

**METSIMAHOLO LOCAL MUNICIPALITY****APPOINTMENT OF A CONTRACTOR FOR RESURFACING
AND RESEALING OF TAR ROADS IN DENEYSVILLE
AND ORANJEVILLE****BID NO.: MLM 28/2023/24****CIDB GRADING: 4 CE/4SB or HIGHER****ISSUED BY:**

Metsimaholo Local Municipality
Municipal Building
10 Fichardt Street
Sasolburg
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Name of Company	:	
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Contact No	:	
Email Address	:	
CSD Supplier Number	:	
CSD Unique registration ref no:	:	
CIDB: CRS Number	:	
Tender Amount (VAT incl.):		R

TENDER NUMBER: MLM 28/2023/24

APPOINTMENT OF A CONTRACTOR FOR RESURFACING AND RESEALING OF TAR ROADS IN DENEYSVILLE AND ORANJEVILLE LIST OF CONTRACT DOCUMENTS

The following documents form part of this contract:

1. The General Conditions of Contract for Construction Works, Second Edition (GCC 2015), published by the South African Institute of Civil Engineers, which the Tenderer shall purchase himself (see note 1 below).
2. SANS 1200 The Standard Specifications for Civil Engineering Construction
3. The Standard Specifications for Road and Bridge Works for State Road Authorities, 1998 Edition (COLTO) published by the South African Institute of Civil Engineers, which the Tenderer shall purchase himself
4. The Project Document containing the Tender Notice, Conditions of Tender, Tender Data, Returnable Schedules, Form of Offer, General and Particular Conditions of Contract, Pricing Schedule, Project Specifications and Site Information, issued by the Employer (see note 4 below). The Employer's Form of Acceptance and any correspondence from the selected Tenderer, performance security-demand guarantee, and all addenda issued during the period of tender will also form part of this volume once a Tenderer has been appointed.
5. The civil drawings

Notes to Tenderer

1. **Volume 1 is obtainable from SAICE, Private Bag X200, Halfway House, 1685.**
Tel: +27 11 805 5947 Fax: +27 11 805 5971, email: civilinfo@saice.org.za.
Website: <http://www.saice.org.za>
2. **Volume 2 is obtainable from SA Bureau of Standards Dr Lategan Road; Groenkloof; Pretoria; 0001. Private Bag X191, Pretoria, 0001.**
3. **Volume 3 is obtainable from SAICE, Private Bag X200, Halfway House, 1685.**
Tel: +27 11 805 5947 Fax: +27 11 805 5971, email: civilinfo@saice.org.za.
Website: <http://www.saice.org.za>
4. **Volume 4 is issued at tender stage as per tender advertisement. The pricing data is available on request in Excel format**

At contract stage Volume 4 will be a bound signed paper copy containing the following documents:
 - Returnable schedules relevant to the project
 - Agreements and Contract Data
 - Pricing Data
 - Scope of Work
 - Site Information

4. SUBMISSION OF TENDER – Refer to clause F2 in the Tender Data

Information provided by a Tenderer over and above the above elements of Volume 4 shall be treated as information only and will only be bound into the document if the tenderer notes on Form A4: Schedule of Variations or deviations that the information has a bearing on the tender price.

5. For alternative offers, the Tenderer shall refer to clause F2.12 in the Tender Data

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PART T1: TENDERING PROCEDURES

PART T2: RETURNABLE DOCUMENTS

T.1.1 TENDER NOTICE AND INVITATION TO TENDER



TENDER NOTICE

BID NO: MLM 28/2023/24

METSIMAHOLO LOCAL MUNICIPALITY invites tenders for the **ADVERTISEMENT: APPOINTMENT OF A CONTRACTOR FOR RESURFACING AND RESEALING OF TAR ROADS IN DENEYSVILLE AND ORANJEVILLE**

Tenderers should have a CIDB Contractor grading designation of 4 CE/4SB or HIGHER.

Bid documents will be available during working hours upon payment of R600.00 at The Municipal Building, 10 Fichardt Street, Sasolburg. Documents can also be downloaded for the e-tender portal www.e-tenders.gov.za for free.

No clarification meeting will be required.

It is a pre-requisite that Bidders must be in good standing with SARS, have the requisite CIDB certificate, and must be registered on the Central Supplier Database (CSD)..

The closing time and date for receipt of tenders is **20 June 2024 @ 11:00**. Bid documents, clearly marked BID MLM 28/2023/24; ADVERTISEMENT: APPOINTMENT OF A CONTRACTOR FOR RESURFACING AND RESEALING OF TAR ROADS IN DENEYSVILLE AND ORANJEVILLE must be deposited in the bid box at the Municipal Building, 10 Fichardt Street, Sasolburg before the closing time. Bid documents will be opened in public soon after the closing time. Telegraphic, telephonic, telex, e-mail, facsimile and late tenders will not be accepted. Requirements for sealing, addressing, delivery, opening and assessment of tenders are stated in the Tender Data.

Service providers will be adjudicated according to the Supply Chain Management Policy using the 80/20 point system, based on the Preferential Procurement Policy Framework Act 5 of 2005 and MFMA, Act 56 of 2003 as well as the Broad-Based Black Economic Empowerment Act, Act 53 of 2003.

Queries relating to the issues of these documents may be addressed to:

Administrative:

Mr Kgomotso Radebe
Tel No. +27 16 973 8326/7

E-mail: kgomotso.riba@metsimaholo.gov.za

Technical:

Mr Mashudu Mudzuli
Tel No. +27 12 645 1143

E-mail: admin@luvhengoconsulting.co.za

T1.2 CONDITIONS OF TENDER

T1.2 CONDITIONS OF TENDER

F.1 General

F.1.1 Actions

F.1.1.1 The employer and each tenderer submitting a tender offer shall comply with these conditions of tender. In their dealings with each other, they shall discharge their duties and obligations as set out in F.2 and F.3, timeously and with integrity, and behave equitably, honestly and transparently, comply with all legal obligations and not engage in anticompetitive practices.

F.1.1.2 The employer and the tenderer and all their agents and employees involved in the tender process shall avoid conflicts of interest and where a conflict of interest is perceived or known, declare any such conflict of interest, indicating the nature of such conflict. Tenderers shall declare any potential conflict of interest in their tender submissions. Employees, agents and advisors of the employer shall declare any conflict of interest to whoever is responsible for overseeing the procurement process at the start of any deliberations relating to the procurement process or as soon as they become aware of such conflict, and abstain from any decisions where such conflict exists or recuse themselves from the procurement process, as appropriate.

