced Bill of Quantities or Activity Schedule; |
| * + 1. Qualification Information Form and Documents; and     2. any other document or information required to be completed and submitted by bidders, as specified in the BDS. |
| 1. Bid Prices |
| * 1. The Contract will be an Ad-measurement or Lump Sum Contract, as indicated in the BDS.   2. The Contract shall be for the whole Works, as described in ITB Sub-Clause 1.1, based on the:      1. priced Bill of Quantities submitted by the Bidder in the case of an Ad-measurement Contract; or      2. priced Activity Schedule submitted by the Bidder in the case of a Lump Sum Contract. |
| * 1. 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. |
| * 1. 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. |
| * 1. 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. |
| 1. Currencies of Bid and Payment |
| * 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. |
| 1. Bid Validity |
| * 1. Bids shall remain valid for the period specified in the BDS.   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. |
| 1. Bid Security |
| * 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. |
| * 1. 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. |
| * 1. 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 “\_\_\_\_\_\_”. |
| * 1. 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. |
| * 1. The Bid Security of the successful Bidder will be discharged when the Bidder has signed the contract and furnished the required Performance Security. |
| * 1. The Bid Security may be forfeited: |
| * + 1. if the Bidder withdraws the Bid after Bid opening during the period of Bid validity;     2. if the Bidder does not accept the correction of the Bid price, pursuant to Clause 27; or     3. in the case of a successful Bidder, if the Bidder fails within the specified time limit to:  sign the contract; orfurnish the required Performance Security. |
| 1. Alternative Proposals by Bidders |
| * 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. |
| 1. Format and Signing of Bid |
| * 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. |
| * 1. 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. |
| * 1. 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.   2. 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. |

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| 1. Submission of Bids |
| 1. Sealing and Marking of Bids |
| * 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”. |
| * 1. The inner and outer envelopes shall:      1. be addressed to the Procuring Entity at the address provided in the BDS;      2. bear the name and procurement reference number of the Contract as defined in the BDS and SCC; and      3. 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.   2. 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. |
| * 1. 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. |
| 1. Deadline for Submission of Bids |
| * 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.   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. |
| 1. Late Bids |
| * 1. Any Bid received by the Procuring Entity after the deadline prescribed in Clause 20 will be returned unopened to the Bidder. |
| 1. Withdrawal, Substitution and Modification of Bids |
| * 1. Bidders may withdraw, substitute or modify their bids by giving notice in writing before the deadline prescribed in Clause 20. |
| * 1. 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. |
| * 1. No Bid may be modified after the deadline for submission of Bids.   2. 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.   3. 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. |

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| 1. Bid Opening and Evaluation |
| 1. Bid Opening |
| * 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. |
| * 1. 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. |
| * 1. 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. |
| * 1. 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. |
| * 1. 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. |
| * 1. 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. |
| 1. Process to be Confidential |
| 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. |
| 1. Clarification of Bids and Contacting the Procuring Entity |
| * 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. |
| * 1. 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.   2. 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. |
| 1. Examination of Bids and Determination of Responsiveness |
| * 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. |
| * 1. 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. |
| * 1. 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. |
| 1. Correction of Errors |
| * 1. Bids determined to be substantially responsive will be checked by the Procuring Entity for any arithmetic errors.   2. Errors will be corrected by the Procuring Entity as follows: |
| * + 1. For ad-measurement 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; |
| * + 1. 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     2. 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. |
| * 1. 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). |
| 1. Currency for Bid Evaluation |
| * 1. Bids will be evaluated as quoted in Malawi Kwacha. |
| 1. Evaluation and Comparison of Bids |
| * 1. The Procuring Entity will evaluate and compare only the bids determined to be substantially responsive in accordance with Clause 26. |
| * 1. In evaluating the bids, the Procuring Entity will determine for each Bid the evaluated Bid price by adjusting the Bid price as follows:      1. making any correction for errors pursuant to Clause 27;      2. excluding provisional sums and the provision, if any, for contingencies in the Bill of Quantities or Activity Schedule, but including Day work, where priced competitively;      3. making an appropriate adjustment for any other acceptable variations, deviations, or alternative offers submitted in accordance with Clause 17; and      4. making appropriate adjustments to reflect discounts or other price modifications offered in accordance with Sub-Clause 22.5. |
| * 1. 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. |
| 1. Domestic Preference |
| * 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. |

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| 1. Award of Contract |
| 1. Award Criteria |
| * 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. |
| 1. Procuring Entity’s Right to Accept a Bid and to Reject any or all Bids |
| * 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. |
| 1. Notification of Award and Signing of Agreement |
| * 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.   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. |
| * 1. 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.   2. 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. |
| 1. Performance Security |
| * 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.   2. The Performance Security shall be issued by a financial institution operating in Malawi. |
| * 1. 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. |
| 1. Adjudicator |
| * 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. |
| 1. Corrupt or Fraudulent Practices |
| * 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:      1. defines, for the purposes of this provision, the terms set forth below as follows:  "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 or omission 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 Procuring Entity, 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.  * + 1. 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;     2. 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 1.1** | | **The Procuring Entity is the Roads Authority of Malawi.**  **The scope of this bid is for the construction of Thuchila Bridge along M03 Road at Nkando Trading Centre in Mulanje District.** |
| **ITB 4.6 and ITB 30.1** | | A margin of preference of 20% shall be applicable to eligible bidders in accordance with the Public Procurement and Disposal of Public Assets Act, 2016.  The criteria for eligibility and the application methodology are described in Section 3 Evaluation Methodology and Criteria. |
| **ITB 7.2** | | The Roads Authority shall hold a pre-bid meeting preceded by a site visit.  The site visit will be held, as follows:  Location: Thuchila Bridge, Nkando TC, Mulanje  Date: **15th August, 2024** Time: **10:00 Hours Local Time**  A pre-bid meeting will be held immediately after the site visit. |
| B. Bidding Documents | | |
| **ITB 8.1**  **ITB 9.1** | | Volume 2 (Drawings) is part of the Bidding Document  Volume 3 (FIDIC Red Book, 2017 Edition GCC) is part of the Bidding Document  Volume 4 (SATCC Standard Specifications) is part of the Bidding Document  For **clarification purposes** only, the Procuring Entity’s address is:  The Chief Executive Officer  The Roads Authority  Functional Building  Off Paul Kagame Road  Private bag B346  Lilongwe 3  MALAWI  Attention: Procurement Manager  Fax number: (265) 1 750 307  Email: [ipc@ra.org.mw](mailto:ipc@ra.org.mw) |
| C. Preparation of Bids | | |
| **ITB 12.1 (e)** | The Bidder shall submit with its bid the following additional documents or information:   1. **Code of Conduct for Contractor’s Personnel (ES)**   The Bidder shall submit its Code of Conduct that will apply to Contractor’s Personnel (as defined in Sub-Clause 1.1.17 of the General Conditions of Contract), to ensure compliance with the Contractor’s Environmental and Social (ES) obligations under the Contract.  Bidders Shall complete and include the risks to be addressed by the Code in accordance with section VII- Works' Requirements, e.g. risks associated with: labour influx, Spread of communicable diseases, sexual harassment, gender based violence, sexual exploitation and abuse, illicit behaviour and crime and maintaining a safe environment.  In addition the Bidder shall detail how the code of conduct will be implemented. This will include: how it will be introduced into conditions of employment/engagement, what training will be provided, how it will be monitored and how the contractor proposes to deal with any breaches.  The Contractor shall be required to implement the agreed Code of conduct   1. **Management Strategies and Implementation Plans (MSIP) to manage the (ES) risks**   The Bidder shall submit Management Strategies and Implementation Plans (MSIPs) to manage the following key Environmental and Social (ES) risks:   * + Traffic Management Plan to ensure safety of local communities and passengers from construction traffic   + Water Resource Protection Plan to prevent contamination of drinking water;   + Strategy to avoid and manage waste generation;   + General strategy to avoid creation of noise nuisance, vibration and air pollution (due to e.g. dust);   + A Grievance Redress Mechanism for the project   + Strategy for obtaining Consents/Permits prior to the start of relevant works such as opening a quarry or borrow pit;   + Strategy to manage occupational health and safety, incl. HIV prevention measures for contractor’s staff/workers and a grievance mechanism for workers to raise workplace related concerns;   + Strategy to manage community health and safety incl. Gender Based Violence, Sexual Exploitation and Abuse, Child Labour and Violence Against Children prevention and response plan; HIV/STIs prevention plan; conflict resolution;   + Strategy to ensure recruitment of locals and inclusion of youth and women in employment opportunities   The Contractor shall be required to submit for approval, and subsequently implement, the Contractor’s Environmental and Social Management Plan (C-ESMP), in accordance with the Particular Conditions of Contract Sub-Clause 4.1, that includes the agreed Management Strategies and Implementation Plans described here. | |
| **ITB 13.1** | The Contract is an Ad-measurement Contract. | |
| **ITB 13.5** | Bid Prices shall **Not** be subject to adjustment during performance of the contract. | |
| **ITB 15.1 and 22.4** | Bids shall remain valid for a period of 120 days. | |
| **ITB 16.1** | The amount of the bid security shall be **NA** | |
| **ITB 17.1** | Alternative proposals to the requirements of the bidding documents shall not be permitted. | |
| **ITB 18.1** | In addition to the original of the bid, the number of copies is: **3** | |
| D. Submission of Bids | | |
| **ITB 19.2(a)** | For **bid submission purposes** only, the Roads Authority’s address is:  The Chief Executive Officer  The Roads Authority  Functional Building  Off Paul Kagame Road  Private bag B346  Lilongwe 3  MALAWI  Room Number: 21 | |
| **ITB 19.2(b)** | The Procurement Reference Number is: **RA/DEV/BR/MJ/2024-25/06** | |
| **ITB 20.1** | **The deadline for bid submission is:**  Date: **28th August 2024**  Time: **10:00 Hours** | |
| **ITB 23.1** | The bid opening shall take place in the conference room at:  The Roads Authority  Functional Building, Off Paul Kagame Road  Private bag B346, Lilongwe 3  Date: **28th August 2024**  Time: **10:00 Hours** | |
| F. Award of Contract | | |
| **ITB 35.1** | | The Adjudicator proposed by the Procuring Entity is: ***the Malawi Engineering Institution (MEI)***  The hourly fee for this proposed Adjudicator shall be:  ***As advised by MEI***  The biographical data of the proposed Adjudicator is as attached to this Bid Data Sheet. |

**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: None

The requirements for joint ventures in ITB Sub-Clause 4.4 are modified as follows: None

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

1. average annual volume of construction work over the past five (5)yearsof at least **MK2.0 billion**;
2. experience as prime contractor in the construction of at least three (3) works contracts of a nature and complexity equivalent to the Works over the last five (5) years (to comply with this requirement, works cited should be at least seventy (70) percent complete (through measured works certified by the client i.e. certified interim payment certificate reflecting the value of measured works)). The nature and complexity will be assessed by the following items:

|  |  |  |  |
| --- | --- | --- | --- |
| Item No | Activity | Unit | Quantity |
| 1 | Formwork and False work | M2 | 3700 |
| 2 | Reinforced Concrete works | m3 | 1000 |

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

|  |  |  |
| --- | --- | --- |
| S/N | Description | Quantity |
| 1 | Self-propelled grader | 1 x No |
| 2 | Dozer; | 1 x No |
| 3 | Loaders and/or excavators | 2 x |
| 4 | 12m3 Tippers; | 4 x |
| 5 | Pneumatic tyred roller (123kw, 10t); | 1 x No |
| 6 | Vibrating Rollers (123kw, 10t); | 1 x No |
| 7 | Sheepsfoot roller (10t); | 1 x No |
| 8 | Bitumen distributor, | 1 x No |
| 9 | Asphalt Paver (at least 5.94m width capacity); | 1 x No |
| 10 | Water Bowsers (10,000 to 14,000 litre) | 4 x No |

1. Personnel with the following qualifications and experience:

|  |  |  |
| --- | --- | --- |
| S/N | Position | Requirements |
| 1 | Site Agent: | Minimum of degree in Civil Engineering and at least ten years of experience |
| 2 | Materials Engineer: | Minimum of degree in Civil Engineering and at least ten years of experience; |
| 3 | Health, Social, Environmental and Safety Officer: | Minimum of Degree in a relevant discipline with at least five years of experience; |
| 4 | 3 x Foremen: | Minimum of Diploma in Civil Engineering/Road Foremanship Certificate or equivalent with at least ten years experience; |

1. 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 not less than MK400Million;

A consistent history of 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**

If so indicated in the Bid Data Sheet, bidders for works contracts applying for a margin of domestic prefer­ence in bid evaluation shall provide such information, including details of ownership, certificates of registration, and composition of the labour force as are necessary to confirm whether a particular supplier or group of suppliers qualifies for domestic preference.

A margin of domestic preference may be awarded to established domestic contractors who are registered as Malawian contractors by the National Construction Industry Council, and are at least fifty (50) percent owned by Malawian nationals. This margin of domestic preference shall also be extended to joint ventures between a foreign and such a qualifying Malawian partner provided that at least seventy-five (75) percent of the labour force to be used in the construction and supervision of the works is of Malawian nationality.

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 Security Form (Bank Guarantee)

4.4 Qualification Information Forms

4.5 Schedule of Malawian Local Contractors

Note: All forms show the information to be completed by the Bidder in bold in square brackets e.g. **[insert date]** etc.

*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:

1. We have examined and have no reservations to the Bidding Documents, including Addenda No.: [**insert the number and issuing date of each Addenda**];
2. 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;
3. The advance payment required is: **[insert amount in numbers and words]** Malawi Kwacha;
4. Our bid shall be valid for a period of **[specify the number of days that the bid is valid for]** calendar days 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;
5. We have no conflict of interest in accordance with ITB Sub-Clause 3.5;
6. 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;
7. 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.
8. The names and physical addresses of the Directors of our firm are provided in the table below or we enclose a copy of our latest Audited Accounts (issued within the last twenty-four (24) months):

|  |  |
| --- | --- |
| **Name** | **Address** |
|  |  |
|  |  |

1. 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.
2. We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.
3. 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 fully priced Bill of Quantities for Ad-measurement Contracts or Activity Schedule for Lump Sum Contracts as provided in Section 6 of the Bidding Documents. Each page of the Bill of Quantities or the Activity Schedule should be signed by a person with the proper authority to sign documents for the Bidder*

**4.2 Priced Schedules**

**(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 Engineers’ Representative 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 Supervisors’ Representative 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 and duties, together with all general risks, liabilities and obligations set out or implied in the Contract.

1.4 A rate or price shall be entered against each item in the priced Bill of Quantities, whether quantities are stated or not. The cost of items against which the Contractor has failed to enter a rate or price shall be deemed to be covered by other rates and prices entered in the Bill of Quantities.

1.5 The whole cost of complying with the provisions of the Contract shall be included in the items provided in the priced Bill of Quantities. Where no items are provided the cost shall be deemed to be distributed among the rates and prices entered for the related items of work.

1.6 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.

1.7 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 Supervisors’ Representative.

1.8 The method of measurement of completed work for payment shall be in accordance with the measurement and payment item in the General and Particular Specifications.

1.9 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.

1.10 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 Supervisors’ Representatives’ detailed instructions for all work before ordering any materials or executing work or making arrangements therefore.

1.11 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, Specifications, and Conditions of Contract for more detailed information regarding the extent of the work entailed under each item.

1.12 All rates and sums of money quoted in the Bill of Quantities shall be in Malawi Kwacha.

1.13 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 Bill of Quantities, the Specifications or elsewhere but the quantity of work of which is not measured in any units.

Prime Cost Sum A sum included in the Contract and so designated in the Schedule 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

1.14 The Tenderer shall fill in a rate or a lump sum for each item where provision has been made for it even where no quantities are given. 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.

**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 Schedule 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.**

1.18 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 Supervisors’ Representative.

2.10 The description of the plant should be completed by the Bidder when bidding.

*Note to Bidders: This Bid Security should be on the letterhead of the issuing Financial Institution and should be signed by a person with the proper authority to sign the Bid Security. It should be included by the Bidder in his bid, in accordance with ITB Clause 16.*

**4.3 Bid Security (Bank Guarantee)**

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**]

Whereas [**insert complete name of Bidder**] (hereinafter “the Bidder”) has submitted its bid dated [**insert date (as day, month and year) of bid submission**] for procurement reference no. [**insert procurement reference no]** for the construction of **[insert name of Contract**], hereinafter called “the Bid.”

KNOW ALL PEOPLE by these presents that WE **[insert complete name of bank issuing the Bid Security**], of **[insert city of domicile and country of nationality]** having our registered office at **[insert full address of the issuing institution] (hereinafter “the Bank”),** are bound unto **[insert complete name of the Procuring Entity]** (hereinafter “the Procuring Entity”) in the sum of [**specify in words the amount and currency of the bid security** **(specify the amount and currency in figures)],** for which payment well and truly to be made to the aforementioned Procuring Entity, the Bank binds itself, its successors or assignees by these presents.

Sealed with the Common Seal of this bank, this **[insert day in numbers]** day of **[insert month], [insert year].**

THE CONDITIONS of this obligation are the following:

1. If the Bidder withdraws its bid during the period of bid validity specified by the Bidder in the Bid Submission Form, except as provided in ITB Sub-Clause 20.2; or

2. If the Bidder, having been notified of the acceptance of its bid by the Procuring Entity, during the period of bid validity, fails or refuses to:

(a) execute the Contract; or

(b) furnish the Performance Security, in accordance with the ITB Clause 34; or

(c) accept the correction of its bid by the Procuring Entity, pursuant to ITB Clause 27.

We undertake to pay the Procuring Entity up to the above amount upon receipt of its first written demand, without the Procuring Entity having to substantiate its demand, provided that in its demand the Procuring Entity state that the amount claimed by it is due to it, owing to the occurrence of one or more of the above conditions, specifying the occurred conditions.