- Note:
- 1) A conflict of interest may arise due to a conflict of roles which might provide an incentive for improper acts in some circumstances. A conflict of interest can create an appearance of impropriety that can undermine confidence in the ability of that person to act properly in his or her position even if no improper acts result.
 - 2) Conflicts of interest in respect of those engaged in the procurement process include direct, indirect or family interests in the tender or outcome of the procurement process and any personal bias, inclination, obligation, allegiance or loyalty which would in any way affect any decisions taken.

F.1.1.3 The employer shall not seek and a tenderer shall not submit a tender without having a firm intention and the capacity to proceed with the contract.

F.1.2 Tender Documents

The documents issued by the employer for the purpose of a tender offer are listed in the tender data.

F.1.3 Interpretation

F.1.3.1 The tender data and additional requirements contained in the tender schedules that are included in the returnable documents are deemed to be part of these conditions of tender.

F.1.3.2 These conditions of tender, the tender data and tender schedules which are only required for tender evaluation purposes, shall not form part of any contract arising from the invitation to tender.

F.1.3.3 For the purposes of these conditions of tender, the following definitions apply:

- a) **conflict of interest** means any situation in which:
 - i) Someone in a position of trust has competing professional or personal interests which make it difficult to fulfil his or her duties impartially;
 - ii) an individual or organisation is in a position to exploit a professional or official capacity in some way for their personal or corporate benefit; or
 - iii) in compatibility or contradictory interests exist between an employee and the organisation which employs that employee.

- b) **comparative offer** means the tenderer's financial offer after all tendered parameters that will affect the value of the financial offer have been taken into consideration in order to enable comparisons to be made between offers on a comparative basis
- c) **corrupt practice** means the offering, giving, receiving or soliciting of anything of value to influence the action of the employer or his staff or agents, *or any official in the public service or in the employ of an Organ of State*, in the tender process; and
- d) **fraudulent practice** means the misrepresentation of the facts in order to influence the tender process or the award of a contract arising from a tender offer to the detriment of the employer, including collusive practices intended to establish prices at artificial levels
- e) **organization** means a company, firm, enterprise, association or other legal entity, whether incorporated or not, or a public body
- f) **quality (functionality)** means the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs
- g) **tenderer** means any organisation who is represented by a duly authorised employee, partner, shareholder or director that responds to the Tender Notice by drawing tender documents
- h) **these conditions of tender** mean the Standard Conditions of Tender (as published and amended from time to time by the Construction Industry Development Board) and the employer's Special Conditions of Tender, the latter are demonstrated by appearing in italics.

F.1.4 Communication and employer's agent

Each communication between the employer and a tenderer shall be to or from the employer's agent only, and in a form that can be readily read, copied and recorded. Communications shall be in the English language. The employer shall not take any responsibility for non-receipt of communications from or by a tenderer. The name and contact details of the employer's agent are stated in the tender data.

F.1.5 The employer's right to accept or reject any tender offer

F.1.5.1 The employer *does not bind itself to accept the lowest or any other tender, and may, in addition, accept or reject any variation, deviation, tender offer, or alternative tender offer, and may cancel the tender process and reject all tender offers at any time before the formation of a contract.* The employer shall not accept or incur any liability to a tenderer for such cancellation and rejection but will give written reasons for such action upon written request to do so.

F.1.5.2 The employer may not subsequent to the cancellation or abandonment of a tender process or the rejection of all responsive tender offers re-issue a tender covering substantially the same scope of work within a period of six months (*measured between the relevant closing dates of the abandoned tender and the re-issued tender*) unless only one tender was received and such tender was returned unopened to the tenderer, *or if there is agreement by the participating tenderers.*

F.2 Tenderer's obligations

F.2.1 Eligibility

F.2.1.1 Submit a tender offer only if the tenderer satisfies the criteria stated in the tender data and the tenderer, or any of his principals, is not under any restriction to do business with the employer.

F.2.1.2 Notify the employer of any proposed material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used by the employer as the basis in a prior process to invite the tenderer to submit a tender offer and obtain the employer's written approval to do so prior to the closing time for tenders.

F.2.2 Cost of tendering

Accept that, unless otherwise stated in the tender data, the employer will not compensate the tenderer for any costs incurred in the preparation and submission of a tender offer, including the costs of *attending any clarification meeting* and any testing necessary to demonstrate that aspects of the offer complies with the requirements.

F.2.3 Check documents

Check the tender documents on receipt for completeness and notify the employer of any discrepancy or omission.

F.2.4 Confidentiality and copyright of documents

Treat as confidential, *regardless of whether or not a tender offer is submitted*, all matters arising in connection with the tender. Use and copy the documents issued by the employer only for the purpose of preparing and submitting a tender offer in response to the invitation.

F.2.5 Reference documents

Obtain, as necessary for submitting a tender offer, copies of the latest versions of standards, specifications, conditions of contract and other publications, which are not attached but which are incorporated into the tender documents by reference.

F.2.6 Acknowledge addenda

Acknowledge receipt of addenda to the tender documents, which the employer may issue, and if necessary apply for an extension to the closing time stated in the tender data, in order to take the addenda into account.

F.2.7 Clarification meeting

Attend, where required, *in person or designate a suitably qualified person in the direct employ of the tenderer*, a clarification meeting at which tenderers may familiarize themselves with aspects of the proposed work, services or supply and raise questions. Details of the meeting(s) are stated in the tender data.

F.2.8 Seek clarification

Request clarification of the tender documents, if necessary, by notifying the employer at least five working days before the closing time stated in the tender data. *Any variation or deviation based on a point for which clarity should have been requested may render a tenderer's offer non-responsive in terms of F.3.8.*

F.2.9 Insurance

Be aware that the extent of insurance to be provided by the employer (if any) might not be for the full cover required in terms of the conditions of contract identified in the contract data. The tenderer is advised to seek qualified advice regarding insurance.

F.2.10 Pricing the tender offer

F.2.10.1 Include in the rates, prices, and the tendered total of the prices (if any) all *costs prescribed as being applicable to the specified pay items as well as all* duties, taxes except Value Added Tax (VAT), and other levies payable by the successful tenderer, such duties, taxes and levies being those applicable 14 days before the closing time stated in the tender data.

F.2.10.2 Show VAT payable by the employer separately as an addition to the tendered total of the prices.

F.2.10.3 Provide rates and prices that are fixed for the duration of the contract and not subject to adjustment except as provided for in the conditions of contract identified in the contract data.

F.2.10.4 State the rates and prices in Rand unless instructed otherwise in the tender data. The conditions of contract identified in the contract data may provide for part payment in other currencies.

F.2.11 Alterations to documents

Not make any alterations or additions to the tender documents, except to comply with instructions issued by the employer, or necessary to correct errors made by the tenderer. All signatories to the tender offer shall initial all such alterations. Erasures and the use of masking fluid are prohibited.

F.2.12 Alternative tender offers

F.2.12.1 Unless otherwise stated in the tender data, submit alternative tender offers only if a main tender offer, strictly in accordance with all the requirements of the tender documents, is also submitted as well as a schedule that compares the requirements of the tender documents with the alternative requirements that are proposed. *Alternative tender offers shall not alter any contingency pay items provided in the tender documents, or offer fixed prices (except where such are provided in the postulated pricing schedule) or a fixed price contract.*

F.2.12.2 Accept that an alternative tender offer may be based only on the criteria stated in the tender data or criteria otherwise acceptable to the employer.

F.2.12.3 *Qualify a tender offer (except that no qualifications shall be in conflict with F.2.8) but undertake to do so by submitting such qualification in terms of F.2.12.1 and F.2.12.2.*

F.2.13 Submitting a tender offer

F.2.13.1 Submit one tender offer only, either as a single tendering entity or as a member in a joint venture to provide the whole of the works, services or supply identified in the contract data and described in the scope of works, unless stated otherwise in the tender data.

F.2.13.2 Return all returnable documents to the employer after completing them in their entirety, either electronically (if they were issued in electronic format) or by writing legibly in non-erasable ink.

F.2.13.3 Submit the parts of the tender offer communicated on paper as an original plus the number of copies stated in the tender data, with an English translation of any documentation in a language other than English, and the parts communicated electronically in the same format as they were issued by the employer.

F.2.13.4 Sign the original and all copies of the tender offer where required in terms of the tender data. The employer will hold all authorized signatories liable on behalf of the tenderer. Signatories for tenderers proposing to contract as joint ventures shall state which of the signatories is the lead partner whom the employer shall hold liable for the purpose of the tender offer.

F.2.13.5 Seal the original and each copy of the tender offer as separate packages marking the packages as "ORIGINAL" and "COPY". Each package shall state on the outside the employer's address and identification details stated in the tender data, as well as the tenderer's name and contact address.

F.2.13.6 Where a two-envelope system is required in terms of the tender data, place and seal the returnable documents listed in the tender data in an envelope marked "financial proposal" and place the remaining returnable documents in an envelope marked "technical proposal". Each envelope shall state on the outside the employer's address and identification details stated in the tender data, as well as the tenderer's name and contact address.

F.2.13.7 Seal the original tender offer and copy packages together in an outer package that states on the outside only the employer's address and identification details as stated in the tender data.

F.2.13.8 Accept that the employer will not assume any responsibility for the misplacement or premature opening of the tender offer if the outer package is not sealed and marked as stated.

F.2.13.9 Accept that tender offers submitted by facsimile or e-mail will be rejected by the employer, unless stated otherwise in the tender data.

F.2.14 Information and data to be completed in all respects

Accept that tender offers, which do not provide all the data or information requested completely and in the form required, may be regarded by the employer as non-responsive.

F.2.15 Closing time

F.2.15.1 Ensure that the employer receives the tender offer at the address specified in the tender data not later than the closing time stated in the tender data. Accept that proof of posting shall not be accepted as proof of delivery.

F.2.15.2 Accept that, if the employer extends the closing time stated in the tender data for any reason, the requirements of these conditions of tender apply equally to the extended deadline.

F.2.16 Tender offer validity

F.2.16.1 Hold the tender offer(s) valid for acceptance by the employer at any time during the validity period stated in the tender data after the closing time stated in the tender data.

F.2.16.2 If requested by the employer, consider extending the validity period stated in the tender data for an agreed additional period with or without any conditions attached to such extension.

F.2.16.3 Accept that a tender submission that has been submitted to the employer may only be *modified, corrected, withdrawn* or substituted by giving the employer written notice before the closing time for tenders that a tender is to be *modified, corrected, withdrawn* or substituted.

F.2.16.4 Where a tender submission is to be substituted, submit a substitute tender in accordance with the requirements of F.2.13 with the packages clearly marked as "SUBSTITUTE".

F.2.17 Clarification or *withdrawal* of tender offer after submission

F.2.17.1 Provide clarification of a tender offer in response to a request to do so from the employer during the evaluation of tender offers. This may include providing a breakdown of rates or prices and correction of arithmetical errors or *adjusting of imbalanced rates*, by the adjustment of certain rates or item prices (or both). No change in the competitive position of tenderers or substance of the tender offer is sought, offered, or permitted.

F.2.17.2 *Accept that the employer may, at its sole discretion, accept a less favourable tender from those already received or invite fresh tenders if a tenderer, at any time after the opening of his tender offer but prior to the signing of a contract based on his tender offer:*

- a) *withdraws his tender; or*
- b) *gives notice of his inability to execute the contract in terms of his tender; or*
- c) *fails to sign a contract or furnish the performance security within the period fixed in the letter of award or any extended period fixed by the employer; or*
- d) *fails to comply with a request made in terms of F.2.17.1 or F.2.18.1,*

in which case such tenderer shall be automatically barred from tendering on any of the employer's future tenders for a period to be determined by the employer, but not less than twelve (12) months, from the date of tender closure. The employer may fully or partly exempt a tenderer from the provisions of this condition if he is of the opinion that the circumstances justify the exemption.

Note: Sub-clause F.2.17 does not preclude the negotiation of the final terms of the contract with a preferred tenderer following a competitive selection process, should the Employer elect to do so.