This guarantee shall remain in force up to and including twenty-eight (28) days after the period of bid validity, as stated in the Bid Submission Form or as it may be extended by the Bidder, notice of which extension(s) to the Bank is hereby waived. Any demand in respect thereof should be received by the Bank no later than the above date.

This Guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458.

Name: [**insert complete name of person signing the Bid Security**] In the capacity of **[insert legal capacity of person signing the Bid Security]**

Signed: [**insert signature of person whose name and capacity are shown above**]

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

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

**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:

1. have withdrawn our bid during the period of bids validity specifies by us in the Bid Data Sheet; or
2. 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]*

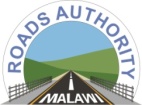
Date: on …………….. day of ………….,………….. *[insert date of signing]*

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.]**

**Beneficial Ownership Disclosure Form**



***Accelerating Malawi’s Economic Growth***

**Beneficial Ownership Disclosure Form**

***INSTRUCTIONS TO BIDDERS: DELETE THIS BOX ONCE YOU HAVE COMPLETED THE FORM***

*This Beneficial Ownership Disclosure Form (“Form”) is to be completed by the Bidder. In case of a joint venture, the Bidder must submit a separate Form for each member of the Joint Venture. The beneficial ownership information to be submitted in this Form shall be current as at the date of its submission.*

*For the purposes of this Form, a Beneficial Owner of a Bidder is any natural person who ultimately owns or controls the Bidder by meeting one or more of the following conditions-*

1. *directly or indirectly holding 5% or more of the shares*
2. *directly or indirectly holding 5% or more of the voting rights*
3. *directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Bidder.*
4. *directly or indirectly, has a substantial economic interest in or receives substantial economic benefit from, a company, whether acting alone or together with other persons;*
5. *has a significant stake in a company and on whose behalf activity of a company is conducted; or*
6. *exercises significant control or influence over a person through a formal or informal agreement, and where such ownership, control or interest is through a trust, the trustee (s), beneficiaries, or anyone who controls the trust.*

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 and Disposing Entity**]

In response to the invitation for bid dated **[insert date of invitation for bid]** we hereby submit beneficial ownership information: [**select one option as applicable and delete the options that are not applicable**]

(i) we hereby provide the following beneficial ownership information.

Details of beneficial ownership

| **Identity of Beneficial Owner** | **Directly or indirectly holding 5% or more of the shares**  **(Yes / No)** | **Directly or indirectly holding 5 % or more of the Voting Rights**  **(Yes / No)** | **Directly or indirectly having the right to appoint a majority of the Board of the Directors or an equivalent governing body of the Bidder**  **(Yes / No)** |
| --- | --- | --- | --- |
| [include full name (last, middle, first), nationality, country of residence, telephone number(s), email address, postal and physical addresses] |  |  |  |

**OR**

(ii) We declare that there is no Beneficial Owner who has not been disclosed meeting one or more of the following conditions-

1. directly or indirectly holding 5% or more of the shares
2. directly or indirectly holding 5% or more of the voting rights
3. directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Bidder.
4. directly or indirectly, has a substantial economic interest in or receives substantial economic benefit from, a company, whether acting alone or together with other persons;
5. has a significant stake in a company and on whose behalf activity of a company is conducted; or
6. exercises significant control or influence over a person through a formal or informal agreement, and where such ownership, control or interest is through a trust, the trustee (s), beneficiaries, or anyone who controls the trust.

**OR**

(iii) We declare that we are unable to identify any Beneficial Owner meeting one or more of the following conditions. [If this option is selected, the Bidder shall provide explanation on why it is unable to identify any Beneficial Owner]

1. directly or indirectly holding 5% or more of the shares
2. directly or indirectly holding 5% or more of the voting rights
3. directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Bidder]”
4. directly or indirectly, has a substantial economic interest in or receives substantial economic benefit from, a company, whether acting alone or together with other persons;
5. has a significant stake in a company and on whose behalf activity of a company is conducted; or
6. exercises significant control or influence over a person through a formal or informal agreement, and where such ownership, control or interest is through a trust, the trustee (s), beneficiaries, or anyone who controls the trust.

Name of the Bidder: [insert **complete name of the Bidder**][[1]](#footnote-1)

Name of the person duly authorized to sign the Bid on behalf of the Bidder: [insert **complete name of person duly authorized to sign the Bid**][[2]](#footnote-2)

Title of the person signing the Bid: [insert **complete title of the person signing the Bid**]

Signature of the person named above:

Date signed [insert **ordinal number**] day of [insert **month**], [insert **year**]

**4.4 Qualification Information Form**

|  |  |
| --- | --- |
| **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. 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: |  |  |  |  |  |

|  |  |
| --- | --- |
|  | 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. |

|  |  |  |  |
| --- | --- | --- | --- |
| 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 |
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| --- | --- |
|  | 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 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) |  |  |  |  |

|  |  |
| --- | --- |
|  | 1.6 Proposed subcontracts and firms involved. |

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

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

|  |  |
| --- | --- |
|  | 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 - 1.10 above shall be provided for each partner of the joint venture.  2.2 The information in 1.11 above shall be provided for the joint venture.  2.3 Attach the power of attorney of the signatory or signatories of the Bid authorising signature of the Bid on behalf of the joint venture.  2.4 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 SCHEDULE OF MALAWIAN LOCAL CONTRACTORS**

With reference to Clause 4.4 of the General Conditions of Contract, the Bidder shall list below the subcontractors he intends to appoint for the various items of work on this contract ‑ alternatives may be mentioned.

The acceptance of this tender shall not be construed as approval of all or any of the listed subcontractors. Should any or all of the subcontractors not be approved subsequent to acceptance of the tender, this shall in no way invalidate this tender, and the tendered unit rates for the various items of work shall remain final and binding even in the event of a subcontractor not being approved by the Engineer.

|  |  |  |
| --- | --- | --- |
| ACTIVITY | NAME OF SUBCONTRACTOR | ESTIMATED VALUE OF WORK  (MWK) |
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SIGNED ON BEHALF OF THE BIDDER: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Section 6: Work Requirements**

|  |
| --- |
| **Section 6: Work Requirements** |

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**Section 6A-Scope of Works**

**6A. Scope of Works**

This project involves the construction of 141.65metres 5 span reinforced concrete bridge across Thuchila River at Nkando trading Centre in Mulanje District. The detailed engineering design for the bridge construction was carried out in accordance with SATCC design manuals and SATCC specifications and standards.

**A1. DESCRIPTION OF THE WORKS**

**A1.1 General**

The description is only an indication of the work to be executed and may change due to unforeseen conditions on site. All construction activities are not necessarily listed below and only the main and major activities are dealt with. The scope of works may change due to changes in site conditions, or as directed by the Employer or the Engineer.

**A1.2 Bridge Works**

There is an existing steel portal frame Bailey type structure which will be de-launched after construction of the new reinforced concrete bridge. Some works on the new bridge were already done as below, and the scope of these works is to complete the bridge construction;

1. South end (Mulanje side) abutment- excavation for foundation was completed.
2. North end (Blantyre side) abutment- concrete for footing, first, second and third lifts for the concrete columns were completed.
3. 3 No piers - all concrete footings and column lifts were completed.
4. 1 No pier – excavation for foundation was completed.

**A1.3 Roadworks**

1. **General**

The bridge approaches (about 200m on each side) will be upgraded to asphalt surfaced road consisting of two lanes of 3.35m each and 1.5m shoulders on both sides. The designed finished road level is above the existing road level.

1. **Horizontal alignment**

The designed horizontal alignment has substantially remained the same as the existing, with few necessary improvements to fit to the geometric design standards.

1. **Vertical alignment**

The vertical alignment has been raised such that the finished road surface is generally above the existing road level and the surrounding ground, with minor improvements to fit to the geometric design.

1. **Pavement**

The pavement to be constructed for the road consists of the following:

|  |  |  |
| --- | --- | --- |
| **Surfacing** |  | Asphalt Surfacing 50mm thick using 70/100 penetration bitumen, continuously graded (medium grading). |
| **Base** | 150mm | Gravel (granular) material un-stabilised and compacted to minimum 98% of modified AASHTO density, PI not more than 6%, CBR of not less than 80%. |
| **Subbase** | 200mm | Natural gravel (granular) unstabilised material compacted in 100mm layers to minimum 95% of modified AASHTO density, PI not more than 10%, CBR of greater than 45%. |
| **Fill/Roadbed** | 150mm | Fill/Roadbed compacted to 93% of modified AASHTO density. CBR of greater than 15%. General fill material complying with the following:  The Plasticity Index (P1) shall not exceed 25%.   1. The percentage passing a 0.075 mm sieve shall not exceed 40%. 2. The CBR swell shall not exceed 1 % after soaking for 48 hours. 3. The maximum laboratory dry density as determined by the BS (Heavy) Compaction test shall not be less than 1,500 kg/m3. 4. The material shall not contain particles with a maximum dimension exceeding 100 mm except in the case of rock fill. |
|  |  |  |

**A1.4 Appurtenant Works**

1. **General**

The road works also include the following appurtenant works:

* Open trapezoidal Concrete lined side drains, covered in some sections
* Kerbs and channels;
* Concrete Edge beams;
* Road signs;
* Road Marking and Road Studs;

1. **Road signage**

The work consists mainly of the provision and installation of new ground-mounted signs. All ground-mounted signs are to be mounted on galvanised steel pole supports.

Existing unofficial signs must be removed and stored by the rightful owner, but these owners will have to be advised well in advance to allow ample time for removal. Regulatory and warning signs are to be made from pre-painted galvanised steel plate (Chromadek) with Class I reflective background and Class III reflective legends.

**(c) Road Markings**

The road markings consist mainly of left and right edge lines (yellow 100 mm wide) and a broken centre dividing line (white 100 mm wide) and with unbroken no-overtaking lines as and where indicated on the drawings. Other road markings include stop lines and pedestrian walkways.

**A1.5 Utility Services**

It is expected that utility services may be situated within the roads reserve. The Contractor must contact all service providers to check where services are situated in the construction area well in advance of the start of construction, and such services must be exposed to confirm their position and the level thereof. The Engineer may request the Contractor to move or protect the services.

Where services must be moved or protected due to construction works, these actions must be done by the Contractor in close co-operation with the respective utility service owner.

**A1.6 Availability of Materials**

The contractor shall undertake a detailed soils and materials survey to identify materials of the required quality and quantity to complete the works in accordance with the contract.

Materials to be used in the works shall be stockpiled, at no extra cost, well in advance and tested to confirm compliance with the specifications, prior to hauling to site.

**A1.7 Construction Strategy**

The construction strategy should enable the completion of the construction of the bridge without the interference with the normal through traffic.

**A1.8 Maintenance Works**

The Contractor shall be responsible for the maintenance of all detours necessary.

**A2. DRAWINGS**

Any un-scaled or scaled drawings issued as part of this document, shall be used for bidding purpose only, and shall not be used for construction. The Contractor will be provided with drawings approved for construction at the commencement of the Contract.

The Contractor will be supplied with two paper prints of the full-scale drawing. Only figured dimensions shall be used and dimensions shall not be scaled on the drawings unless so instructed by the Engineer. These drawings need to be updated as the project progresses.

The Engineer will provide any dimensions or information, which may have been omitted from the drawings.

**A3. SITE FACILITIES**

**A3.1 Site facilities available**

The Contractor will be responsible for the provision of a suitable site for his construction camp and to provide accommodation for his personnel.

The Contractor shall make his own arrangements for the supply of potable water and water for construction purposes, and for electrical power and all other services as well as all safety and security measures necessary for the duration of the contract. In his Bid he must make provision for all negotiations and procurement of these services, which will be deemed to have been included in his tendered rates.

**A3.2 Site facilities required**

Under this contract the Contractor shall provide for use by the Engineer such facilities as detailed in the Particular specifications.

**A4. SECURITY**

The Contractor will be responsible for the security of his personnel and construction plant on and around the Site of the Works and for the security of his camp, and no claims in this regard will be considered by the Employer.

**A5. CLIMATIC CONDITIONS**

The climate is temperate to warm and sub-humid. Rainfall between 800 mm and 1000 mm per year can be expected, with the rainy season being during the months of November to March.

**A6. FEATURES REQUIRING SPECIAL ATTENTION**

**A6.1 Co-operation with others on the Site**

All work shall be carried out in such a way as to allow access, and afford all reasonable facilities for any other Contractor and his workmen, including the workmen of the Employer or any other person who may be employed in the execution of the work and/or operations at or near the site of work.

The contractor shall endeavour to co-operate with such persons as may be necessary without interference with their work and shall observe all the instructions and orders of the Engineer in that regard. In the preparation of his Programme of Work the Contractor shall take full account of and co-ordinate his programme with the programming of work of other Contractors.

**A6.2 Roads and Site to be kept clean**

The Contractor shall take great care and all reasonable precautions to ensure that the bridge and roads and thoroughfares used by him either for the construction of the works or the transport of plant, labour and materials are kept clean of any spillage as a result of construction or transport operations. In the event of any such spillage, the Contractor shall take all necessary and immediate steps to clean the area involved.

**A6.3 Working hours**

Normal working hours shall be 45 hours per week between sunrise and sunset Monday to Saturday. The Contractor shall strictly observe and implement the stipulations of the Employment Act, 1999, (and any amendments thereof) of the Malawi Laws with particular attention to Part VI Clause 36 to 49.

Should the Contractor fall behind on the agreed programme (refer to Clause 6.5 of the Conditions of Contract) and the Engineer is of the opinion that the Contractor will not be able to complete the Contract within the prescribed construction period, the Engineer may instruct the Contractor to extend his working hours a day. The Contractor will not be entitled to any additional remuneration.

**A8. SUBMISSION OF QUALITY ASSURANCE PLAN**

The Contractor shall formulate a Quality Assurance Plan (QAP) that shall be acceptable to the Employer prior to the commencement of the works. The QAP shall be submitted together with the programme of work.

**A9. EXTENSION OF TIME RESULTING FROM ABNORMAL RAINFALL**

It must be noted that the extension of time resulting from abnormal rainfall shall not be regarded as an event for which compensation can be claimed. This means that no payments whatsoever will be made, including any payments under time related obligations, regardless of the period of time by which the Time for Completion may be extended due to abnormal rainfall.

**SECTION 6B:**

**TECHNICAL SPECIFICATIONS**

**6 B. 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.

**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).

**SECTION 1200: GENERAL REQUIREMENTS AND PROVISIONS**

**PS1204: PROGRAMME OF WORK**

***Replace the first paragraph with the following***

1. **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.

1. **REPORTING**

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

1. 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.

1. 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.

**PS 1205 Workmanship and Quality Control**

**Add the following paragraphs:**

(a) Inspections

The Engineer will inspect the works during the course of construction. The Contractor shall accord the Engineer every facility he may require for such inspection.

Any inspection, examination or test either of workmanship, material or performance shall not exempt the Contractor from any of his obligations under the contract. The liability of the Contractor for defective material or workmanship that may be discovered after any portion or portions of the work have been put into service shall be in accordance with the General Conditions of Contract notwithstanding that the defective item(s) may have previously been inspected and approved by the Engineer.

(b) Workmanship

(i) Testing of Materials

The Contractor shall carry out tests on materials and workmanship in order to ensure compliance with the requirements of the Specifications. The frequency of testing shall be in accordance with the requirements of the Standard and/or Technical Specifications, but the Contractor may increase the specified frequency in order to have more control of the quality of the Works.

All tests shall be conducted in accordance with the latest published methods listed below.

1. British Standards Institution (BSI)

2. American Society for Testing and Materials (Abbreviation: ASTM)

3. American Association of State Highways and Transportation Officials (AASHTO)

4. Technical Methods For Highways (TMH): Standard Methods of Testing Road Construction Materials, TMH1 2nd Edition, published by the South African Department of Transport, 1986.

5. South African Bureau of Standard Specifications, (SABS)

In addition to the above, standard specifications or test methods of other bodies may be referred to in these specifications, or test methods may be described where no acceptable standard methods exist.

The Contractor shall submit all test results to the Engineer on a weekly basis. Work for which process control test results have not been submitted to the Engineer will not be approved.

(ii) Contractor’s Laboratory

The Contractor shall establish on site and maintain in good order a laboratory with approved equipment sufficient to enable him to carry out process control testing required to ensure conformity with the Specifications. As a minimum, the laboratory shall be equipped with equipment and facilities as specified for the Engineer's Laboratory.

The laboratory equipment to be used shall be tested and calibrated by the supplier or by his Agent before their use for process control testing. The calibration shall be done at the beginning of the Contract and shall be repeated every six months or at such other interval as the Engineer may decide. Proof of calibration in the form of certificates shall be submitted to the Engineer not later than seven days after calibration, failing which the Engineer shall declare the equipment unsuitable for use on the project. Results of any tests carried out prior to the testing and calibration of the equipment will be rejected.

Results of compaction densities obtained by nuclear density testing equipment shall be compared to results obtained by the sand replacement method at the rate of one sand replacement test per fifteen nuclear density tests.

The Contractor shall employ a qualified Materials Engineer with at least ten (10) years’ experience to supervise the Contractor’s Laboratory and quality control tests. Prior to deploying the Materials Engineer to the site, the Contractor shall submit to the Engineer his academic details and Curricula Vitae. The Engineer reserves the right to reject the proposed personnel if in his opinion he is not qualified or sufficiently experienced to supervise or carry out quality tests.

The Contractor shall maintain record of test results in files clearly numbered in a logical sequence. The Engineer shall have access to the records at all times.

(iii) Laboratory for the Consulting Engineer

The Contractor shall establish on site and equip a laboratory for use by the Engineer. The laboratory building shall be constructed in accordance with the drawings and specifications issued by the Engineer as part of the Contract drawings.