F.2.18 Provide other material

F.2.18.1 Provide, on request by the employer, any other material that has a bearing on the tender offer, the tenderer's commercial position (including notarized joint venture agreements), preferencing arrangements, or samples of materials, considered necessary by the employer for the purpose of a full and fair risk assessment. Should the tenderer not provide the material, or a satisfactory reason as to why it cannot be provided, by the time for submission stated in the employer's request, the employer may regard the tender offer as non-responsive *and may invoke the same remedy as provided for under F.2.17.2.*

F.2.18.2 Dispose of samples of materials provided for evaluation by the employer, where required.

F.2.18.3 *Accept the employer's right, at its sole discretion, to appoint suitably qualified persons to report on the financial resources, standing with the South African Revenue Service regarding all taxes, management structure and ownership details of any tenderer and/or to verify the correctness of any information furnished to the employer in terms of F.2.17.1. Comply with the employer's request within the time stated in the request. Failure on the part of the tenderer to cooperate with such an inquiry shall entitle the employer to declare such tender offer as non-responsive and may invoke the same remedy as provided for under F.2.17.2.*

F.2.19 Inspections, tests and analysis

Provide access during working hours to premises for inspections, tests and analysis as provided for in the tender data.

F.2.20 Submit securities, bonds, policies, etc.

If requested, submit for the employer's acceptance before formation of the contract, all securities, bonds, guarantees, policies and certificates of insurance required in terms of the conditions of contract identified in the contract data.

F.2.21 Check final draft

Check the final draft of the contract provided by the employer within the time available for the employer to issue the contract.

F.2.22 Return of other tender documents

If so instructed by the employer, return all retained tender documents within 28 days after the expiry of the validity period stated in the tender data.

F.2.23 Certificates

Include in the tender submission or provide the employer with any certificates as stated in the tender data.

F.3 The employer's undertakings**F.3.1 Respond to requests from the tenderer**

F.3.1.1 Unless otherwise stated in the tender data respond to a request for clarification received up to five working days before the tender closing time stated in the tender data and notify all tenderers who drew *tender* documents.

F.3.1.2 Consider any request to make a material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used to prequalify a tenderer to submit a tender offer in terms of a previous procurement process and deny any such request if as a consequence: -

- a) an individual firm, or a joint venture as a whole, or any individual member of the joint venture fails to meet any of the collective or individual qualifying requirements;
- b) the new partners to a joint venture were not prequalified in the first instance, either as individual firms or as another joint venture; or
- c) in the opinion of the Employer, acceptance of the material change would compromise the outcome of the prequalification process.

F.3.2 Issue Addenda

If necessary, issue addenda that may amend or amplify the tender documents to each tenderer during the period from the date that tender documents are available until three working days before the tender closing time stated in the tender data. If, as a result a tenderer applies for an extension to the closing time stated in the tender data, the Employer may grant such extension and, shall then notify all tenderers who drew *tender* documents.

F.3.3 Return late tender offers

Return tender offers *withdrawn in terms of F.2.16.3* or received after the closing time stated in the tender data, unopened, (unless it is necessary to open a tender submission to obtain a forwarding address), to the tenderer concerned.

F.3.4 Opening of tender submissions

F.3.4.1 Unless the two-envelope system is to be followed, open valid tender submissions in the presence of tenderers' agents who choose to attend at the time and place stated in the tender data. Tender submissions for which acceptable reasons for withdrawal have been submitted will not be opened.

F.3.4.2 Announce at the meeting held immediately after the opening of tender submissions, at a venue indicated in the tender data, the name of each tenderer whose tender offer is opened and, where applicable, the total of his prices, preferences claimed and time for completion for the main tender offer only.

F.3.4.3 Make available the record outlined in F.3.4.2 to all interested persons upon request.

F.3.5 Two-envelope system

F.3.5.1 Where stated in the tender data that a two-envelope system is to be followed, open only the technical proposal of valid tenders in the presence of tenderers' agents who choose to attend at the time and place stated in the tender data and announce the name of each tenderer whose technical proposal is opened.

F.3.5.2 Evaluate the quality of the technical proposals offered by tenderers, then advise tenderers who remain in contention for the award of the contract of the time and place when the financial proposals will be opened. Open only the financial proposals of tenderers, who score in the quality evaluation *equal to or more than* the minimum number of points for quality stated in the tender data, and announce the total price. Return unopened financial proposals to tenderers whose technical proposals failed to achieve the minimum number of points for quality.

F.3.6 Non-disclosure

Not disclose to tenderers, or to any other person not officially concerned with such processes, information relating to the evaluation and comparison of tender offers, the final evaluation price and recommendations for the award of a contract, until after the award of the contract to the successful tenderer.

F.3.7 Grounds for rejection and disqualification

F.3.7.1 Determine whether there has been any effort by a tenderer to influence the processing of tender offers and instantly disqualify a tenderer (and his tender offer) if it is established that he engaged in corrupt or fraudulent practices. *In addition, any such disqualification shall entitle the employer, at its sole discretion, to impose a specified period during which tender offers will not be accepted from the offending tenderer.*

F.3.7.2 *Communicate to other state tender boards, provincial tender boards or parastatal tender boards any tenderer disqualified in terms of special condition F.3.7.1.*

F.3.7.3 *Consider rejecting any tender offers received from tenderers who are involved in any form of litigation or legal proceedings by or against the Employer.*

F.3.7.4 *Reject any offer from a tenderer who has not purchased the tender documents in his own name or in the name of a fellow member of a joint venture.*

F.3.7.5 *Reject any offer from a tenderer that contains information or data that is not in compliance with the minimum key staff qualification requirements.*

F.3.8 Test for responsiveness

F.3.8.1 Determine, after opening and before detailed evaluation, whether each tender offer properly received:

- a) complies with the requirements of these Conditions of Tender,
- b) has been properly and fully completed and signed, and
- c) is responsive to the other requirements of the tender documents.

F.3.8.2 A responsive tender is one that conforms to all the terms, conditions, and specifications of the tender documents without material deviation or qualification. A material deviation or qualification is one which, in the Employer's opinion, would:

- a) detrimentally affect the scope, quality, or performance of the works, services or supply identified in the Scope of Work,
- b) significantly change the Employer's or the tenderer's risks and responsibilities under the contract, or
- c) affect the competitive position of other tenderers presenting responsive tenders, if it were to be rectified.

Reject a non-responsive tender offer, and not allow it to be subsequently made responsive by correction or withdrawal of the non-conforming deviation or reservation *unless it can be subsequently rendered responsive by correction of non-material deviations.*

F.3.9 Arithmetical errors, omissions, discrepancies and imbalanced unit rates

F.3.9.1 Check responsive tenders for discrepancies between amounts in words and amounts in figures. Where there is a discrepancy between the amounts in figures and the amount in words, the amount in words shall govern.

F.3.9.2 Check *responsive* tender offers for:

- a) the gross misplacement of the decimal point in any unit rate;
 - b) omissions made in completing the pricing schedule or bills of quantities; or
 - c) arithmetic errors in:
 - i) line-item totals resulting from the product of a unit rate and a quantity in bills of quantities or schedules of prices; or
 - ii) the summation of the prices.
- F) *imbalanced unit rates.*

F.3.9.3 Notify the tenderer of all errors or omissions that are identified in the tender offer and either confirm the tender offer as tendered or accept the corrected total of prices.

F.3.9.4 Where the tenderer elects to confirm the tender offer as tendered, correct the errors as follows:

- a) If bills of quantities or pricing schedules apply and there is an error in the line item total resulting from the product of the unit rate and the quantity, the line total shall govern and the rate shall be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the unit rate shall be corrected.
- b) Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the tenderer's addition of prices, the total of the prices shall be corrected.
- c) *Where the unit rates are imbalanced request tenderers to amend and adjust any rates declared imbalanced by the employer while retaining the total of the prices derived after any adjustment made.*

F.3.9.5 Consider the rejection of a tender offer if the tenderer does not correct or accept the correction of his arithmetical errors or amend/adjust an imbalanced unit rate in the manner described above.

F.3.10 Clarification of a tender offer

Obtain clarification from a tenderer on any matter that could give rise to ambiguity in a contract arising from the tender offer.

F.3.11 Evaluation of tender offers

F.3.11.1 General

Appoint an evaluation panel of not less than three persons. Reduce each responsive tender offer to a comparative offer and evaluate them using the tender evaluation methods and associated evaluation criteria and weightings that are specified in the tender data.

F.3.11.2 Method 1: Financial offer

In the case of a financial offer:

- a) Rank tender offers from the most favourable to the least favourable comparative offer.
- b) Recommend the highest ranked tenderer for the award of the contract, unless there are compelling and justifiable reasons not to do so.
- c) Re-rank all tenderers should there be compelling and justifiable reasons not to recommend the highest ranked tenderer and recommend the highest ranked tenderer, unless there are compelling and justifiable reasons not to do so and the process set out in this sub clause is repeated.

F.3.11.3 Method 2: Financial offer and preference

In the case of a financial offer and preferences:

- a) Score each tender in respect of the financial offer made and preferences claimed, if any, in accordance with the provisions of F.3.11.7 and F.3.11.8.
- b) Calculate the total number of tender evaluation points (T_{EV}) in accordance with the following formula:

$$T_{EV} = N_{FO} + N_P$$

where: N_{FO} is the number of tender evaluation points awarded for the financial offer made in accordance with F.3.11.7;

N_P is the number of tender evaluation points awarded for preferences claimed in accordance with F.3.11.8.

- c) Rank tender offers from the highest number of tender evaluation points to the lowest.
- d) Recommend the tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.
- e) Rescore and re-rank all tenderers should there be compelling and justifiable reasons not to recommend the tenderer with the highest number of tender evaluation points, and recommend the tenderer with the highest number of tender evaluation points, unless there are compelling and justifiable reasons not to do so and the process set out in this sub clause is repeated

F.3.11.4 Method 3: Financial offer and quality

In the case of a financial offer and quality:

- a) Score each tender in respect of the financial offer made and the quality offered in accordance with the provisions of F.3.11.7 and F.3.11.9, rejecting all tender offers that fail to score the minimum number of points for quality stated in the tender data, if any.
- b) Calculate the total number of tender evaluation points (T_{EV}) in accordance with the following formula:

$$T_{EV} = N_{FO} + N_Q$$

where: N_{FO} is the number of tender evaluation points awarded for the financial offer made in accordance with F.3.11.7;

N_Q is the number of tender evaluation points awarded for quality offered in accordance with F.3.11.9.

- c) Rank tender offers from the highest number of tender evaluation points to the lowest.
- d) Recommend tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.
- e) Rescore and re-rank all tenderers should there be compelling and justifiable reasons not to recommend the tenderer with the highest number of tender evaluation points and recommend the tenderer with the highest number of tender evaluation points, unless there are compelling and justifiable reasons not to do so and the process set out in this sub clause is repeated.

F.3.11.5 Method 4: Financial offer, quality and preferences

In the case of a financial offer, quality and preferences:

- a) Score each tender in respect of the financial offer made, preference claimed, if any, and the quality offered in accordance with the provisions of F.3.11.7 to F.3.11.9, rejecting all tender offers that fail to score the minimum number of points for quality stated in the tender data, if any.
- b) Calculate the total number of tender evaluation points (T_{EV}) in accordance with the following formula, unless otherwise stated in the tender data:

$$T_{EV} = N_{FO} + N_P + N_Q$$

where: N_{FO} is the number of tender evaluation points awarded for the financial offer made in accordance with F.3.11.7;

N_P is the number of tender evaluation points awarded for preferences claimed in accordance with F.3.11.8;

N_Q is the number of tender evaluation points awarded for quality offered in accordance with F.3.11.9.

- c) Rank tender offers from the highest number of tender evaluation points to the lowest.
- d) Recommend the tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.
- e) Rescore and re-rank all tenderers should there be compelling and justifiable reasons not to recommend the tenderer with the highest number of tender evaluation points and recommend

the tenderer with the highest number of tender evaluation points, unless there are compelling and justifiable reasons not to do so and the process set out in this sub clause is repeated.

F.3.11.6 Decimal places

Score financial offers, preferences and quality, as relevant, to two decimal places.

F.3.11.7 Scoring Financial Offers

Score the financial offers of remaining responsive tender offers using the following formula:

$$N_{FO} = W_1 \times A$$

where: N_{FO} is the number of tender evaluation points awarded for the financial offer.
 W_1 is the maximum possible number of tender evaluation points awarded for the financial offer as stated in the tender data.
 A is a number calculated using the formula and option described in Table F.1 as stated in the tender data.