The Contractor shall supply, install and insure the laboratory equipment required by the Engineer for carrying out quality assurance tests. The laboratory shall be equipped with all equipment, chemicals, supplies, etc. necessary for the performance of the following tests and procedures as described in:

**BS 1377:1975 “Methods of Testing Soils for Civil Engineering Purposes”.**

Method

1.5 Preparation of disturbed samples for testing

2.1 Test 1: Determination of the moisture content

1 (A): Standard method (oven-drying method)

1 (B): Subsidiary method (sand bath method)

2.2 Test 2 Determination of the liquid limit

2 (A) Method using cone Penetrometer

2 (B) Method using the Casagrande apparatus

2.3 Test 3 Determination of the plastic limit

2.4 Test 4 Determination of the plasticity index

2.6 Test 6 Determination of the specific gravity of soil particles

6 (A) Method for fine, medium-and coarse-grained soils

6 (B) Method for fine-grained soils

2.7 Test 7 Determination of the particle size distribution

7 (A) Standard method by wet sieving

4.2 Test13 Determination of the dry density moisture contents relation - 4.5kg

Rammer method

4.4 Test 15 Determination of the dry density of soil on the site

15 (A) Sand replacement method suitable for fine, medium and coarse-grained soils: small pouring cylinder method (minimum of 3 sets)

15 (B) Sand replacement methods suitable for fine- medium, and coarse-grained soils: large pouring cylinder method (minimum of 2 sets)

5.1 Test 16 Determination of the California Bearing Ratio (CBR)

Notes:

(1) Two soaking tanks 1500mm x 1000mm x 600mm deep to be provided, together with apparatuses for measuring swell (minimum 10No).

(2) At least 25 moulds and 75 x 2 kg surcharge weights to be provided.

**BS 812: 1975 “Methods for Sampling and Testing of Minerals Aggregates Sand and Fillers”.**

Part 1: Sampling size, shape and classification, Sections 5 to 7 inclusive

Part 2: Physical Properties, Section 5 to 7 inclusive

Part 3: Mechanical Properties, Section 7 and 8

**BS 1881: 1970 “Methods of testing Concrete”**

Part 2: Slump test, Compacting factor test

Part 3: Making and curing test cubes

Note:

At least 30 moulds shall be supplied and the curing tank shall not be used for any other purpose.

Part 4: Test compressive strength of test cubes

Note:

The gap between the platens of the compressive testing machine must be capable opening to at least 200mm.

**U.K. Transport and Road Research Laboratory publication - Road Note 39**

“Road Note 39 – Recommendations for Road Surface Dressing”

Road Tray (Appendix1)

**BS 1707: 1970 “Hot Binder Distributors for Road surface Dressing”**

Depot Tray Test

**Standard Methods for Testing Penetration and its Products” 1959 (Institute Petroleum)**

IP 49/72 Penetration Test for Bitumen

**ASTM Designation: C88-78 Standard Method of Testing for Soundness of Aggregates by use of Sodium Sulphate or Magnesium”**

**AASHTO Designation: T176-65 Standard Method of Test for Plastic Fines in Graded Aggregates in Soils by Use of the Sand Equivalent Test”**

The equipment will be as scheduled in these Particular Specifications. All equipment furnished for use by the Engineer must be calibrated as stated above. The Contractor shall maintain throughout the contract period both the laboratory building and the laboratory equipment and shall replace any damaged equipment within seven days of receiving the Engineer’s instruction to do so.

The laboratory building and equipment will revert to the Contractor at the end of the contract.

Payment for the provision of laboratory building and equipment shall be as tendered by the Contractor. The tendered rate shall include full compensation for procuring, furnishing, insuring, calibrating and maintaining in good order all the facilities and equipment

(c) Cost of Testing

(i) Testing by Contractor and Provision of Samples

The cost of testing of materials and workmanship undertaken by the Contractor to ensure compliance with the Specification, including the submission of certificates that materials supplied by him comply with the relevant BS or other Specifications, shall be deemed to be covered by the prices tendered under the relevant items in the Bills of Quantities for work in which the materials are incorporated. The same applies to samples that the Contractor must supply to the Engineer for testing.

(ii) Additional Testing

The Engineer shall have the right to take samples and/or order any additional tests on workmanship or materials supplied by the Contractor. Where such additional testing is required, the cost thereof to the Contractor shall be determined. If the costs of individual tests are not itemised in the Bills of Quantities the cost of additional testing shall be classified as additional work under Clauses 7.4 and 13 of the General Conditions of Contract, provided that the test indicate compliance with the Specification otherwise the cost shall be borne by the Contractor.

**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 Volume 2 Drawing No. JEDRD/STD/RD/RS/02 of this document for details of the Notice Boards. These boards shall remain in position until the end of the maintenance 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**

1. **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 PRACTICAL COMPLETION OF THE WORKS**

***Replace the words “Certificate of Practical Completion of the Works” in title and text of this clause by the words*** “Taking-over Certificate”

***Amend the sub-clauses of this clause as follows:***

In (b) add "and all storm water drainage works;"

***Add the following to the list of sections of the Works:***

"(i) all service relocations."

***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 Taking-over Certificate 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 Meteorological 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:

Table B1215/1: Anticipation days (“n” working days) lost due to climatic conditions:

|  |  |
| --- | --- |
| **Month** | **Rain days** |
| January | 14 |
| February | 13 |
| March | 10 |
| April | 2 |
| May | 0 |
| June | 0 |
| July | 0 |
| August | 0 |
| September | 0 |
| October | 0 |
| November | 3 |
| December | 10 |
| **Total** | **52** |

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: 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

Land to be identified and acquired by the contractor

i. The contractor shall provide and maintain such buildings and sheds as maybe required for the use of the workmen employed in the works and for the storage of materials requiring protection and shall remove the same from the site on completion of the works and make good everything disturbed. The contractor shall be responsible for identifying a suitable site for location of the temporary facilities that he may require and he shall obtain approval of usage of any piece of land from the relevant local authority

The contractor shall make all negotiations and pay all necessary compensation fees for any 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 of work not forming part of the permanent works shall be borne by the contractor.

**PS 1231: 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 1232: 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 1233: 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 1234: DRAWINGS**

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 1235: 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 4.18 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 1236: DUST CONTROL**

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

**PS1237 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 1238 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) Application of bitumen if so required.

(j) Trimming of cut slopes, and final trimming of shoulder breakpoints and fill slopes.

(k) Trimming of open drains, side drains, inlet and outlet channels of culverts.

(l) Trimming of catch - water drains, mitre banks and mitre drains.

(m) 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.

**PS1239 ENVIRONMENTAL IMPACT CONTROL**

Before any work is commenced on the Site, the Contractor's site management staff including foremen shall attend an environmental awareness-training course presented by the Engineer. The Contractor shall liaise with the Engineer prior to the Commencement Date to fix a date and venue for the course. The Engineer will provide the course content. The Contractor shall provide a suitable venue and ensure that the specified employees attend the course.

The environmental awareness-training course shall be held in the morning during normal working hours. The information presented at the course shall be communicated to the Contractors employees on the site, to any new employees coming onto site after the initial training course and to his suppliers as required by the Project Specification. 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.

In addition to aspects of design which are intended to avoid or reduce environmental impact, and also in addition to normal good construction practice expected to the Contractor, the requirements of the Project Environmental Management Plan (see under Section 6 D Clause A: Environmental and Social Impact Management) shall be strictly followed. 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 1240 HIV/ AIDS PREVENTION PROGRAMME**

The contractor shall from the commencement of the contract through his SHE-Officer implement a generic 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 Ministry of Health and Ministry of Education 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**

1. Provisional Sum for Authorised Compensation……………..………………………………… Provisional Sum
2. 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

Q

(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 drawing number **PSB/01**

**PS 13.05: Contractor’s Environmental and Social Obligations**

(a) Fixed obligations …………………………………………… lump sum

(b) Time-related obligations ……………………………………… month

(c) Remuneration of workers undergoing the environmental awareness

training course ……………………………………………… provisional sum

(d) Implementation of environmental management plan as per Clause A11 of the specifications …………………………………………… lump sum

(e) Handling cost and profit in respect of sub-item B13.05(c)

(state % and extend as an amount) …………………………………………… %

The lump sum tendered under Item PS13.05(a) and 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.

The remuneration of the Contractor’s workers undergoing the environmental training course as well as the HIV/AIDS prevention programme will be measured as a Provisional sum. The reimbursement shall be for the actual attendance (total hours)

The sum shall cover all remuneration costs incurred by the Contractor in ensuring the attendance of his staff, including, site management staff at the course.”

**PS13.06 Aids Awareness Training**

(a) Training………………………………………………………… Provisional Sum

(b) Remuneration of the workers undergoing training …… Provisional Sum

(c) Handling costs and profit in respect of sub-items PS13.06(a)

and (b)(state as % and extend as an amount) ……………………… %

The provisional sum for sub-item PS13.06 (a), allows for the provision of the AIDS awareness training programme delivered 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 training institution/s (excluding VAT) for the training.

The provisional sum allowed for pay item PS13.06 (b) is to remunerate the trainees at a rate per hour for attending training. The reimbursement shall be for actual attendance (total hours).

The percentage tendered for pay item PS13.06(c) shall be applied to the amounts expended under pay items B13.04 (a) and (b) to generate an amount that covers all the monies required by the Contractor for managing the training, paying the trainees, and any other costs that may arise from these payments, including any Contractor’s profits and overheads.

**PS13.07 Public Awareness Programmes**

1. Television and Radio Broadcast and Print Media Publications P.S.
2. Sensitization Programs on site for workers P.S
3. Handling costs and profit in respect of sub-items PS13.05(a) and (b)

(stated as % and extend as an amount) ………..................……………...... %

The provisional sum for sub-item PS13.05(a) 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 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(b) shall be applied to the amounts expected under pay items PS13.05(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

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

**Replace clause 1401 with the following:**

**PS 1401: SCOPE**

This Section covers the provision of accommodation for the Engineer’s supervisory staff. This accommodation shall be the necessary laboratory accommodation, and the provision of all the necessary services.

**Replace clause 1402 with the following:**

**PS 1402: LABORATORY**

Provision of the laboratory facilities for the use of the Engineer shall be ready for occupation and use by the Engineer within thirty (30) days (including days for mobilization) of the official commencement date.

The Contractor shall make all arrangements and pay all necessary charges for the provision and maintenance of the following services to the laboratory to the satisfaction of the Engineer:

* 1. Supply of electricity for power and light (220-250 v AC, 50 Hz) from a public utility.
  2. Supply of clean, fresh, potable water; either from a public utility or provided directly by the Contractor.
  3. Disposal of sewage and waste water
  4. Split type remote controlled air conditioners. The air conditioners shall have 2.5 KW minimum power and shall be capable of heating during winter.
  5. Laboratory furniture and equipment specified in these specifications. The furniture and equipment shall be new and of quality acceptable to the Engineer.
  6. A full-time attendant to clean and service the laboratory including all utensils and sundries for that purpose.

**Furniture and Equipment for the Engineer's Laboratory Office**

The Contractor shall supply new furniture and new equipment for the Engineer's laboratory as hereinafter listed.

**Furniture for the Engineer's Laboratory Office**

**Item No**

Desks with lockable drawers (1830 x 915mm) 2

Table (1830 x 915mm) 1

Chair (2 arm chairs) robust and comfortable 6

Shelves (1830 x 1200mm x 350mm) with backing 1

Cupboards (1730mm x 900mm x 550mm (3shelves and lock) 1

Steel filing cabinets (1300mm x 460mm x 600mm) deep with 4 drawers on

runners and lock 4

Wall Board 1

Electric heater, 750watt minimum rating 1

Waste paper baskets 2

Punch 1

Stapling machine 1

Stationary as required

**Laboratory Installations and Equipment, etc.**

All equipment, chemicals supplies etc. necessary for the performance of the tests and procedures as described in BS 1377:1975 “Methods of Testing Soils for Civil Engineering Purposes" shall be supplied by the Contractor.

Please refer to **PS 1205 (b) (iii)** regarding the required tests and procedures**.**

**Miscellaneous Laboratory Equipment**

The laboratories shall be supplied and resupplied, as often as necessary, with the minimum level of ancillary equipment as detailed below:

**Item No.**

Metal thermometers reading to 260°C 2

Graduated steel rule 2

1000ml capacity measuring cylinder graduated to 5ml 2

500ml capacity measuring cylinder graduated to 5ml 2

1000m1 beaker 2

Hotplate gas type 4

Wire gauze for use with hotplate 12

Tablespoons 3

Chisel blade, 200mm x 25mm 4

Knife, 200mm blade with wooden handle 4

Trowel, 150mm blade approximately 100mm wide 4

Plastic bucket with lid, approximately 300mm diameter and 450mm deep 6

Pick with handle 15

Shovel with handle 15

Panga 12

Metal drying trays, 1 metre square with raised edges 10

Paint brush 25mm wide 3

Hard bristle broom with handle 2

Scientific calculator 4

Ovens (aggregate volume 1m3 minimum) 2

Rain gauges 3

Plus printed test forms, samples bags, hessian, plastic or 4 ply paper for large disturbed samples, towels soap etc., as required.

**Asphalt testing Laboratory Equipment**

Stability and Flow machine (Digital) 1

Centrifugal extractor 1

Specimen Mould Assembly 6

Specimen Extractor 1

Compaction Hammer 1

Compaction Pedestral 1

Specimen Mould Holder 1

Breaking Head 1

Loading Jack 1

Oven 1

Mixing Apparatus 1

Water Bath (Controller 25oC) 1

**Miscellaneous Equipment for Asphalt Testing**

* Containers 12
* Mixing Tools 1
* Thermometers 1
* Balance (2.5 kg) 1
* Gloves 4
* Rubber Gloves 4
* Marking Crayons 12
* Scoop 1
* Spoon 1
* 2 Litre flasks 2
* Thin-film Oven 6
* Vernia Caliper 2
* Timer 1

For the laboratory works of the Engineer the Contractor has to provide as much semi­-skilled workers as requested.

The laboratory shall at all times be provided with a sufficient stock of consumables equipment to allow for usage, breakage and deterioration. In the event of any item of equipment becoming unserviceable through any cause the Contractor shall, at his own cost, order replacements or spare parts to be air-freighted from the same suppler. This replacement equipment shall be new and as determined by the Engineer.

**Protective Clothing for the Supervisor's Staff**

1. dust coats for laboratory staff including replacements as required
2. sets of water-proof coats for all staff, mouth musk, safety boots and safety helmets for each of the staff; including replacements as required.

The reticulation network and the wiring installation of the laboratory shall be maintained at the highest standard of safety and reliability, with particular reference to the earthing installation and safety/protective devices.

The Contractor shall be responsible for providing all sanitary services necessary for keeping latrines in a clean, neat and hygienic condition. When no municipal sewage treatment is available, the Contractor shall provide the necessary septic tanks for all latrines. Waste water and septic tank effluent shall be discharged into properly designed French drains. The Contractor shall also make provision for the removal of all rubbish. Where the construction of septic tank or water - borne sewage scheme is unfeasible, the Contractor shall construct conservancy tanks and make arrangements for the removal and disposal of sewage.

The Contractor shall provide adequate 24 - hour security for the laboratory. The Contractor shall take all reasonable precautions to prevent unauthorized entry to the laboratory and to ensure overall security of camps, field laboratories and the site in general.

**Survey Equipment**

The Contractor shall provide survey equipment for carrying out the topographical survey of the road as well as the detailed survey works of all the junctions, drainage works and bridges that are to be constructed.

The Contractor shall provide the following survey equipment on site for the full duration of the contract:

1. Two automatic levels with all its accessories,
2. One total station complete with all its accessories including standby batteries,
3. Two Survey umbrellas,
4. Five 5m measuring tapes,
5. Four 50m fibre glass measuring tapes,
6. One steel measuring tape of length 100m,
7. Measuring wheel,
8. One GPS Survey Equipment with all its accessories,
9. All the necessary auxiliary facilities including, but not necessarily limited to, two-way short range (minimum 2km) radio communication handsets, continuous supply of level books, consumables, etc.

**Maintenance or Replacement of Equipment and Provision of Consumables**

All equipment provided shall be kept full serviceable at all times by the Contractor. The Contractor shall repair/replace any defective equipment within three days after notification by the Engineer's staff. The contractor shall also provide all stationary, paper (including also special photo quality paper) Laser Jet toner cartridges, colour and black ink cartridges, USB Memory sticks, CDs and CD storage containers required by the Engineer.

The Contractor shall insure the equipment against any loss, damage or theft and he shall indemnify the Engineer against any claims in this regard. This equipment shall be available for use by the Engineer at all times. The Contractor shall maintain the equipment in good working order and keep it clean throughout the contract period.

Ownership of all the buildings, services, fittings and associated works, the laboratory furnishing, and survey equipment shall remain with the contractor at the end of the Contract or at such earlier date as the Engineer may instruct with the exception of the laboratory equipment which shall revert to the Employer.

**PS1407 MEASUREMENT AND PAYMENT**

**Change pay item 14.01, 14.02 and 14.03 as follows:**

**PS14.01 Laboratory Accommodation**

**Item Unit**

Provision of Laboratory accommodation as specified ………. Lump sum

**Add:** The tendered lump sums shall include all the materials and standards for laboratory in accordance with the details given in Particular Specifications and in the drawings.

**PS14.02 Laboratory Furniture**

Laboratory furniture as specified in the Particular Specifications............. Lump sum

**Add:** The tendered lump sums shall include all the furniture for laboratory in accordance with the details and as listed in Particular Specifications.

**PS14.03 Laboratory Fittings, Installations and Equipment**

Laboratory fittings, installations and equipment as specified in the Particular Specifications............Lump sum

**Add:** The tendered lump sums shall include all the fittings, installations and equipment for laboratory in accordance with the details and as listed in Particular Specifications.