Table F.1: Formulae for calculating the value of A

Formula	Comparison aimed at achieving	Option 1 ^a	Option 2 ^a
1	Highest price or discount	$A = (1 + \frac{(P - P_m)}{P_m})$	$A = P_m / P$
2	Lowest price or percentage commission / fee	$A = (1 - \frac{(P - P_m)}{P_m})$	$A = P_m / P$
P_m is the comparative offer of the most favourable comparative offer (excluding all Provisional and Prime Cost Sums and the associated VAT). P is the comparative offer of the tender offer under consideration (excluding all Provisional and Prime Cost Sums and the associated VAT).			

F.3.11.8 Scoring preferences

Confirm that tenderers are eligible for the preferences claimed in accordance with the provisions of the tender data and reject all claims for preferences where tenderers are not eligible for such preferences. Calculate the total number of tender evaluation points for preferences claimed in accordance with the provisions of the tender data.

F.3.11.9 Scoring quality

Score each of the criteria and sub-criteria for quality in accordance with the provisions of the tender data.

Calculate the total number of tender evaluation points for quality using the following formula:

$$N_Q = W_2 \times S_O / M_S$$

where: S_O is the score for quality allocated to the submission under consideration;
 M_S is the maximum possible score for quality in respect of a submission; and
 W_2 is the maximum possible number of tender evaluation points awarded for the quality as stated in the tender data.

F.3.12 Insurance provided by the employer

If requested by the proposed successful tenderer, submit for the tenderer's information the policies and / or certificates of insurance which the conditions of contract identified in the contract data, require the employer to provide.

F.3.13 Acceptance of tender offer

Accept the tender offer, if in the opinion of the employer, it does not present any unacceptable commercial risk and only if the tenderer:

- a) is not under restrictions, or has principals who are under restrictions, preventing participating in the employer's procurement,
- b) can, as necessary and in relation to the proposed contract, demonstrate that he or she possesses the professional and technical qualifications, professional and technical competence, financial resources, equipment and other physical facilities, managerial capability, reliability, experience and reputation, expertise and the personnel, to perform the contract,
- c) has the legal capacity to enter into the contract,
- d) is not insolvent, in receivership, bankrupt or being wound up, has his affairs administered by a court or a judicial officer, has suspended his business activities, or is subject to legal proceedings in respect of any of the foregoing,
- e) complies with the legal requirements, if any, stated in the tender data, and
- f) is able, in the opinion of the employer, to perform the contract free of conflicts of interest.

F.3.14 Prepare contract documents

F.3.14.1 If necessary, revise documents that shall form part of the contract and that were issued by the employer as part of the tender documents to take account of:

- a) addenda issued during the tender period,
- b) inclusion of some of the returnable documents, and
- c) other revisions agreed between the employer and the successful tenderer.

F.3.14.2 Complete the schedule of deviations attached to the form of offer and acceptance, if any.

F.3.15 Complete adjudicator's contract

Unless alternative arrangements have been agreed or otherwise provided for in the contract, arrange for both parties to complete formalities for appointing the selected adjudicator at the same time as the main contract is signed.

F.3.16 Notice to unsuccessful tenderers

F.3.16.1 Notify the successful tenderer of the employer's acceptance of his tender offer by completing and returning one copy of the form of acceptance before the expiry of the validity period stated in the tender data, or agreed additional period.

F.3.16.2 After the successful tenderer has been notified of the employer's acceptance of the tender, notify other tenderers that their tender offers have not been accepted.

F.3.17 Provide copies of the contracts

Provide to the successful tenderer the number of copies stated in the tender data of the signed copy of the contract as soon as possible after completion and signing of the form of offer and acceptance.

F.3.18 Provide written reasons for actions taken

Provide upon request written reasons to tenderers for any action that is taken in applying these conditions of tender, but withhold information which is not in the public interest to be divulged, which is considered to prejudice the legitimate commercial interests of tenderers or might prejudice fair competition between tenderers.

F.3.19 Delegation of authority

The Employer may delegate any power vested in him by virtue of these Conditions of Tender to an officer or employee of the Employer.

T1.3 TENDER DATA

The conditions of tender are the Standard Conditions of Tender as contained in Annex F of the CIDB Standard for Uniformity in Construction Procurement (May 2010) as published in Government Gazette No 33239, Board Notice 86 of 2010.

The Standard Conditions of Tender make several references to the tender data for details that apply specifically to this tender. The tender data shall have precedence in the interpretation of any ambiguity of inconsistency between it and the Standard Conditions of Tender.

Each item of data given below is cross-referenced to the sub clause in the Standard Conditions of Tender to which it mainly applies.

Sub- clause	Data
F1.1	The Employer is Metsimaholo Local Municipality.
F1.2	The Project Document issued by the Employer consists of the following: THE TENDER Part T1: Tendering procedures: T1.1 Tender notice and invitation to tender T1.2 Tender Data Part T2: Returnable documents T2.1 Returnable Schedules required for Tender Evaluation T2.2 Other Documents required for Tender Evaluation T2.3 Returnable Schedules that will be incorporated into the Contract THE CONTRACT Part C1: Agreements and contract data C1.1 Form of Offer and Acceptance C1.2 Agreement in terms of Occupation Health and Safety Act C1.3 Form of Guarantee C.1.4 Contract Data Part C2: Pricing data C2.1 Pricing instructions C2.2 Bills of quantities Part C3: Scope of work Part C4: Site information Drawings

Tender data contd.

Sub-clause	Data
F1.3	The Tender Document is available upon payment of R600.00 or can be downloaded free of charge from the e tender website.
F1.4	Name: Luvhengo Consulting Engineers Address: 546 16th Road Constantia Park Midrand 1685 Contact person: Mashudu Mudzuli Tel: +27 12 645 1143 E-mail: admin@luvhengoconsulting.co.za
	Only those tenderers who are registered with the CIDB, or are capable of being so prior to the evaluation of submissions, in a contractor grading designation equal to 4 CE/4SB or HIGHER or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations, for an 4 CE/4SB or HIGHER class of construction work, are eligible to have their tenders evaluated.
	a) Only those tenderers who are registered with the CIDB, or are capable of being so prior to the evaluation of submissions, in a contractor grading designation equal to 4 CE/4SB or HIGHER than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations, for an 4 CE/4SB or HIGHER class of construction work, are eligible to have their tenders evaluated. - every member of the joint venture is registered with the CIDB; - the combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for an 4 CE/4SB or HIGHER class of construction work or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations.