**Amend Pay Item 14.08 as follows:**

**PS14.08 Services**

(a) Services at laboratory........................................... Month The tendered amounts shall include all specified services rendered to laboratory.

**Create the following new pay items:**

**PS14.12** **Survey equipment for use by the Engineer .................................... month**

The unit of measurement for the supply and maintenance of the survey equipment as described in detail in the Particular Specifications 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.

**PS14.14 Security at Engineers’ Laboratory....................... month**

The unit of measurement for the supply of security guards shall be the month. The rate tendered shall be full compensation for the supply of security guards, including transport, weapons, equipment and uniforms as may be applicable, as well as all other costs necessary to provide the security service. The tendered rate shall be payable for as long as the security service is required and provided, but not after the official completion date of the Contract`

**PS14.15 Provision of semi-skilled labour for use by the Engineer**

1. Provision of Labourers P.S.
2. Handling cost and profit in respect of PS 14.20 (a)

(State % and extend as an amount) %

Payment under Item PS14.15(a) (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 semiskilled 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 for the laboratory and survey work. 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.

**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.

1. **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.

1. **Road signs and barricades**

***Add the following:***

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

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

1. A minimum contrast ratio of 4 shall exist between the yellow call 1 retro-reflective material and the black non-reflective material.
2. 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.
3. 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:***

1. **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.

**PS 1517: Measurement and Payment**

Pay item 15.09 is not applicable and deleted. Pay items 15.01, 15.02, 15.03, 15.04, 15.05, 15.06, 15.07, 15.07, 15.08, 15.09, 15.10, 15.11, and 15.12 are combined and included into one pay item 15.01.

**Item Unit**

## PS15.01: Accommodating traffic, including all notices, signing, construction, providing, maintaining and reinstating temporary diversions……………………….... km

**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**

**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. Penalty, depending on its size and age, 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**

The tendered rate for Item No. 17.01 shall also include the full compensation for safe removal of existing road signs with the resulting holes backfilled with acceptable material. The removed road signs shall be properly stacked and stored; the Engineer shall give an instruction for the final custody. Waste material shall be disposed of in accordance with the Specifications.

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

**PS 17.04: Demolition, dismantling, removal and clearing of existing structures**

**Item Unit**

PS 17.04(a): Masonry structures ………………………………..………………….. m3

PS 17.04(b): Concrete structures …………………………..…………...…………. m3

PS 17.04(c): Gabions ………………………………………...…………...…………. m3

PS 17.04(d): Steel Bailey Bridge ………………………………………...……….… Lump sum

The tendered rate shall include full compensation for demolition or dismantling of the existing structures, proper stacking of Bailey Bridge parts, delivery of all the steel bridge parts to a physical address to be provided by the Employer, clearing and disposal of the waste material from site including unlimited haulage costs.

***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**

**Item Unit**

**PS18.01 PERSONNEL DURING NORMAL WORKING HOURS**

|  |  |  |
| --- | --- | --- |
| (a) | Unskilled labour | Hr |
| (b) | Semi - skilled labour | Hr |
| (c) | Skilled labour | Hr |
| (d) | Ganger | Hr |
| (e) | Flagmen | Hr |
| (f) | Operators | Hr |
| (g) | Foremen | Hr |
| (h) | Surveyor | Hr |
| (i) | Lab technician | Hr |
|  |  |  |

**Item Unit**

**PS18.02 PERSONNEL OUTSIDE NORMAL WORKING HOURS**

|  |  |  |
| --- | --- | --- |
| (a) | Unskilled labour | Hr |
| (b) | Semi - skilled labour | Hr |
| (c) | Skilled labour | Hr |
| (d) | Ganger | Hr |
| (e) | Flagmen | Hr |
| (f) | Operators | Hr |
| (g) | Foremen | Hr |
| (h) | Surveyor | Hr |
| (i) | Lab technician | Hr |

**Item Unit**

**PS18.03 PLANT**

|  |  |  |
| --- | --- | --- |
| (a) | Tip Truck 6m³ | Hr |
| (b) | Tip truck 10m³ | Hr |
| (c) | Motor grader (type specified) | Hr |
| (d) | Wheeled loader (type specified) | Hr |
| (e) | LB (type specified). | Hr |
| (f) | Water bowser self-propelled (capacity specified) | Hr |
| (g) | Vibratory roller | Hr |
| (h) | Pneumatic roller | Hr |
| (i) | Grid roller with tractor (type specified) | Hr |
| (j) | Tractor (type specified) | Hr |
| (k) | Tracked excavator (type specified) | Hr |
| (l) | Bulldozer (type specified) . | Hr |
| (m) | Excavator | Hr |
| (n) | Concrete Mixer | Hr |
| (o) | Water Pump | Hr |

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 may 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

**Item Unit**

**PS18.04 Materials**

(a) Procurement of materials ………………...... Provisional 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.

**Item Unit**

**PS18.05 Transport**

1. LDV …………………..………………………... kilometre (km)
2. Flatbed 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:***

**“Item Unit**

PS 21.01(c) Excavating for open or subsoil drains in all type of material at any depth……………. m³

PS21.05 Excavation for mitre drains/catchwater banks……..m³

PS21.06(b) Natural permeable material in subsoil drainage systems crushed stone 19mm nominal size…………m³

PS21.08(b) Unplasticised PVC pipes and fittings, normal duty,

complete with couplings 150mm diameter perforated or slotted………m

PS21.10(a) Synthetic-fibre filter fabric, Bidim or similar approved Grade 250g/m^2 for sub soil drains……….m2

**PS21.20 Excavation for open drains using manual labour:**

1. Hand excavation soft material situated within the following depth ranges below the surface level:

(i) 0m up to 1.5m ……………………………….……………………… m³

1. Extra over sub-item PS21.20 (a) for excavation in the following classes of material, irrespective of depth:

(i) Hand excavation of intermediate material ………………….…. m³

The unit of measurement shall be the cubic 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.

**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***

**ItemUnit**

PS22.30 Backfilling using manual labour

1. Using the excavated material …………………………… cubic metre (m³)
2. Using imported selected material ……………………… cubic metre (m³)
3. Extra over sub-item PS22.30 (a) and (b) for soil cement

backfilling (5% cement) …………………………………… cubic metre(m³)

1. Concrete backfill (Class 15/19) ..………………………… cubic metre(m³)

PS 22.31 Cement mortared stone masonry:

Lining for open channel horizontal or inclined …………… 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 to a thickness between 250mm and 350mm including pointing.

**PS2300 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 2304 CONSTRUCTION**

In item (a)(i), substitute “75mm” with **“100mm”**

**PS 2306 CONSTRUCTION TOLERANCES AND SURFACE FINISH**

In item (a)(i), first paragraph, substitute “25mm with **“15mm”**

In item (b)(i), substitute “25mm with **“15mm”**

In item (b)(ii), substitute “25mm with **“15mm”**

**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.

**Replace Pay Item 23.08 with the following new pay item:**

**Item Unit**

PS23.08 Concrete lining for open drains:

(a) Cast in situ concrete lining (Concrete Class 20/19) for open drains

(All types of drains including formwork Class F2 surface finish,

sealing of joints with approved sealant and weep holes):

(i) 75mm thick to vertical or inclined surfaces............................................ m2

(ii) 100mm thick to horizontal surfaces....................................................... m2

The unit of measurement shall be the square metre of the drain surface lined as specified in drawings. The tendered rate shall include full compensation for painting open joint surfaces as specified.

The tendered rate shall include full compensation for casting concrete of the specified thickness and class, for supplying and fixing formwork, for weep holes, for forming and sealing joints, all as specified in the drawings.

**Pay Items 23.09, 23.10 and 23.11 shall not apply.**

**Add the following Pay Items:**

**Item Unit**

PS23.16 Access bridges

(b) Vehicular bridges

(i) Type 1................................................................................................... No

(ii) Type 2................................................................................................... No

(iii) Type 3A................................................................................................... No

1. Type 3B.................................................................................................. No

PS23.18 Precast concrete class 25/19 cover panels including

formwork, F2 surface finish, as detailed in the relevant drawings

(a) 150mm thick

(i) Width not exceeding 2360mm.............................................................. m

(ii) Width not exceeding 2060mm.............................................................. m

(b) 200mm thick

(i) Width not exceeding 2360mm.............................................................. m

(ii) Width not exceeding 2060mm.............................................................. m

PS23.19 Extra over Item S23.18 for:

(a) Panels with grates and frame.............................................................. No

(b) Panels with lifting hooks at the specified interval.............................................. No

**SECTION 2600: GABIONS**

**PS 2605 MEASUREMENT AND PAYMENT**

***Amend the pay items as follows;***

**ItemUnit**

PS26.01(a) Foundation trenches excavation and backfilling

in solid rock which require blasting including

surface preparation for bedding………………………………………. m³

PS26.01(b) Foundation trenches excavation and backfilling in

all other classes and types of material including

surface preparation for bedding……………………………………….. m³

PS26.03 Gabions:

* 1. PVC-coated gabion boxes (2m x 1m x 1m box,

2.7mm dia wire and 80mm x 100mm mesh with

1m diaphragm)………………………………………………………….. m³

* 1. PVC-coated gabion mattresses (6m x 2m x 300mm deep

2.7mm dia wire and 80mm x 100mm mesh with

1m diaphragm)…………………………………………………………… m³

**SECTION 3100 BORROW MATERIAL**

**PS 3101: SCOPE**

***Add the following to the end of this clause:***

The possible locations of sites for proposed quarries and borrow pits for construction materials are indicated in the materials survey report. The Contractor shall satisfy himself as to the suitability of such sources by trial pits dug on a 25 m grid through the full depth of the material being investigated and testing samples from each pit for classification, CBR and compaction. It shall be, in any case the responsibility of the Contractor to provide sufficient material of approved quality to complete the Works.

The Contractor may, with the approval of the Engineer, locate and open up quarries and borrow pits in addition to those indicated in the materials survey, in which case he shall investigate these additional sources as specified above for borrow areas designated in the materials survey.

The Contractor must obtain a permit from the Chief Mining Engineer before opening up stone quarries.

The Contractor shall remove all ant-hills, ants’ nests, vegetation, topsoil, overburden, boulders, rock, unsuitable and oversize material, and shall provide, erect, operate and maintain all plant necessary for the operation of quarries and borrow pits, together with all access roads, bridges and the like, all at his own expense unless otherwise provided as a pay item..

**PS 3102: Negotiations with Owners and Authorities**

***Replace clause 3102 with the following:***

The Contractor shall satisfy himself that all necessary negotiations have been made with the owner (if any) of the land on which any borrow pit is situated, prior to the opening of such borrow area. The attention of the Contractor is drawn to the provisions of Clause 1214.

**PS 3108: Classification of Borrow Pits for Gravel Materials for Pavement Layers**

Delete this clause in its entirety.

***Add the following clause to Section 3100:***

**PS 3110: Explosives and Blasting**

Blasting shall be carried out in strict accordance with the latest Government regulations, and at all times shall be carried out and supervised by fully qualified persons in terms of these Regulations. If in any situation blasting is considered dangerous, the Engineer’s decision in this respect shall be final. Should any damage of any kind occur, the Contractor shall be solely responsible for such damage or any claims that may arise therefrom, and shall, at his own expense, carry out repairs or restoration as the Engineer may direct.

Care shall be taken that no undischarged cartridges are allowed to remain in the excavation. Careless or indiscriminate use of explosives will result in the Engineer withdrawing permission for their use and under such circumstances the Contractor shall resort to other methods of excavation.

The Contractor shall obtain the written permission of the Engineer for each location where the Contractor requires using explosives.

**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**

**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."

**(c) Preparing and compacting the roadbed**

Where the roadbed is anywhere within 1.0m of the selected formation layer, it shall be compacted to 93% of modified AASHTO density. Roadbed shall be compacted to 90% of modified AASHTO density where it is more than 1.0m below the selected formation layer.

**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

Free-haul distance

1. Gravel or soft fill material in compacted layer

thicknesses of 200 mm and less

1. compacted to 90% modified AASHTO ……….… cubic metre

density

1. compacted to 93% modified AASHTO ……….… cubic metre

density

PS33.07 Removal of unsuitable material on instruction by

the Engineer………………………………………………………… m³

**SECTION 3400 PAVEMENT LAYERS OF GRAVEL MATERIAL**

**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 with 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 18%

**PS3403 CONSTRUCTION**

**(b) Placing and compaction**

1. Shoulders

***Add the following:***

Shoulders shall be constructed from the same material as the base

**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, (and mechanical stabilisation for base), 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.

**SECTION 4100 PRIME COAT**

**PS 4102 MATERIALS**

1. **Priming material**

***Add the following:***

The prime coat shall be MC 30 cut-back bitumen. The nominal rate of application for tender purposes shall be 0.8 litre/m².

SECTION 4200: ASPHALT BASE AND SURFACING PS 4214 MEASUREMENT AND PAYMENT

***Amend the wording of pay item 42.02 to read:***

**Item Unit**

PS42.02 Asphalt surfacing, 50mm thick, using 70/100 penetration grade bitumen, including binder and active filler variations:.............m2

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

**PS 4303: Plant and Equipment**

1. **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 45o 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."

**PS 4304: GENERAL LIMITATION AND REQUIREMENTS**

1. **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, seal-work 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 80/100 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 Contractor shall seal wide cracks by hand-application of Petrol seal. Payment will be made at Dayworks 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/m² 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**

1. 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.

**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 30/20 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**

* 1. Subbase 95% modified AASHTO in layers of 200mm ……………….….…....... m3
  2. Base to 98% modified AASHTO in layers of 200mm ………………….…......… m3
  3. Class 30/20 concrete pavement 200mm thick …………….……………….…. m3
  4. Class 20/20 for kerbing along bus-bays………………………… m
  5. 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**

**PS 51.03 Road reserve demarcation beacons …………………………..…. No.**

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, construction, backfilling and plastering of the beacon.

**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:**

**Item Unit**

PS52.13 Galvanised and painted guardrails on concrete posts including

end units and reflective plates as per drawing........................................... 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**

**Substitute the second paragraph with the following:**

All Road Traffic Signs shall comply with the South African Development Community (SADC) Road Traffic Sign Specifications.

(1) The Traffic Sign details shown on the drawings give general information on the erection, placing and details of several of the required signs. Details of signs not shown on the drawing shall be in accordance with Regulations. The specifications information regarding the dimensions and locations of signs reference should be made to "The SADC Road Traffic Signs Manual”.

(2) The exact location of signs shall be as directed by the Engineer.

(3) Sign faces will be constructed of sheet steel of a minimum thickness of 1.6 mm and the back of the sign shall be painted grey.

1. Regulatory and warning signs shall be similarly mounted; larger signs shall be mounted on two or more 75mm diameter galvanised mild steel posts. Where the horizontal or vertical dimension exceeds 900mm, the sign shall be stiffened by means of 25mm x 25mm rectangular hollow sections as detailed on the drawings. All guide or information sign posts are to be painted grey. Sign posts for regulatory and warning signs shall be painted with alternating bands of yellow and black.

(5) The size of guide or information signs shall be as specified in the regulations. The layout of the sign (letter spacing, size, border size, etc.) and colours shall be as given in the SADC Regulations.

1. The size, colours and letter series type for regulatory signs will be as given in the SADC Regulations, or as shown on the drawings or as instructed by the Engineer.

All warning and regulatory traffic signs on the Main Road shall be at least size 1200mm for the design speed of 120km/hr.

All warning and regulatory traffic signs on the Access Roads shall be at least size 914mm for the design speed of 80km/hr.

(7) Warning signs will be on an equilateral triangle with a white reflectorized symbol on a blue reflectorized background. The size of the triangle will be as given in the SADC Road Traffic Sign Specification or as shown on the drawings or as instructed by the Engineer.

(8) All signs are to be reflectorized with engineering grade retro reflective materials. The material is to be good quality and is to be affixed to the sheet metal according to the manufacturer’s recommendations".

**PS 5409 MEASUREMENT AND PAYMENT**

**Delete pay items 54.01, 54.02 and 54.03 and replace with the following:**

**Item Unit**

PS54.01 Road sign boards with painted or coloured background.

Symbols, lettering and borders in Class 1 retro-reflective material,

complete with posts and supports pre-painted galvanised steel

plate (Chromadek or approved equivalent) position as shown on

the drawings:

(a) Area not exceeding 2m2.......................................................................... m2

(b) Area exceeding 2m2 but not 10m2.......................................................... m2

(c) Area exceeding 10m2............................................................................. m2

**Add the following new pay item:**

**Item Unit**

PS54.10 Erection of Standard Road Signs........................................................... No

The unit of measurement shall be the number of specified road signs erected. The tendered rate shall include full compensation for the provision and fixing in position of sign faces, posts, nuts, for painting the surfaces, lettering, excavation for posts, concreting, backfilling, removal of excess excavated materials, etc. and all that is necessary to make the work comply with the specifications.

**SECTION 5500: ROAD MARKINGS**

**PS 5501 SCOPE**

**Add the following: -**

After sections of road are completed and before being opened to traffic all road markings are to be completed. The road studs will not be placed at this stage. The Contractor shall return during the Defects Liability Period to re-paint all road marking as specified as well as the placement of road studs.

All Road Traffic Markings shall comply with the South African Development Community (SADC) Road Traffic Sign Specifications.

The Contractor may use thermoplastic marking material and shall provide a three year guarantee for the road traffic markings. Towards the end of the Defects Liability period the Contractor shall repaint all road traffic markings. No separate payment shall be payable. The Contractor shall make appropriate allowance in his programme and his tender rates for re-painting at the end of the Defects Liability Period.