Tender data contd.

Sub-clause	Data
F1.4	b) The following tenderers who are registered with the CIDB, or are capable of being so registered prior to the evaluation of submissions, are eligible to have their tenders evaluated: 1. contractors who have a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) of 25(7A) of the Construction Industry Development Regulations, for an 4 CE/4SB or HIGHER class of construction work; and • the employer is satisfied that such a contractor has the potential to develop and qualify to be registered in that higher grade as determined in accordance with the provisions of the CIDB Specification for Social and Economic Deliverables in Construction Works Contracts; and • the employer agrees to provide the financial, management or other support that is considered appropriate to enable the contractor to successfully execute that contract. c) No clarification meeting will be required.
F2.1	Eligibility Only those tenderers who satisfy the following eligibility criteria and who provide the required evidence in their tender submissions are eligible to submit tenders and have their tenders evaluated: a) Only those tenderers who are registered with the CIDB, or are capable of being so prior to the evaluation of submissions, in a contractor grading designation equal to 4 CE/4SB or HIGHER than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations, for a 6CE class of construction work, are eligible to have their tenders evaluated. Joint ventures are eligible to submit tenders provided that: - every member of the joint venture is registered with the CIDB; - the combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for an 6 CE class of construction work or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations.

Tender data contd.

Sub-clause	Data
F2.1	b) The following tenderers who are registered with the CIDB, or are capable of being so registered prior to the evaluation of submissions, are eligible to have their tenders evaluated: I. contractors who have a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) of 25(7A) of the Construction Industry Development Regulations, for an 4 CE/4SB or HIGHER class of construction work; and - the employer is satisfied that such a contractor has the potential to develop and qualify to be registered in that higher grade as determined in accordance with the provisions of the CIDB Specification for Social and Economic Deliverables in Construction Works Contracts; and - the employer agrees to provide the financial, management or other support that is considered appropriate to enable the contractor to successfully execute that contract. c) No clarification meeting will be required.
F2.10	a) The Valued Added Tax (VAT) rate shall be 15% or as otherwise provided for by legislation. b) The successful Tenderer shall be required to produce a VAT invoice that shall only be prepared once measurements and valuations for work done in terms of the contract offer have been agreed with the Employers agent and a certificate of payment issued. Payment of VAT to previously non-VAT vendors shall be processed from the month in which the Tenderers liability with the South African Revenue Services is effective.
F2.11	A Tender offer shall not be considered if alterations have been made to the forms of tender data or contract data (unless such alterations have been duly authenticated by the Tenderer) or if any particulars required therein have not been completed in all respects.
F2.12	No alternative tender offers will be considered
F2.13.1	The Tenderer may not make an offer for only part of the services as defined in the Scope of Work.

Tender data contd.

Sub-clause	Data		
F2.13.3	Parts of each tender offer communicated on paper shall be submitted as original, plus 0 copies. Under no circumstances whatsoever may the tender forms be retyped or redrafted.		
F2.13.5	The Employer's address for delivery of tender offers and identification details to be shown on each tender offer package is: Municipal Building, 10 Fichardt Street, Sasolburg Location of tender box: As mentioned on the tender advertisement		
F2.15	The closing time for submission of Tender Offers is: 11:00, 20 June 2024, telegraphic, telex, electronic or emailed tenders will not be accepted.		
F2.16	The tender offer validity period is 90 days		
F2.23	RETURNABLE DOCUMENTS		
	NO	RETURNABLES	NOTES
	1	Form of Offer	Fully completed in handwriting and signed in black ink pen.
	2	A copy of a CSD summary report OR CSD number.	- CSD full report or summary report OR CSD number. - Municipality may not make any award to a person whose tax matters are not compliant with SARS, please note that tax compliance will be verified before any award.
	3	Proof of company registration documents with the Director's details must be attached.	- The company registration documents must indicate the company and Director's details. In a case where the Director has changed names, proof of name change must be attached.
	4	Fully completed and signed MBD forms	Fully Completed and signed in handwriting and in black ink pen.
	5	Completed BOQ in black ink pen	Items not priced will be considered rated at R0.00 and cannot be re-priced after appointment.
	6	Joint Venture Agreement (Must indicate the lead partner, if the bidders grading is not the same the lead partner must have the higher grading)	- If applicable submit a complete and signed JV agreement. - JV agreement stating who the lead partner is with the shared percentages. - Note: JV agreement must be as per CIDB regulation of 2001 regulation 25 (5)(a),(b) and (6)
NB! The following documents will not be accepted: for number 7 to 12 Affidavits; Address confirmation letter; invoices from the body corporates or agents, rates and taxes of the lessor (without a lease agreement) and municipal tender / rates clearance letter.			

	7	Latest Municipal rates and taxes account for the COMPANY	• Submit strictly on the 20th of JUNE 2024 municipal rates & taxes statement must be attached • The submitted account must not be in arrears for more than 3 months. • In a case of Rates & Taxes Account being in a family member's name, ONLY MUNICIPAL Account where the address of the Account matches the address on the company registration documents will be accepted) if not in arrears for more than 3 months.
	8	Latest Municipal rates and taxes account for the DIRECTORS/TRUSTEES/ MEMBERS/SHAREHOLDERS.	• Submit strictly on the 20th of JUNE 2024 municipal rates & taxes statement must be attached • The submitted account must not be in arrears for more than 3 months. In a case of Rates & Taxes Account being in a family member's name, ONLY MUNICIPAL Account where the address of the Account matches the address on the company registration documents will be accepted) if not in arrears for more than 3 months.
	9	In the event of a tenant renting a lease agreement MUST be attached for the COMPANY	The lease agreement must include the following: • A valid copy of the lease agreement must be signed by (both Lessor and lessee). • The lease agreement must indicate dates of commencement and expiry or duration. • In a case where the lease agreement has expired and there is a clause indicating an automatic renewal the original lease agreement and a confirmation letter signed by Lessor must be attached. • In the occasion where the lease agreement has expired the original lease agreement AND extension must be attached with commencement and expiry dates or duration. • In a case of lease agreement being in a family member's name, the lease agreement will be accepted if the address on the lease matches the address on the company registration documents, AND ONLY if the lease agreement is valid.