The Employer shall withhold retention monies due until the Contractor has repainted the road markings to the satisfaction of the Engineer. Should the Contractor fail to remobilize the road marking unit team and attend to the notified defects within the Defects Liability Period, the Employer may use the retention money to engage other Contractors to carry out the outstanding work and deduct these costs from the retention monies. Should these retention moneys be insufficient to cover the cost of correcting the road traffic markings then the Employer may recover the shortfall from the Contractor by legal processes.

**PS 5502 MATERIALS**

**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/m2 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 hydro-seeding.

**(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 top-soiling 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.

All grass shall be planted before the start of the defects liability period for any section of the road.

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. Mulch shall be added to the hydroseeding mix at an approved rate.

**(d) Top-soiling 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) Maintenance Period**

The maintenance 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 5707(C): TREES AND SHRUBS**

Add the following:

All trees and shrubs grass shall be planted prior to the start of the defects liability period for any section of the road.

**PS 5709: Measurement and Payment**

Payment items 57.01(a) and (b) are merged into one payment item 57.01. In the last paragraph under Item 57.01, payment shall NOT distinguish between machine trimming which can reasonably be done by bulldozer or motor grader, and hand trimming.

**Payment item 57.04:** the tendered rate shall include preparing the area for grassing, top-soiling using materials from road reserve or from other sources (unlimited free haul), stockpiling, watering the grass and weeding until the grass is established. The unit of measurement for planting Vetiver grass shall be the metre run of established grass.

**Payment items 57.09(b)(i) and 57.09(b)(ii):** the tendered rates shall include the full compensation for providing the trees and the shrubs, landscaping, protection from fire.

**SERIES 6000: STRUCTURES**

**Section 6100: Foundations for Structures**

**6115 Measurement and Payment**

***Change pay items 61.02 and 61.04 as follows:***

## Item Unit

**PS 61.02 Excavation:**

(a) Excavation in any material other than rock at any depth ………….. m³

(b) Excavation in rock at any depth ………………..…..……………….…... m³

**PS 61.04 Backfill to Excavations:**

(a) Utilizing imported material or material from excavation ……………….. m³

**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 formwork. The rate for formwork shall be for all classes of finish and to any direction.”

**Introduce:**

**SERIES 8000: SPEED CALMING FEATURES**

**PS8100 HUMPS AND RUMBLE STRIPS**

Humps and rumble strips shall be constructed, arranged and spaced according to details provided in the drawings.

**PS8101 Measurement and Payment**

|  |  |  |
| --- | --- | --- |
| **Item** |  | **Unit** |

PS81.01(a) Installation of humps as per drawing detail …………………………… No.

PS81.01(b) Installation of rumble strips in sets of five as per drawing detail …… Set

The tendered rate shall include cost of preparing the area for the hump or strip, setting-out, transport, materials, installation, trimming, cleaning and clearing the area and all other costs associated with the construction of the hump or strips.

**PS8300 Contractors Environmental and Social Management Plan (CESMP)**

(a) Develop and implement CESMP that includes the following agreed Management Strategies and Implementation Plans;

* Code of conduct
* Grievance Redress Mechanism
* Traffic Management Plan
* Water Resources Protection Plan
* HIV/AIDS and GBV/SEA prevention Plan
* Community and occupational health and safety
* Waste Management Plan
* Quarry /borrow pit management and restoration plan

b) implementation of ESMP mitigation measures

c) Sensitization and training of workers and communities on ESHS

**SECTION 9000: SUPPLY, INSTALLATION AND COMMISSIONING OF STREET LIGHTING SYSTEM**

**PS 9001: Installation of Grass Fibre poles**

Add the following Clause.

The Contractor shall Install glass fibre poles manufactured in accordance with SANS 1749 under the ISO 9002 quality system. If an access opening is required, the access door cover shall be manufactured from glass filled nylon impregnated in the same colour as that of the surface coat. A cable entry with a minimum diameter of 34mm shall be provided at a minimum depth of 400mm below the ground surface. Poles for direct embedment in the ground shall be provided with a 300 x 300 x 1.6mm hot dipped galvanised base plate.

The details of the poles shall be as indicated on the drawings. **PS 9002: Installation of 50w all in one solar street light** Add the following Clause.

The Contractor shall supply and install solar panel power 18v/50Wp (Monocrystalline PV). Life-span 25 years Batteries Capacity/Type 12.8V/36AH (460.80WH) / LiFePO4 Lithium. Lifespan 5+ years (2,000 circles) Controller Type MPPT / Waterproof class IP65 Sensor Microwave Radar (PIR & Timing as optional). LED Light Source Rated Power 12V/ 50W (36Wx2 modules) LED Brand CREE/OSRAM (LED Lumen: 150lm/W) Lumens (LM) 2000-3000lm Life-span 50,000 hours Viewing Angle 1400 x 700 Full Charge Time By Solar 6-8 hours (STC: 1000W/m2, 25° C ) Discharge Time Bright Mode >14 hours , Dim Mode >70 hours Working Temp. -30°C~+80°C Color Temp. Cool White 3000K (3000~3500k) / Space Between Lights 30~35m Materials aluminium alloy Certificate ROHS / IP65/ STQC/MNRE warranty-36 months from the date of supply. “specialized for street lighting purposes”

**PS 9003 MEASUREMENT AND PAYMENT**

**Add the following pay items:**

**Item Unit**

PS90.01 Glass fibre poles 32 apart, manufacture, logistics and installation. No

The unit of measurement shall be in No. The tendered rates shall include procuring, logistics, installation and including any other works, operation or activity necessary for completing the installation of poles in compliance with the specifications and drawings.

**Add the following pay items:**

**Item Unit**

PS90.02 Supply and installation of 50W all in one solar street light ................... No

The unit of measurement shall be in No. The tendered rates shall include all items listed above.

**SECTION 6C**

**DRAWINGS**

**Section 6C. Drawings**

**Drawings are provided and bound separate as Volume 2:**

**SECTION 6D**

**Environmental, Health, Social and Safety Requirements**

**A. ENVIRONMENTAL AND SOCIAL IMPACT MANAGEMENT**

**A 1. ENVIRONMENTAL MANAGEMENT TEAM (EMT)**

The Contracting Authority will be represented on site by a Resident Engineer (RE) and his inspection team will include an Environmental Control Officer (ECO) who shall determine members of the site supervision team as the Environmental Management Team (EMT) that will report on the activities to the Contracting Authority through RE.

The EMT will be responsible for monitoring the performance of the Contractor during the construction phase with regard to Environmental issues and to assess the effectiveness of the impact mitigation measures in protecting the environment on behalf of the Roads Authority and the local communities. The role of the EMT will be “pro-active” with regard to impacts seeking to predict and prevent negative impact and pollution.

The Contractor will provide one full time Contractor’s Health Safety and Environmental Liaison Officer (HSE Officer) to be responsible for the implementation of all environmental mitigation measures. The HSE Officer will also undertake liaison with local community leaders and ensure that the Contractor’s compliance with the requirements of the Malawi Environmental Affairs Department, the District Value’s Office, and other relevant authorities in connection with environmental and social considerations.

The Contractor shall prepare a Project Environmental Management Plan (PEMP) based on the headings, risks and responsibilities given in the EMP Table (see A11).

This Plan shall be particular to the works required under this Contract. The draft PEMP will be discussed, reviewed, where necessary amended and finally agreed in the EMT. The PEMP will form the principal document upon which all Environmental Monitoring will be based throughout the project.

**A 2. IMPACT MITIGATION MEASURES**

**A 2.1. LANDSCAPE PRESERVATION**

1. General

The Contractor shall exercise care to conserve the natural landscape and shall conduct his construction operations so as to prevent any unnecessary destruction, scarring, or defacing of the natural surroundings in the vicinity of the works. Except where clearing is required for permanent works, diversions or excavation operations, all trees, native shrubbery and vegetation shall be preserved and shall be protected from damage by the contractor’s construction operation and equipment. The edges of clearing and cuts through trees, shrubbery, and vegetation shall be irregularly shaped to soften the undesirable visual impact of straight lines. Movement of labour and equipment within the right-of-way and over routes provided for access to the work shall be performed in a manner to prevent damage to grazing land, crops or property.

Except as otherwise provided special reseeding or replanting will not be required under these specifications; however, on completion of the work all work areas not seeded shall be scarified and left in a condition which will facilitate natural re-vegetation provided for proper drainage and prevent erosion. All unnecessary destruction, scarring, damage or defacing reseeded or the landscape resulting from the Contractor’s operations shall be repaired, replanted reseeded or otherwise corrected as directed by the Resident Engineer and at the Contractor’s expense.

1. Construction Roads

The location, alignment, and grade of construction roads shall be subject to approval of the Resident Engineer. When no longer required by the Contractor, construction roads shall, if required by the Resident Engineer, be restored to the original contour and made impassable to vehicular traffic. The surfaces of such diversions shall be scarified as needed to provide a condition that will facilitate natural re-vegetation provided for proper drainage and prevent erosion.

1. Construction Facilities

The Contractor’s workshops office and yard area shall be located and arranged in a manner to preserve trees and vegetation to the maximum practicable extent. On completion of the project all temporary buildings including concrete footings and slabs, and all construction materials and debris shall be removed from the site. The area shall be

regarded, as required, so that all surfaces drain naturally, blend with natural terrain, and are left in a condition that will facilitate natural re-vegetation, provide for proper drainage and prevent erosion.

1. Blasting Precautions

In addition to any requirements of local regulations, the contractor shall adopt precautions when using explosives that will prevent scattering rocks, stumps, or other debris outside the work area, and prevent damage to surrounding trees, shrubbery and vegetation.

**A 2.2. PRESERVATION OF TREES AND SHRUBBERY**

1. Preservation

All trees and shrubbery which are not specifically required to be cleared or removed for construction purposes shall be protected from any damage that may be caused by the construction operations and equipment. Special care shall be exercised where trees or shrubs are exposed to injuries by construction equipment, blasting excavating, dumping, chemical damage or other operations; and the Contractor shall adequately protect such trees by use of protective barriers or other methods approved by the Resident Engineer. The removal of trees or shrubs will only be permitted after prior approval by the Resident Engineer.

The layout of the Contractor’s construction facilities such as workshops, warehouse storage areas and parking areas; location of access and haul routes; and operation in borrow and spoil areas shall be planned and conducted in such a manner that all trees and shrubbery not approved for removal by the Resident Engineer shall be preserved and adequately protected from either direct or indirect damage by the Contractor’s operations.

Except in emergency cases or when otherwise approved by Resident Engineer, trees shall not be used as anchorages. Where such use is approved, the trunk shall be wrapped in with a sufficient thickness of approved protective material before any rope, cable, or wire is placed.

1. Repair or Treatment of Damage

The Contractor shall be responsible for injuries to trees and shrubs caused by his operations. The term “injury” shall include without limitation, bruising, scarring, tearing and breaking of roots, trunk or branches. All injured trees and shrubs shall be repaired or treated without delay, at the Contractor’s expense. If damage occurs, the Resident Engineer will determine method of repair or treatment to be used for injured trees and shrubs as recommended by an experienced horticulturist or a licensed tree surgeon provided by and at the expense of the Contractor.

1. Replacement

Trees or Shrubs that in the opinion of the Resident Engineer are beyond savings shall be removed and replaced early in the next planning season. The replacement shall be the same species or other approved species and of the maximum size that is practicable to plant and sustain growth in the particular environment. Replacement trees and shrubs shall be stayed, watered and maintained for a period of 1 year from the date of replacement.

**A 2.3. PREVENTION OF WATER POLLUTION**

1. General

The Contractor’s construction activities shall be performed by methods that will prevent entrance or accidental spillage, of solid matter, contaminants, debris, and other pollutants and wastes into streams, flowing or dry watercourses, lakes, and underground water sources, concrete, sanitary waste, industrial waste, radioactive substances, oil and other petroleum products, aggregate processing tailings, mineral salts and thermal pollution.

Dewatering work for structure foundations or earthworks operations adjacent to or encroaching on streams or watercourses shall be conducted in a manner to prevent muddy water and eroded materials from entering the streams or watercourses by construction of intercepting ditches, bypass channels, barriers, settling ponds or by other approved means. Excavated materials or other construction materials shall not be stockpiled or deposited near or on stream banks, lake shorelines or other watercourse perimeters where they can be washed away by high water or storm runoff or can in any way encroach upon watercourse itself.

Turbidity increases in a stream or other bodies of after that are caused by construction activities shall be strictly controlled. When necessary to perform required construction work in a stream channel, the turbidity may be increased, as approved by the Resident Engineer, for the shortest practicable period required to complete such work. This required construction work may include such work as diversion of a stream, construction or removal of coffer-dams, specified earthworks in or adjacent to a stream channel, pile driving, and construction of turbidity control structures. Mechanised equipment shall not be operating in flowing water except as necessary to construct crossing or to perform the required construction.

Wastewater from aggregate processing, concrete batching, or other construction operations shall not enter streams, watercourses, or other surface waters without the use of such turbidity control methods as settling ponds, gravel-filter entrapment dikes, approved flocculating processes that are not harmful to fish, re-circulation systems for washing of aggregates or other approved methods. Any such wastewaters, discharged into surface of these specifications, settleable material is defined as that material possible. For the purpose of these specifications settleable material is defined as material which will settle from the water by gravity during a 1- hour quiescent detention period.

1. Compliance with law and regulations

The Contractor shall comply with applicable laws and regulations and water quality standards concerning the control and abatement of water pollution.

**A 2.4. ABATEMENT OF AIR POLLUTION**

The Contractor shall comply with applicable laws and regulations concerning the prevention and control of air pollution. Notwithstanding the above in conduct of construction activities and operation of equipment, the Contractor shall utilize such practicable methods and devices as are reasonably available to control prevent and otherwise minimize atmospheric emissions or discharges of air contaminants.

The emission of dust into the atmosphere shall be strictly controlled during the manufacture, handling and storage of concrete and road aggregates, and the Contractor shall use such methods and equipment as are necessary for the collection and disposal or prevention of dust during these operations. The Contractor’s methods of storing and handling cement and lime shall also include means of eliminating atmospheric discharges of dust. Equipment and vehicles that show excessive emissions of exhaust gases due to poor engine adjustments or other inefficient operating conditions. Shall not be operated until corrective repairs or adjustments are made.

Burning of materials resulting from clearing of trees and bush, combustible construction materials, and rubbish will be permitted only when atmospheric conditions for burning are considered favourable and when authorized by the Resident Engineer. In lieu of burning, such combustible materials may be disposed of by other methods as provided in Clause B 2.10hereof. Where open burning is permitted, the burn piles shall be properly constructed to minimize smoke, and in no case shall unapproved materials such as tires, plastic rubber products, asphalt products, or other materials, that create heavy black smoke or nuisance odours, be burned.

**A 2.5. DUST ABATEMENT**

During the performance of the work required by this specifications or any other appurtenant thereto, whether on right-of-way provided by the Employer or elsewhere, the Contractor shall furnish all the labour, equipment, materials, and means required, and shall carry out proper and efficient measures wherever and as often as necessary to reduce the dust nuisance and to prevent dust which has originated from his operations from damaging crops, orchards, cultivated fields and dwellings or causing nuisance to obtain adequate control.

**A 2.6. NOISE ABATEMENT**

The Contractor shall comply with applicable National laws, orders and regulations concerning the prevention, control and abatement of excessive noise.

Blasting, the use of jackhammers, pile driving, rock crushing or other operations producing high-intensity impact noise may be not be performed during the night.

**A 2.7. LIGHT ABATEMENT**

The Contractor shall exercise special care to direct all stationary flood-light to shine downwards at an angle less than horizontal. These floodlights shall also be shielded so as not to be a nuisance to surrounding areas. No lighting shall include a residence in its direct beam.

The Contractor shall be responsible for correcting light problems when they occur as directed by the Resident Engineer.

**A 2.8. PRESERVATION OF HISTORICAL & ARCHAELOGICAL DATA**

Should the Contractor or any of his employees in the performance of his contract discover evidence of possible scientific, prehistoric, or archaeological data he will notify the Resident Engineer immediately, giving the location and nature of the findings. Written confirmation shall be forwarded within 2 days. The Contractor shall exercise care so as not to damage artefacts or fossils uncovered during excavation operation and shall provide such co-operation and assistance as may be necessary to preserve the findings for removal or other disposition by the employer. The Contractor will also report his findings for the Ministry of Forestry, Fisheries and Environmental Affairs and the authority responsible for antiquities.

Where appropriate by reasons of a discovery the Resident Engineer may order delays in the time of performance, or changes in the work, or both. If such delays, or changes or both are ordered, the time of performance and contract price shall be adjusted in accordance with the applicable clause in the conditions of contract.

The Contractor shall insert this Clause in all subcontracts that involve the performance of work on the project site.

**A 2.9. PESTICIDES**

Pesticides include herbicides, insecticides, fungicides rodenticides, and pesticides, surface disinfectants animal repellent and insect repellent. Should the Contractor find it necessary to use pesticides in work areas of this contract, he shall submit his plan for such use to the Resident Engineer for written approval.

The Contractor shall read and comply with all labelling requirements when using pesticides.

**A2.10. CLEAN-UP AND DISPOSAL OF WASTE MATERIALS**

**Clean – Up**

The Contractor shall, at all times keep the construction area, including storage areas used free from accumulation of waste material or rubbish.

All waste water and sewerage from office, residential and mobile camps shall be piped to soak pits or other disposal areas constructed in accordance with local government regulations, and where and when regulations require it the Contractor shall obtain a permit or other appropriate documentation approving the disposal methods used.

All used fuels, oils, other plant or vehicle fluids, and old tyres and tubes shall be collected to a central disposal area on a daily basis and disposed of in a manner approved by the Resident Engineer.

Servicing of plant equipment and vehicles shall whenever possible be carried out at a workshop area. This workshop area shall be equipped with secure storage areas for fuels oils and other fluids and constructed in such a way as to contain any spillage, which may occur, and similar storage where fluids can be stored securely prior to their disposal.

When servicing of plant, equipment and vehicles is carried out away from the workshop area it shall be done at locations and in such a manner as to avoid spillage and contamination of streams and other drainage courses. Any spillage shall be cleaned up by either burning in place or collecting the contaminated soils and burning them at the central disposal area, all to the satisfaction of the Resident Engineer.

Prior to the completion of the work, the Contractor shall remove from the vicinity of the work all facilities, buildings, rubbish, unused materials, concrete forms and other like material, belonging to him or used under his directions during construction.

All work areas shall be graded and left in a neat manner conforming to the natural appearance of the landscape as provided in Clause 8201.

Any residue deposited on the ground from washing out truck mixers, agitating trucks or any other similar concrete operations shall be buried or cleaned up in a manner acceptable to the Resident Engineer.

In the event of the Contractor’s failure to perform the above work, the work may be performed by the Employer at the expense of the Contractor, and his surety or sureties shall be liable therefore.

**Disposal of Waste Material**

1. General

Waste materials including, but not restricted to refuse, garbage, sanitary wastes industrial wastes and oil and other petroleum products, shall be disposed of by the Contractor. Disposal of combustible materials shall be by burying, where burial of such materials is approved by the Resident Engineer by burning, where burning of approved materials is permitted; or by removal from the construction area. Disposal of non-combustible materials

shall be by burying where burial of such materials is approved by the Resident Engineer or by removal from the construction area. Waste materials removed from the construction area shall be dumped at an approved dump

1. Disposal of Material by Burying

Only materials approved by the Resident Engineer may be buried. Burial shall be in pits and the location, size and depth of which shall be approved by the Resident Engineer. The pits shall be covered by at least 0.6 metre of earth material prior to abandonment.

1. Disposal of Material by Burning

All materials to be burned shall be piled in designated burning areas in such a manner as will cause the least fire hazards. Burning shall be through and complete and all charred pieces remaining after burning, except for scattered small pieces, shall be removed from the construction area and disposed of as otherwise provided in this Clause.

The Contractor shall at all times, take special precautions to prevent fire from spreading beyond the piles being burned and shall be liable for any damage caused by such burning operations. The Contractor shall have available, at all times, suitable equipment and supplies for use in preventing and suppressing fires and shall be subject to all laws and regulations locally applicable for pre-suppression, suppression and prevention of fires.

1. Disposal of Material by Removal

Material to be disposed of by removal from the construction area shall be removed from the area prior to the completion of the work under these specifications. All materials removed shall become the property of the Contractor.

Materials to be disposed of by dumping shall be hauled to an approved dump. It shall be the responsibility of the Contractor to make any arrangements of such dumping. Any fees for charges required to be paid for dumping of materials shall be paid by the Contractor and shall be included in the prices tendered in the Bill of Quantities for other work.

**A 3. PROJECT ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (PESMP)**

The Contractor will be deemed to have prepared his tender upon sound environmental practice and the guidelines contained in this section together with the entire contents of the Guidelines to Environmental Impact Assessment issued by the Ministry of Forestry, Fisheries and Environmental Affairs in December 1997 and the heading applicable to this contract in the Environmental Management Plan that follows this Section; as well as Environmental and Social Management Guidelines in the Road Sector issued by the Roads Authority in March 2008.

The PEMP will be read in conjunction with and shall be deemed to include all descriptions of environmental protection and mitigation described elsewhere in the Specification, Design Standards and Conditions of Contract. The PEMP will supplement but not supersede normal Regulatory Controls from Health and Safety Inspectorates and shall be made available to all parties.

The following is a summary of the guidelines to be incorporated into the PEMP

1. **Specific proposals**

* Drainage and Proper installation of drainage structures

Soil erosion

* Controlling and management of excavation activities
* Installation of erosion control measures such as check dams, scour checks and impact dissipators
* Landscaping and re-vegetating road embankment and gravel sites

Pollution (air, noise, water)

* Supervision of construction traffic, including control of speed
* Sensitisation of workforce
* Maintenance of plant and equipment
* Proper disposal of construction debris, proper handling, storage and disposal of oil and oil wastes, and disposal of wastewater / sewage at Contractor’s /workmen’s camps

Materials sources

* Planned, controlled and restricted access to all materials sites
* Proper management of excavation activities
* Landscaping, terracing where necessary, and grassing and re-vegetation of materials sites
* Compensation of individuals/ communities as required for use of material
* Controlled blasting of hard stone material

Water Sources

* Consultation with communities during identification of sources
* Management of water usage

Deviations

* Planning of deviations
* Reinstating deviations (and old tracks) to original condition

Vegetation

* Prohibition of use of herbicides
* Landscaping and planting all disturbed areas (pits, deviations, embankments, camps sites)
* Planting of trees at main towns/trading centres along road for aesthetics and as pollution screens.

Demobilisation/ Decommissioning

* Proper removal and disposal of construction buildings and structures required for the contractors’/workmen’s camp, and construction wastes including oil, solid wastes, and debris after construction works are complete, and restoration to original condition where applicable.

Land/property and crops

* Notification to people about non – compensation for annual crops within road reserve
* Evaluate land/property loss due to deviations, materials sites and Contractor’s camp
* Compensation to be paid for land, crops and all property on land temporarily acquired for road construction works (camps and deviations) and for all crops outside road reserve that are removed/destroyed for clearing of carriageway, gravel pits and deviations

Public Health and Occupational Safety

* Provision of water supply for the workforce, and proper facilities for the disposal of solid and sanitary waste
* Provision of protective gear to workforce
* Provision of a first aid kit on site

Road Safety

* Supervision of construction traffic and management of construction activities
* Provision of safe access/egress to work sites
* Warning signs are erected.

Site of cultural, historical and traditional value

* All findings to be reported to the Resident Engineer, RA Ministry responsible for antiquities and Department of Environmental Affairs.
* All graves are avoided.

1. **Planning and prevention**

* Frequency of Environmental site meetings to be chaired by the Environmental Control Officer and attended by relevant parties
* Adoption of time scale and planning for all relevant measures
* Procedure for correction of bad practice
* Reinstatement of borrow pits

**Borrow areas**

* Borrow areas shall be reinstated in compliance with the following minimum specifications in the table below:

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| PIT AND QUARRY REINSTATEMENT SPECIFICATION |
| 1. At the completion of operations, the Contractor shall rehabilitate used, exhausted and obsolete pits and quarries. |
| 2. The sides and floors of pits shall be formed to a flowing finish with side slopes not steeper than 1 vertical to 6 in horizontal. |
| 3. During pit reshaping any material carried to the pit shall be spread uniformly over the entire shaped surface. The Contractor shall ensure that non – biodegradable and inert waste is removed and disposed of in licenced sites. The same will apply to toxic waste. |
| 4. Topsoil shall be spread over the shaped batters, filled areas and bare areas of the pits to a reasonable depth. |
| 5. Following the spreading of topsoil, the entire pit shall be ripped along the contours to a depth of 500mm and at not more than 500mm spacing. |

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| REVEGETATION SPECIFICATION |
| 1. Planting and direct seeding shall be carried out after the topsoil has been placed, shaped and prepared for planting and seeding operations |
| 2. The Contractor shall prepare a plant and seed species list that is representative of the native vegetation (trees, and understorey species) in adjacent areas and the list is to be included in the Environmental Management Plan. |
| 3. The plant and seed list shall describe the plant size and spacing of all plants, the quantities by seed species in a seed mix and the seeding rate (kg per hectare) to be used in any revegetation of the area to be rehabilitated. |
| 4. The Contractor shall supply and hand-plant tube stock in good condition using the species and spacing chosen in the plant list. |
| 5. The Contractor shall supply and direct seed the areas to be seeded using the seed species mix and seeding rate (kg per hectare) as described in the plant list. |
| 6. All planting, seeding and or weed control operations shall be undertaken in accordance with basic principles of REVEGETATION AND LANDSCAPING. |
| 7. The completion criteria for revegetation shall be in accordance with the Environmental Management Plan. |

**A 4. ENVIRONMENTAL TRAINING**

The ECO will be responsible for organising the environmental training of all the Engineer’s and Contractor’s staff. It is suggested that this training is coupled with the safety training that the Contractor should include in his own site management plan. The Contractor shall ensure that the Resident Engineer is informed of all staff that will work on the site and their general responsibilities and shall make sure that they are available to attend suitable briefing sessions arranged by the ECO on the environmental mitigation measures that are to be in place on the site.

The Contractor shall provide the ECO with a suitable room for the briefing and such administrative support and facilities as shall be ordered by the ECO.

**A 5. MEDICAL AND HIV/AIDS PREVENTATION PROGRAMMES**

To assist in the general health and well-being of both all the site staff and the residents in the community local to the works, the Roads Authority will organize and coordinate appropriate awareness training as well as health screening (other than accident prevention and medical aid facilities provided by the Contractor).

The Contractor shall ensure that the Resident Engineer is informed when any new staff commences work on the site such that health and HIV awareness and counselling can be provided either in group sessions or on an individual basis. The Contractor shall ensure that staff are available for briefing by the RA’s staff and shall make available suitable rooms, administrative support and provide any facilities or supplies against an order from the RA. The Contractor shall ensure that condoms provided as part of the HIV/STD control programme are readily available to all staff.

The RA will also arrange for the health screening of site workers in local medical facilities and the Contractor shall cooperate fully in these programmes by making staff available. The Contractor shall ensure that the Resident Engineer and local medical officials are informed promptly of any workers suffering from the symptoms of infectious disease so appropriate help and treatment can be arranged promptly.

**A 6 ROAD SAFETY TRAINING**

The RA will be arranging road safety training and awareness sessions in local schools and community centres. The Contractor will assist the RA when requested with administrative support and where ordered the provision of supplies for these courses and programmes.

**A 7 Responsible Authorities**

The Contractor is advised that the following authorities have an interest in the environmental and social protective measures associated with this road construction project.

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| Environmental Affairs Department  Public Health Department  Health and Safety Office  District Valuer |
| Mulanje District Council  P.O Box 63  Mulanje |

**A 8 Site Clearance**

No trees are to be cut or removed unless required to be cleared or removed for construction works. Where there are branches overhanging roads or traffic diversion routes the Contractor shall agree with the SR the cutting back necessary to provide for clear vehicle access. The Branch cutting shall then be carried carefully using saws to leave a clean-cut face with no damages or snags.

**A 9 Finishing of verges and other works area**

Verges, routes of diversion roads, site camps and all other areas where the Contractor’s work has heavily compacted the soil shall be loosened, spread with a thin layer of grass plant rich soil and firmed by foot or a light roller so as to encourage the re-growth of natural vegetation.

**A 10 Water Pollution**

The Contractor shall avoid the pollution of watercourses and ground water. Sanitary facilities for all site workers convenient to the working sites shall be provided to enable environmentally sensitive disposal of the waste. The storage of bitumen fuel and oil for the works operations shall be arranged in working sites, refuelling of all plant and equipment and servicing practices shall be arranged to prevent the uncontrolled spilling of any oil-based products.

Mitigation measures shall include drip trays, working on paved surfaces with waste collection arrangements and the provision of oil absorbing material for spills that can be subsequently disposed safely by burning.

Measurement and Payment

**Add the following new pay items**

**Item Description Unit**

PS13.05(a) Allow for the undertaking and implementation of all the requirements of the Environmental management plan as described in clause 8300 and full compliance with series of the project specification Lump Sum

PS13.05 (b) Provide assistance and environmental training to staff P.S

PS13.05 (c) handling costs, profit, and overheads in respect of item 80.03 %

PS13.05 (d) Provide assistance and road safety training to staff P.S

PS13.05 (e) handling costs, profit, and overheads in respect of item 80.07 %

**A 11 Environmental Management Plan Table**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Environmental Social Impact** | **Proposed Mitigation and Aspect for Monitoring** | **Responsibility for intervention and monitoring during design, construction and defects liability period** | **Responsibility for mitigation monitoring and/or maintenance after defects liability period** | **Monitoring means**  **(c) = Construction**  **(o) = operation** | **Recommended frequency of monitoring** |
| **ENVIRONMENTAL MANAGEMENT** | | | | | |
| Changes in hydrology impeded drainage | Install drainage structure properly  Efficiency of drainage structures | Design consultant Supervising Engineer  Supervising Engineer | Contractor  District Works Offices | Inspection  (o) routine maintenance and road condition survey | (c) during construction and on completion of each structure |
| Soil erosion | * Control earthworks * Install drainage structures properly * Install erosion control measures * Landscape and re-vegetate gravel sites * Management of excavation activities * Impact on erosion (on road, off road, embankments, riverbanks etc) * Efficiency of erosion control measures * Landscape and grass road embankment | Supervising Engineer and Contractor Designer /RA  District Works Offices RA | Supervising Engineer and Contractor | (c) inspection   1. routine maintenance and road condition survey   (c) inspection   1. routine maintenance and road condition survey | (c) daily erosion control measures during construction and on completion of measures  (o) once in 6 months  (c) once a month |
| Air pollution | * Control speed of construction vehicles * Prohibit idling of vehicles * Sensitive workforce * Maintenance of plant and equipment * Plant trees in towns as pollution screens * Impose speed limits for all vehicles, especially at towns and villages * sensitize motorists/road users | Supervising Engineer and Contractor  Designer RA | TA \Health and Environment committees Traffic police | (c) inspection/ observation  (o) observation | (c) Daily /random  (o) random |

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| --- | --- | --- | --- | --- | --- |
| Noise pollution | * Sensitize workforce * Supervise construction traffic * Sensitise drivers of construction vehicles * Maintain plant and equipment * Impose speed limits for all vehicles, especially at towns and villages * Sensitize motorists /road users | Supervising Engineer and Contractor | TA Health and environment Committees  Traffic police | (c) inspection/ observation  (o) observation | 1. Daily /random   (o) random |
| Water pollution | * Incorporate erosion control measures * Works on culverts to be done in the dry season * Proper disposal of construction debris * Proper handling, storage and disposal of oil and oil wastes * Proper disposal of wastewater /sewerage at Contractor’s workmen’s camps | Designer RA  Supervising Engineer and Constructor | Contractor | (c) inspection | (c) daily |
| Oil pollution | Construct parking bays at larger trading centres for heavy vehicles.   * Proper storage, handling and disposal of oil and oil wastes * Maintain plant and equipment * Maintenance of construction vehicles should be carried out in the Contractor’s camp | Design Consultant Supervising Engineer and Contractor  Supervising Engineer and Contractor | Contractor | (c) Inspection  (o) routine maintenance | (c) during construction and on completion  (o) once in 6 months  (c) daily |
| Gravel sites | * Inform people living at/near the sites that the pits have been selected for exploitation. * Plan access to gravel sites * Control and restrict access to gravel sites (e.g. by fencing) * Control earthworks * Proper management of excavation activities * Landscape terrace if necessary, and grass site s. Replace trees that were removed during excavation * Discourage pits being made into water pans after construction Rehabilitate old unused gravel pits * Compensate individuals/ communities as required for use of material * Progress of rehabilitated gravel sites (use of site, established vegetation) | Supervising engineer and Contractor  Supervising Engineer and Contractor  Contractor  Supervising Engineer | District Works offices RA | (c) meeting  (c) Inspection  (c) Payment records  (o) Inspection | (c) Once immediately after selection of sites  (c) daily  (o) once before excavation begins and at specified periods as agreed thereafter  (c) once in 2 months  (o) once in 6 months |

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| --- | --- | --- | --- | --- | --- |
| Hard stone sources | * Inform communities living at/near the sites that the sites have been selected for exploitation. * Plan access to hard stone sites * Control and restrict access to hard stone sites (e.g. by fencing) * Control blasting * Proper management of exploitation activities * Landscape site after exploitation and grass sites. Replace trees or vegetation that were removed during excavation * Compensate individuals / communities as required for use of material | Supervising Engineer and Contractor  Supervising Engineer and Contractor  Contractor |  | (c) meeting  (c) inspection  (c) payments records | (c) Once immediately after selection of sites  (c) daily  (o) once before excavation begins and at specified periods as agreed thereafter |
| Sand sources | * Take sand from beds of large rivers only * Extraction to be done during low flow | Supervising Engineer and Contractor | n/a | (c) inspection | (c) during mining |
| Water sources | * Consult with communities during identification of sources * Management of water usage | Designer/RA | n/a | (c) meetings, inspection, check plans and schedule | (c) during rains during abstraction at source and at random |
| Deviations | * Plans deviations * Adhere to road reserve if possible * Obtain permission from inhabitant/community if deviation goes beyond road reserve * Re instate deviations (and old tracks) to original condition * Pay compensation for crops/property removed/destroyed by deviations * Monitor rehabilitation of deviations | Supervising Engineer and  Contractor  Contractor | Contractor  District Works Offices RA | (c) check plans inspections  (o) Payment records | (o) daily when deviations are in use  (c) once before constructing deviations   1. Once in 6 months |
| Vegetation / flora / forests | * Control clearing * Prohibit clearing using herbicides * Replant areas where vegetation is unnecessarily removed * Landscaping and planting all disturbed areas (pits, deviations embankments, camp sites) * Plant trees at main towns/trading centre s along road | Supervising Engineer and Contractor  TA Health and Environment Committees | Contractor | (c) inspection | (c) daily |

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|  | * Planting and grassing should be done just before the rains * Discourage use of firewood/charcoal by providing alternatives * Care for tree/plants | |  | TA Health and Environment Committees | (c) observation  (o) observation | (c) weekly  (o) Random |
| Workmanship | * locate camp in terminal town * provide water supply * provide proper sanitation facilities on site * Provide proper solid waste disposal facilities * Have central canteen facilities * Discourage use of firewood/charcoal by providing alternatives * Manage water use in camps | | Supervising Engineer and Contractor | Contractor | (c) inspection | (c) daily |
| Visual Enlargement | * Landscaping and planting of deviations, gravel sites and camp * Plant trees at terminal towns and trading centres * Care for plants and trees | | Designer /RA  TA health and Environment committees | Contractor  TA Health and Environment Committees | (c) inspection  (c) observation  (o) observation | (c) daily / random  (c) Weekly  (o) random |
| Construction waste | * Proper disposal of construction wastes including oil, solid wastes and debris | | Supervising Engineer and Contractor | Contractor | (c) inspection | (c) weekly |
| Demobilisation | * Clean up site * Remove all debris * Remove to original condition | | Supervising Engineer and Contractor | Contractor | (c) inspection and certificate of completion | (c) on completion of road construction works |
| **SOCIAL MITIGATION** | | | | | | |
| Settlement | * Plan for increased population and subsequent expansion of terminal towns and trading centres * Conduct STD/AIDS awareness campaign * Plan for local security | District Physical Planning Department  Supervising Engineer  TAs | | District Physical Planning Department | (c) meetings, barazas  (o) reports  (c) inspection records  (c) meetings, deployment of local police | (c) once during construction  (o) annually  (c) continuous  (c) continuous  (o) continuous |
| Loss of Land /property | * Identify project affected people * Notify people about non-compensation for annual crops within road reserve * Evaluate land/property loss due to deviations, materials sites and contractor’s camp * Compensation to be paid for land and all property on land to temporally acquired for road construction works | RA  Contractor | | n/a | (c) inspection  (c) notices, meetings  (c) inspection  (c) payments records | (c) Once before construction commences  (c) compensation paid once after assessment of loss before construction |
| Loss of crops | * Limits clearing of crops as much as possible * Pay compensation for all crops outside road reserve that are removed/destroyed for clearing of carriage way, gravel pits and deviations * Compensation to be paid for perennial crops within road reserve | RA  Supervising Engineer and Contractor  RA | | Supervising Engineer and Contractor | (c) inspector  (c) payment records | (c) Daily  (c) Once after assessment of loss before construction |
| Employment | Recruit local people, of which at least 25% should be women | Contractor | | n/a | (o) certificate of employment | (o) quarterly |
| Public Health and Occupational safety | * Reduce/minimize pollution as above * Provide water supply at camps * Proper disposal of solid and sanitary waste at camps * Design and locate pit latrines prudently * Have communal ablution facilities * Conduct STD/AIDS awareness campaign and distribute condoms * Provide potable water for workforce * Provision of protective gear to workforce * First Aid Kit on site * Appoint Health Safety and Environment officer on site * Contractor should have workmen’s compensation cover * Monitor impact on public health (incidence of malaria, respiratory diseases, STDs HIV/AIDS) * Conduct COVID-19 awareness and prevention measures, provide hand washing and sanitising facilities, provide face masks, observe social distancing | Supervising Engineer and Contractor  RA/Ministry of health | | Contractor  RA Ministry of Health | (c) Inspection  (o) Independent study | (c) daily  (o) once in 6 months |

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| --- | --- | --- | --- | --- | --- |
| Disturbance to public | * Minimise pollution as above * Erect information and warning signs * Control construction activities * Construct special parking bay at terminal towns for trucks/heavy vehicles | Supervising Engineer  Supervising Engineer  Supervising Engineer and Contractor  Design Consultant | Contractor District Works Offices | (c) Inspection  (c) Inspection  (c) Inspection  (c) Inspection  (o) routines maintenance | (c) daily  (c) when affected  (c) daily  (c) during construction and on completion  (o) once in 6 months |
| Road Safety | * Install speed bumps near school and trading centres * Supervise construction traffic * Ensure safe access/egress to work sites * Erect warning signs * Construct shoulders which can be used by pedestrians and non-motorized traffic * Construct special parking bay at large trading centres for trucks/heavy vehicles * Impact on road safety (number of accidents) | Design Engineer  Supervising Engineer and Contractor  Design Consultant | Supervising Engineer and Contractor  District Works Offices  District Works offices  RA | (o) (c) Inspection  (c) Inspection  (o) routines maintenance  (c) Inspection  (o) routine maintenance  (o) Police report | c) daily  (c) when designed  (o) once in 6 moths |
| Sites of cultural historical and traditional value | * Report all findings to Supervising Engineer, RA, Ministry responsible for antiquities and DEA * Avoid all graves | Supervising Engineer and Contractor | n/a | (c) Inspection and report | (c) As need arises |
| Socio-economic status | * Changes in income level * Change in health status * Changes in education levels | n/a | RA | (o) Independent Study | (o) once in 5 years |
| Land use | Change in land use area covered by settlement, arable land, pasture, degraded land shrub/bushland, social land | n/a | District Agriculture Offices  District Physical Planning Dept | (o) Independent Study | (o) once in 5 years |
| Economic activity in project area | * Changes in agricultural production and marketing * Changes in livestock production and marketing | n/a | District Agricultural Officers/RA | (o) Independent study | (o) once in 5 years |

**B. STAFF CONDITIONS AND WORKING HOURS**

**B 1. STAFF CONDITIONS**

The wages paid to staff employed by the contractor shall be fair and reasonable having regard to those commonly paid in the trade or industry in which such staff are employed and undertake to comply with such requirements relating to hours of work and conditions of labour as are or are or may from time to time be laid down in the legislation of Malawi.

In the event of any difference or dispute arising as to what wages ought to be paid, or what hours of working conditions ought to be observed it shall be reported to the Secretary for Labour as prescribed under the Trade Disputes (Arbitration and Settlement) Act (Cap. 54.02 for settlement.

Without prejudice to his obligations under Section 43 of the Employment Act (Cap 55:02)., the Contractor shall keep proper wages books and time sheets showing the wages paid and the time worked by the staff under his employment in and about the carrying out of this Contract and such wages books and time sheets shall be produced whenever required for inspection on of any officer authorized by the Contracting authority.

The Contractor shall recognize the freedom of his employees to be members of Trade Unions.

The Contractor shall at all times during the continuance of the Contract display a copy of this Article in full on his Site Office notice boards for the information of his employees.

Due precautions shall be taken by the contractor, and at his own cost, to ensure the safety of his staff and labour and in collaboration with and to the requirements of the local health authorities, to ensure that medical staff, first aid equipment and stores, sick bay and suitable ambulance service are available at camps, housing and on the site at all times throughout the period of the Contract and that suitable arrangements are made for the prevention of epidemics and for all necessary welfare and hygiene requirements. The Contractor shall ensure that all his staff is given awareness programmes on HIV/AIDS.

The Contractor shall maintain records of health and safety and make reports concerning the health and safety of his employees as the Resident Engineer may from time to time prescribe. The Contractor shall at all times take the necessary precautions to protect all staff and labour employed on the site from insect nuisance occasioned by the same. The contractor shall so far as is reasonably practicable, having regard to local conditions, provide on the site an adequate supply of drinking and other water for the use of his staff and labour.

The Contractor shall report to the Resident Engineer details of any accident as soon as possible after its occurrence. In the case of a fatality or serious accident, the Contractor shall, in addition, notify the Resident Engineer immediately by the quickest means available.

The Contractor shall make all necessary arrangements for the transport to any place as required for burial of any of his expatriate employee or member of their families who may die in Malawi. The Contractor shall also be responsible for the transport to the place of origin and burial of any of his local employees who may die while engaged upon the Works.

The Contractor shall at all times take all reasonable precautions for the protection of persons and property in the neighbourhood of the Works

**B 2. WORKING OUTSIDE NORMAL WORKING HOURS**

If any steps taken by the Contractor for working outside normal working hours involve additional supervision costs to the Engineer, such costs shall be recoverable from the Contractor either by direct payment by the Contractor to the Engineer, or by deduction from the contractor’s payment certificates and paid to the Engineer by the Contracting Authority. The overtime rates charged for additional supervision costs, relating to work outside normal working hours, shall be based on the cost rates in the supervision contract between the Engineer and the Contracting Authority.

The procedure for working outside normal working hours shall be as follows:

1. The Contractor shall present to the Engineer a request to work outside normal working hours.
2. The Engineer shall make arrangements with his personnel and may or may not accept the request to work outside normal working hours.
3. The Engineer shall have his personnel fill and sign time sheet(s) relating to hours worked outside normal working hours.
4. The filled time sheet(s) shall be presented to the contractor for countersigning and certification of the hours worked outside normal working hours.
5. At the end of the month the Engineer shall aggregate all hours worked outside normal working hours in the month and lodge with the Contracting Authority or the contractor a claim for payment of the additional supervision costs.
6. Where the additional supervision costs for working outside normal working hours are recoverable by direct payment by the Contractor, the contractor shall make payment to the Engineer within 30 days of receipt of a claim.

**SECTION 7:**

**GENERAL CONDITIONS OF CONTRACT**

**FIDIC: FEDERATION INTERNATIONALE DES INGENIEURS-CONSEILS:**

(INTERNATIONAL FEDERATION OF CONSULTING ENGINEERS)

Conditions of Contract

for CONSTRUCTION

FOR BUILDING AND ENGINEERING WORKS

DESIGNED BY THE EMPLOYER

**General Conditions**

2017 Edition

**SECTION 8:**

**SPECIAL CONDITIONS OF CONTRACT**

Section 8. Particular Conditions of Contract

The following Particular Conditions shall supplement the GC. Whenever there is a conflict, the provisions herein shall prevail over those in the GC.

NOTE: The Clauses of the Particular Conditions of Contract are numbered “PCC” followed in each case by the number of the relevant Clause or Sub-clause in the General Conditions of Contract and its relevant heading, or where new and unrelated Conditions of Contract are introduced by numbers following the last Clause number in the General Conditions of Contract and appropriate headings.

**Part A - Contract Data**

| **Conditions** | **Sub-Clause** | **Data** |
| --- | --- | --- |
| **Cost Plus Profit** | 1.1.20 | N/A |
| **DAAB** | 1.1.22 | One member |
| **Defects Notification Period** | 1.1.27 & 11.3 | 365 days. |
| **Employer’s name** | 1.1.31 | The Government of Malawi represented by Roads Authority |
| **Engineer’s name** | 1.1.35 | TBA |
| **Section** | 1.1.73 | N/A |
| **Time for Completion** | 1.1.84 | 365 days |
| **Notices and other Communications** | 1.3 (a) (ii) | Electronic transmission systems include email and file sharing web sites. Electronic transmission of documents shall be followed by a hard copy |
| **Notices and other Communications** | 1.3 (d) | The address for the Employer is:  Chief Executive Officer Roads Authority of Malawi Private Bag B346 Lilongwe  MALAWI  Telephone: (265)888 209 348/349  Fax number: (265) 1 750 307 |
| **Notices and other Communications** | 1.3 (d) | The address for the Contractor is:  ………………………………………..  ………………………………………...  ………………………………………… |
| **Law and Language** | 1.4 | The Contract shall be governed by the Laws of Republic of Malawi.  The ruling language of the contract shall be English.  The Language for communication shall be English |
| **Care and supply of documents** | 1.8 | The additional paper copies shall be **One (1).** |
| **Right of access to the Site** | 2.1 | No later than the Commencement Date |
| **Performance Security** | 4.2 | The performance security will be in the form of a **Bank Guarantee** in the amount(s) of **Ten (10)** percent of the Accepted Contract Amount and in the same currency (ies) of the Accepted Contract Amount. |
| **Normal working hours** | 6.5 | Monday to Saturday 7:30am – 17:00 hours with exception of Gazetted Public Holidays at a maximum of 45 hours in a week. |
| **Staff Removal** | 6.9 | Insert after 6.9(d);  (e) acts in a manner that breaches the Code of Conduct (ES) (e.g. sexual harassment, gender-based violence, illicit activity or crime).” |
| **Commencement** | 8.1 | **ES Management Strategies and Implementation Plans**  The following is inserted at the end of 8.1:  “Notwithstanding the Start Date as specified in this Sub-Clause, the Contractor shall not commence any Works, including mobilization and/or pre-construction activities (e.g. limited clearance for haul roads, site accesses and work site establishment, geotechnical investigations or investigations to select ancillary features such as quarries and borrow pits), unless the Project Manager is satisfied that appropriate measures are in place to address environmental and social risks and impacts. At a minimum, the Contractor shall apply the Management Strategies and Implementation Plans and Code of Conduct, submitted as part of the Bid and agreed as part of the Contract. The Contractor shall submit, on a continuing basis, for the Project Manager’s prior approval, such supplementary Management Strategies and Implementation Plans as are necessary to manage the ES risks and impacts of ongoing works. These Management Strategies and Implementation Plans collectively comprise the Contractor’s Environmental and Social Management Plan (C-ESMP). The C-ESMP shall be approved prior to the commencement of construction activities (e.g. excavation, earth works, bridge and structure works, stream and road diversions, quarrying or extraction of materials, concrete batching and asphalt manufacture). The approved C-ESMP shall be reviewed, periodically (but not less than every six (6) months), and updated in a timely manner, as required, by the Contractor to ensure that it contains measures appropriate to the Works activities to be undertaken. The updated C-ESMP shall be subject to prior approval by the Project Manager.” |
| **Programme** | 8.3(d) (iv) | Insert at end of GC 8.3(d)(iii):  (iv) “In addition to the progress report, the Contractor shall also provide a report on the Environmental and Social (ES) metrics set out in Appendix B. In addition to Appendix B reports, the Contractor shall also provide immediate notification to the Project Manager of incidents in the following categories. Full details of such incidents shall be provided to the Project Manager within the timeframe agreed with the Project Manager.   * + 1. confirmed or likely violation of any law or international agreement;     2. any fatality or serious (lost time) injury;     3. significant adverse effects or damage to private property (e.g. vehicle accident, damage from fly rock, working beyond the boundary)     4. major pollution of drinking water aquifer or damage or destruction of rare or endangered habitat (including protected areas) or species; or     5. any allegation of sexual harassment or sexual misbehavior, child abuse, defilement, or other violations involving children. |
| **Delay damages for the Works** | 8.8 & 14.15(c) | **0.05%** of the Contract Price per day. |
| **Maximum amount of delay damages** | 8.8 | **5%** of the final Contract Price. |
| **Provisional Sums** | 13.4.(b)(ii) | A percentage for adjustment of Provisional Sums is **7.5 %** |
| **Adjustment for Changes in Cost** | 13.7 | **Applicable**  Price Adjustment shall be based on the FIDIC Formula |
| **Advance Payment** | 14.2 | The total advance payment shall be **Twenty Percentage** **(20%)** of the Accepted Contract Amount payable in the currencies and proportions in which the Accepted Contract Amount is payable, subject to acceptance of an Advance Payment Guarantee. |
| **Percentage of Retention** | 14.3 | **5%** |
| **Limit of Retention Money** | 14.3 | **2.5%** of the Accepted Contract Amount |
| **Plant and Materials intended for the works** | 14.5(b)(i) | If Sub-Clause 14.5 applies:  Plant and Materials for payment when shipped. **N/A***.* |
|  | 14.5(c)(i) | Plant and Materials for payment when delivered to the Site**. N/A** |
| **Minimum Amount of Interim Payment Certificates** | 14.6.2 | **7.5%** of the Accepted Contract Amount. |
| **Payment** | 14.7 (a) | **42 days** |
| **Payment** | 14.7 (b) (ii) | **42 days** |
| **Publishing source of commercial interest rates for financial charges in case of delayed payment** | 14.8 | Prime Lending Rate of the Reserve Bank of Malawi **+ 1%** or if not available the Inter Bank offered rate and shall be calculated at simple interest |
| **Currencies of payment** | 14.15 | The Contract Price shall be paid in **Malawi Kwacha** |
| **Insurance to be provided by the Contractor** | 19.2 | The permitted deductible limits shall be:  (a)The minimum cover for insurance of equipment is **MK200 million** |
| **Insurance to be provided by the Contractor** | 19.2.3 (a) | 1.2 times the value of the Works designed |
| **Insurance to be provided by the Contractor** | 19.2.4 | 1. The minimum cover for insurance of property is: **MK200 million** 2. The minimum cover for personal injury or death insurance is **MK300 million** |
| **Constitution of the DAAB** | 21.1 | The DAAB shall comprise of one suitably qualified person.  The sole member shall be selected from a list of qualified arbitrators from the **Malawi Engineering Institution** |
| **Failure to appoint DAAB member(s)** | 21.2 | The president of the Malawi Engineering Institution |

**Section 8: Particular Conditions Part B - Special Provisions**

|  |  |
| --- | --- |
| **GCC Clause Reference or new SCC Clause No** | **Special Conditions** |
| **GCC 1.4** | **Law and Language**  **Add the following new sub-paragraph**:  The Contractor shall keep himself informed of all the latest laws of Malawi, regulations and bylaws promulgated by the government or any other statutory authority, which may have relevance to the execution of the Contract. |
| **GCC 1.5** | Delete the sequence of the documents presented in Clause GCC 1.5 in its entirety and replace with the following sequence:   1. The Contract Agreement (if completed) 2. Minutes of Contract Negotiations (if any) 3. the Letter of Acceptance 4. the Letter of Tender 5. the Particular Conditions part A- Contract Data 6. the Particular Conditions part B- Special Provisions 7. these General Conditions 8. the Particular Specifications 9. the Standard Specifications (SATCC 1998, reprinted 2001) 10. the Drawings and 11. the priced Bill of Quantities 12. the completed Qualification Information Forms and any other documents forming part of the Contract. |
| **GCC 2.1** | **Right of Access to the Site**  **Add the following after the first paragraph**:  For this Contract, the Employer shall, on the Commencement Date, give the Contractor right of access to the Site and possession of so much of the Site as may be required to enable the Contractor to commence and proceed with the construction of the Works. |
| **GCC3.2** | **Add the following to this Clause:**  The Engineer shall obtain the specific approval of the Employer before taking action under the following clauses   1. Clause GCC 5: Subcontracting 2. Clause GCC 8.5: Extension of time for Completion 3. Clause GCC 10: Employer’s Taking Over 4. Clauses GCC 13: Variations and adjustments 5. Clause GCC 20: Employer’s and Contractor’s Claims   Notwithstanding the obligation as set out above to obtain approval, if in the opinion of the Engineer, an emergency occurs affecting the safety of life or of the works or of adjoining property, the Engineer 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 Engineer 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 Engineer. The Engineer 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. |
| **GCC 4.2.1** | **Performance Security**  **Delete wording of the first Paragraph and replace with the following:**  The Contractor shall deliver the Performance Security to the Employer within 28 days after receiving the Letter of Acceptance, and shall send a copy to the Engineer. The Performance Security shall be issued by a bank registered in the Republic of Malawi or licensed to do business in that country.  The Performance Security shall be presented in accordance with the Form of Performance Security included in these Tender Documents.  The Performance Security shall be in the form of a Bank Guarantee issued by:   * 1. A bank located in Malawi or   2. A foreign bank through a correspondent bank located in Malawi.   The Performance Security for this Contract shall be ten percent (10%) of the accepted contract amount. |
| **GCC 4.8** | **Safety Procedures**  **Add the following item:**  (h) Provide, install and maintain adequate personnel and measures to ensure the safety of road users during construction of the works. In particular, the site must be left in a safe, trafficable condition with adequate traffic control measures outside normal working hours. |
| **GCC 4.10** | **Use of Site Data**  **Add the following at the end of the first Paragraph:**  The information issued by the Employer is for information only and shall neither form part of the Contract nor relieve the Contractor of his obligations under the Contract. |
| **GCC 4.17** | **Contractor’s Equipment**  **Add the following at the end of the Paragraph:**  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 the 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. |
| **GCC 4.18** | **Protection of the Environment**  **Add the following Paragraph at the end:**  The Contractor shall adhere at all times to the Environmental and Social Management Plan contained in the Particular Specifications. 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 deducting the relevant amount from interim payment certificates. |
| **GCC 4.21** | **Security of the Site**  **Add to Clause 4.21 the following item:**  (c) The Contractor shall note that the site is a public road and therefore the public is entitled to the continued use of the road. Notwithstanding, the Contractor is still responsible for ensuring the safe passage of the public through the site and for preventing unauthorised entry to areas where work is in progress. |
| **GCC 4.22** | **Contractor’s Operations on Site**  **Add the following after the first sentence of the first Paragraph:**  For the additional land required, the Contractor shall arrange with the owners or tenants the necessary rent and cost in connection therewith. The Contractor shall be responsible for all damage to such land and property and shall indemnify the Employer and hold him harmless in respect of all claims, demand proceedings, damage costs including attorney’s and client costs charges and expenses arising in respect thereof. The Contractor shall furnish the Engineer for his approval, copies of letters of consent from owners of additional land acquired. |
| **GCC 5** | **Subcontracting**  Add the following to Clause GCC 5:  It is an explicit requirement of the Contract that **ten percent (10%)** of the total value of the works, excluding escalation, contingencies, provisional sums and VAT, **be subcontracted to Malawian Local Contractors. These Small to medium Size Malawian Business Enterprises** are solely and wholly owned by one or more Malawians Persons and whose management and daily business operations are under the control of, and performed by one or more Malawian persons who effectively own and control it. They shall be functioning as the subcontractor to the main Contractor, which assigns Commercially Useful Work Item to be executed under a subcontract agreement to them.  Commercially Useful Work is the performance of real and actual work or provision of the services, in the discharge of any contractual obligation which shall include but not be limited to the performance of a distinct element of the work, which the business has the skills and expertise to undertake, as well as the responsibility for managing and supervising that function.  The Contractor shall prepare and attach to his payment certificates in a form provided by the Employer:   1. A brief report which describes the Commercially Useful Work Items performed by the Malawian Local Contractors in the execution of the Contract, both over the interim period and on cumulative basis; 2. A schedule reflecting the estimated total value of goods to be supplied and work and services to be performed, the cumulative value of goods supplied and/or performed, over the period for which the payment is claimed in respect of **each and every Malawian Local Contractor.**   The acceptance of the Main Contractor bid shall not be construed as approval of all or any of the listed **Malawian Local Contractors** in Form 4.6 of the Bidding Forms (Section 4) Should any or all the Malawian Local Contractors not be approved as a Sub contractor subsequent to the acceptance of the Tender, this shall in no way invalidate this tender and tendered units rates for various items of works which shall remain final and binding even in the event of Malawian Local Contractor not approved by the Engineer.  Should random inspection conducted by the Project Manager on the Main Contractor’s activities indicate that Main Contractor is not adhering to the requirements of this Specification; this may constitute sufficient grounds for cancellation of the contract depending on the seriousness of such non conformance.  The Contractor shall enter into a written Sub contract with each Specialist and Malawian Local Contractor and submit to the Project Manager and Employer details of all such sub Contract agreements which shall comply with all terms and conditions of this contract. |
| **GCC 5.2** | **Nominated Subcontractors**  **Add the following new Sub-Clause:**  **PCC 5.2.5 Employer’s assumption of subcontract**  If the Contract shall have been terminated in terms of Clause 15, the Employer shall have the right, by written notice given to any Nominated Subcontractor no later than 28 days after the said cancellation, to convert the subcontract concerned to a direct contract between the Employer and the Subcontractor provided that:  (a) the terms of the said direct contract shall mutatis mutandis be those of the subcontract concerned and  (b) The Employer shall have the right notwithstanding any breach of the subcontract by the Contractor subject to his forthwith paying to the Subcontractor all amounts then owing to the Subcontractor by the Contractor and perform any obligation, which the Contractor has failed to perform. |
| **GCC 6.1** | **Engagement of staff and Labour**  **Add the following at the end of the paragraph:**  The Contractor shall enter into written contract with all his personnel detailing their engagement terms and conditions. |
| **GCC 6.6** | **Facilities for Staff and Labour**  **Add the following sentence at the end of the first Paragraph:**  The facilities in particular for housing and ablutions shall be decent with lockable doors and cubicles and shall have privacy and be acceptable to the Engineer. |
| **GCC 6.10** | **Contractors Records**  **Add the following to Sub-Clause 6.10:**  The information required by the Engineer in respect of the Contractor’s Personnel shall be submitted three working days before each monthly site meeting.  The information required by the Engineer in respect of the Contractor's Equipment shall also be presented three working days before each monthly site meeting, and shall include details of plant availability, reasons for downtime, source of plant whether hired or owned, and manufacturer's ratings. |
| **GCC 6.12** | **Add the following to Sub-Clause 6.12:**  **Foreign Personnel**  The Contractor may import any personnel who are necessary for the execution of the Works, provided that these personnel are in possession of the required residence visas and work permits. The Contractor shall be responsible for the return to the place where they were recruited or to their domicile of imported Contractor’s Personnel. In the event of the death in Malawi of any of these personnel or members of their families, the Contractor shall similarly be responsible for making the appropriate arrangements for their return or burial.  No employee of the Contractor originating from any other country shall enter Malawian territory without a work and residence permit, which is obtainable from the Ministry of Home Affairs.  The Contractor shall note that he is responsible for the procurement of work and residence permits for his staff. Ample time shall be allowed for the processing of the applications by the Ministry of Home Affairs. The Employer will not honour any claim resulting from the late issuance of work and residence permits. The legal spouse and children of the Contractor’s personnel shall not be entitled to employment themselves, unless the necessary work permits have been obtained from the relevant authorities |
| **GCC 6.13** | **Add the following new Sub-Clauses:**  **Employment of Local Personnel**  It is an explicit Particular Condition of this contract that no unskilled labour may be employed on the works unless he or she is a Malawian citizen. It is a further condition that no skilled or semi-skilled non-Malawian person may be employed on the works unless the Contractor can prove that there is no suitable trained Malawian citizen available.  Tenderers are required to specify the non-Malawian personnel they intend bringing to Malawi for the sole purpose of executing the works. This listing does not absolve the Contractor from compliance with Clause 6.12.  Contractors shall further note that they must reinvestigate the availability of Malawian persons every six months, and if a suitable person is then available, he shall be employed in the place of the Non-Malawian person, who shall then leave the country.  The Contractor is also required to employ at least **10%** of his labour force from the female gender.  Failure to comply with this clause may result in the contract being stopped until the contractor has fulfilled this requirement. The Employer will not honour claims resulting from the stoppage of the contract due to the contractor’s failure to comply with this clause.  Add the following new clause: |
| **GCC 6.14** | **Funeral Arrangements**  The contractor shall make all necessary arrangements for the transport, to any place as required for burial, of any of his expatriate employees or members of families who may die in Malawi. The contractor shall also be responsible, to the extent required by the local regulations, for making any arrangements with regard to burial of any of his local employees who may die while engaged upon the works. |
| **GCC 6.15** | **Alcoholic Liquor and Drugs**  The Contractor shall not, otherwise than in accordance with the statuses, Ordinances and Government Regulations or Orders for the time being in force, import, sell, give, barter or otherwise dispose of any alcoholic liquor or drugs, or permit or suffer any such importance, gift, barter or disposal by his Sub-contractors, agents, staff and labour. |
| **GCC 6.16** | **Arms and Ammunition**  The Contractor shall not give, barter, or otherwise dispose of to any person or persons any arms or ammunition of any kind or permit or suffer the same as aforesaid. |
| **GCC 6.17** | **Festival and Religious Customs**  The Contractor shall, in all dealings with his staff and labour, have due regard to all recognized festivals, days of the rest and religious or other customs prevalent in the country of the Employer prior to submission of Tender, The Contractor is required to satisfy himself with the respective said holidays, customs and festivals.  If unscheduled official events take place on designated project working days (e.g., special election days) for which the Contractor could not have known during Tender Stage, the Contractor is required to submit to the Employer for his for his approval ahead of the event taking place, with a copy to the Engineer, the official notifications, any proposed action to be undertaken and any resultant time or financial aspects. |
| **GCC 6.18** | **Epidemics**  In the event of any outbreak of illness of an epidemic nature, the Contractor, at his own cost, shall comply with and implement such regulations, orders and requirements as may be made by the Government, or the local medical or sanitary authorities, for the purpose of dealing with and overcoming the same. |
| **GCC 6.19** | **Books and Records**  The Contractor shall keep proper wages’ books and time sheets, showing the wages paid to and time worked by the workmen in and about the execution of the Contract. He shall be bound, whenever required, to furnish such wages books and time sheets for the inspection of the Engineer, the Government Agent, or the Employer. |
| **GCC 6.20** | **Evidence of Compliance**  The Contractor shall, from time to time, furnish to the Engineer any detailed information and evidence the Engineer may require in order to satisfy himself that the labour conditions of the contract have been complied with. |
| **GCC 6.21** | **Breach of Wages**  Any Contractor or Sub-Contractor who is found to be in breach of the wages enforced pursuant to Clause 6.2 shall cease to be approved as a Contractor or Sub-Contractor for any further public contracts.  Should a claim be made to the Employer alleging the Contractor’s default in payment of wages of any workmen employed on the Contract and if complaints are brought to the notice of the Engineer and satisfactory proof thereof is furnished to the Engineer, the Engineer may, failing payment by the Contractor, arrange for the payment of such claim out of the monies due to the Contractor under the said Contract. |
| **GCC 6.22** | **Employment Records of Workers**  The Contractor shall keep complete and accurate records of the employment of labour at the site. The records shall include the names, ages, genders hours worked and wages paid to all workers. These records shall be summarised on a monthly basis and submitted to the Engineer, and these records shall be available for inspection by Auditors during normal working hours. These records shall be included in the details to be submitted by the Contractor under GC Clause 6.10 [Records of Contractor’s Personnel and Equipment]. |
| **GCC 6.23** | **Employment of Local Personnel**  It is an explicit Particular Condition of this contract that no unskilled labour may be employed on the works unless he or she is a Malawian citizen. It is a further condition that no skilled or semi-skilled non-Malawian person be employed on the works unless the Contractor can prove that there is no suitable trained Malawian citizen available.  Tenderers are required to specify the non-Malawian personnel they intend bringing to Malawi for the sole purpose of executing the works. This listing does not absolve the Contractor from the compliance with Clause 6.12.  Contractors shall further note that they must reinvestigate the availability of Malawian persons every six months, and if a suitable person is then available, he shall be employed in the place of the Non-Malawian person, who shall then leave the country.  The contractor is also required to employ at least 10% of his labour force from the female gender.  Failure to comply with this clause may result in the contract being stopped until the contractor has fulfilled this requirement. The Employer will not honour claims resulting from the stoppage of the contract due to the Contractor’s failure to comply with this clause. |
| **GCC 7.7** | **Ownership of Plant and Materials**  **Add the following at the end of Clause 7.7:**  All Plant and Materials owned by the Contractor, or by any company in which the Contractor has a controlling interest, shall, when delivered on the Site for incorporation into the works, be deemed to be the property of the Employer.  Provided always that the vesting of such property in the Employer shall not prejudice the right of the Contractor to the sole use of the said Contractor's Plant and Materials for the purpose of the Works nor shall it affect the Contractor's responsibility to operate and maintain the same under the provisions of the Contract. |
| **GCC 7.9** | **Overloading of Vehicles**  The Contractor shall implement sufficient measures on site to prevent overloading of construction vehicles. No vehicle on site shall be loaded more than the load for which the vehicles was designed or is licensed to carry, whichever is smaller.  The Engineer shall have the right to instruct the Contractor to reduce loads on construction vehicles if in his opinion the vehicles damage any part of the asphalt road network. The Engineer shall also be entitled to check the weight to ensure that no vehicle was overloaded.  A penalty in line with applicable penalties for overloading of Ministry of Transport and Public Works will be payable by the Contractor to the Employer for every incident of overloading. Such penalties will be deducted from payments due to the Contractor by the Employer. |
| **GCC 8.2** | **Time for Completion**  **Add the following sentence at the end:**  The time for completion of the works stated in the **PCC Part A (Contract Data)** is inclusive of special non-working days and the normal construction industry holidays. |
| **GCC 8.3** | **Programme**  **Add the following sub-item in item (d):**  (iii) The critical path and the planned production rates of all activities shall be clearly indicated on the programme, with due allowance being made for non-working periods, and periods where for any reason, for instance weather conditions, when production rates will be reduced.  **Add the following at the end of the clause.**  The Employer shall withhold **5%** of Current Interim Payment Certificate amount for late submission of an updated Programme. |
| **GCC 12.3** | **Valuation of the works**  **Add the following Paragraph at the end of this Sub-Clause:**  If, on the issue of the Taking-Over Certificate for the whole of the Works, it is found that as a result of variations issued and all adjustments upon measurement of the estimated quantities set out in the Bill of Quantities, excluding Provisional Sums and price adjustments, there have been additions or deductions from the Accepted Contract Amount which taken together are in excess of fifteen (15) percent of the Accepted Contract Amount less Provisional Sums, Budget Amounts and Contingencies, then and in such event, after due consultation by the Engineer with the Employer and the Contractor, there shall be added to or deducted from the Contract Price ten (10) percent of the total amount of additions or deductions. |
| **GCC13.7** | **Adjustments for Changes in Cost**  Pn = a + b (Ln/Lo) + c (En/Eo) + d(Mn/Mo)+…………..  Where,  “Pn” is the adjustment multiplier to be applied to the estimated contract value in the relevant currency of the work carried out in period “n” this being a month.  “a” is a fixed coefficient, representing the non-adjustable portion in contractual payments. **The fixed component shall be 0.3.**  “b”, “c”, “d” are coefficients representing the estimated proportion of each cost element.  Ln, En, Mn are the current cost indices or reference prices expressed in relevant currency of payment.  Lo, Eo, Mo are the base cost indices or reference prices expressed in relevant currency of payment.  **The Base Date shall be 28 days before the date of Bid Submission** |
| **GCC 14.3** | **Application for Interim Payment Certificates**  **Add the following at the end of the Clause:**  The estimated contract value of the Works executed during the month shall be agreed with the Engineer’s Representative on site prior to the preparation of the Statement. The quantities claimed for the various items shall be accurate and not simply guessed or based on a percentage of the scheduled quantity. |
| **GCC 14.8** | Delayed Payment  Calculation of Financing Charges for delayed payment shall be Prime Lending Rate of the Reserve Bank of Malawi + 1% or if not available the Inter Bank offered rate and shall be calculated at simple interest |
| **GCC 18.1** | Add the following to the list of exceptional events  **(g) 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.** |

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| SECTION 9  Contract Forms |

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# Contract Agreement

**Procurement Reference No:**

THIS AGREEMENT made the ……… day of, ………..………….. ,2024, between …………….…………………….… of …………………………………………… (hereinafter called “the Employer”), of the one part, and …………………………………………..…. of ………………………………………………………………………………… (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 ….......................……… …...…………………………………………………. (hereinafter called the Contract Price) within a period .........................calendar days*.*

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) this Contract Agreement (if completed)

(b) the Minutes of Contract Negotiations (if any)

(c) the Letter 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 (SATCC 1998, reprinted 2001)

(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.

1. 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: Position:

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.

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| Performance Bank Guarantee |

## 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.

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| 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 there-under 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:

1. **In the case of the Bid submitted by a Joint Venture specify the name of the Joint Venture as Bidder. In the event that the Bidder is a joint venture, each reference to “Bidder” in the Beneficial Ownership Disclosure Form (including this Introduction thereto) shall be read to refer to the joint venture member.** [↑](#footnote-ref-1)
2. **Person signing the Bid shall have the power of attorney given by the Bidder. The power of attorney shall be attached with the Bid Schedules.** [↑](#footnote-ref-2)