	10	In the event of a tenant renting a lease agreement MUST be attached for the DIRECTORS/TRUSTEES/MEMBERS/SHAREHOLDERS .	The lease agreement must include the following: • A valid copy of the lease agreement must be signed by (both Lessor and lessee). • The lease agreement must indicate dates of commencement and expiry or duration. • In a case where the lease agreement has expired and there is a clause indicating an automatic renewal the original lease agreement and a confirmation letter signed by Lessor must be attached. • In the occasion where the lease agreement has expired the original lease agreement AND extension must be attached with commencement and expiry dates or duration. • In a case of lease agreement being in a family member's name, the lease agreement will be accepted if the address on the lease matches the address on the company registration documents, AND ONLY if the lease agreement is valid.
		Note: If the company registration document's physical address on lease agreement or the municipal rates and taxes statement is the same as the Director's physical address, we will accept for both Company & Director.	
	11	Municipal rates and taxes for bidders who are from the rural areas for the COMPANY	• In the event that the bidder is from the rural area a letter from the municipality that the area is not liable to pay municipal rates and taxes OR a signed letter from the chief indicating that the bidder is from that particular rural/tribal area.
	12	Municipal rates and taxes for bidders who are from the rural areas for the DIRECTORS/TRUSTEES/MEMBER S/SHAREHOLDERS .	• In the event that the bidder is from the rural area a letter from the municipality that the area is not liable to pay municipal rates and taxes OR a signed letter from the chief indicating that the bidder is from that particular rural/tribal area.
	13	CIDB Grading	• Copy of Company CIDB Grading designation 4CE / 4SB or Higher.

Failure to comply with the above-mentioned terms and conditions will deem your bid to be disqualified.

Bidders must keep a copy of a completed excel spreadsheet BOQ which may be required during the evaluation processes

PROPOSED ALLOCATION OF POINTS IN TERMS OF FUNCTIONALITY

The below mentioned criteria regarding Functionality is required for responsiveness and therefore eligibility for the next stage of evaluation. This is done to determine the ability of each bidder to successfully execute the contract according to specifications.

Non-compliant bidders will be rejected after this phase and not continue to price scoring. These criteria shall only determine whether a tender will further be evaluated and will not influence the points scored on Price. **Bidders must obtain a minimum of 70 for functionality for further evaluation**

No.	Description	Max Points																
1.	<u>Capacity: Key members in the team</u> The personnel as listed must be the site team and may not be changed at time of implementation without prior notice to the Client (MLM) <table> <tr> <th>Job Description</th><th>Required Experience + Qualification</th><th>Points Allocation</th></tr> <tr> <td rowspan="2">Site Agent/ Contracts Manager</td><td>National Diploma or Degree/B-Tech Degree in Civil Engineering: Min 5 years' experience in roads projects (resurfacing and or resealing tar roads)</td><td>15</td></tr> <tr> <td>National Diploma or Degree/B-Tech Degree in Civil Engineering: Min 3 years' & less than 5 years' experience in roads projects (resurfacing and or resealing tar roads)</td><td>10</td></tr> <tr> <td rowspan="2">Site Foreman</td><td>Min 5 years' experience in roads projects (resurfacing and or resealing tar roads)</td><td>5</td></tr> <tr> <td>Min 3 years' & less than 5 years' experience in roads projects (resurfacing and or resealing tar roads)</td><td>2</td></tr> <tr> <td>Safety Agent/ Officer</td><td>OHS certificate endorsed by NOSA or National Diploma in OHS or higher.</td><td>5</td></tr> </table>	Job Description	Required Experience + Qualification	Points Allocation	Site Agent/ Contracts Manager	National Diploma or Degree/B-Tech Degree in Civil Engineering: Min 5 years' experience in roads projects (resurfacing and or resealing tar roads)	15	National Diploma or Degree/B-Tech Degree in Civil Engineering: Min 3 years' & less than 5 years' experience in roads projects (resurfacing and or resealing tar roads)	10	Site Foreman	Min 5 years' experience in roads projects (resurfacing and or resealing tar roads)	5	Min 3 years' & less than 5 years' experience in roads projects (resurfacing and or resealing tar roads)	2	Safety Agent/ Officer	OHS certificate endorsed by NOSA or National Diploma in OHS or higher.	5	25
Job Description	Required Experience + Qualification	Points Allocation																
Site Agent/ Contracts Manager	National Diploma or Degree/B-Tech Degree in Civil Engineering: Min 5 years' experience in roads projects (resurfacing and or resealing tar roads)	15																
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Site Foreman	Min 5 years' experience in roads projects (resurfacing and or resealing tar roads)	5																
	Min 3 years' & less than 5 years' experience in roads projects (resurfacing and or resealing tar roads)	2																
Safety Agent/ Officer	OHS certificate endorsed by NOSA or National Diploma in OHS or higher.	5																

		Attach copies of qualifications & CVs with references.												
2.	<u>Experience of the company</u> This sub criterion covers the experience of the company in the following works: Resurfacing and or Reseal Projects of tar roads using, single seals, double seals, bituminous seals, and slurry seals. This is reflected by the number of Asphalt Resurfacing and or Reseal Projects completed by the company to the Construction Works value of R 1 500 000 incl. VAT per project or more in the past 10 years (from 01 JUNE 2014). <table><tr><td>Attach company experience with regards to resurfacing and resealing of tar roads. Signed appointment letter / works order WITH fully completed signed Metsimaholo reference (for completed projects only) must indicate project value and scope of work completed. (10points per project) </td></tr></table>	Attach company experience with regards to resurfacing and resealing of tar roads. Signed appointment letter / works order WITH fully completed signed Metsimaholo reference (for completed projects only) must indicate project value and scope of work completed. (10points per project)	40											
Attach company experience with regards to resurfacing and resealing of tar roads. Signed appointment letter / works order WITH fully completed signed Metsimaholo reference (for completed projects only) must indicate project value and scope of work completed. (10points per project)														
3.	<u>Capacity to execute work.</u> Infrastructure and Resources Available Plant & Tools. • Signed confirmation letter: The bidder must submit signed confirmation letter of ownership in the company's letterhead. • Leasing: Signed Letter of intent/ Agreement from Hiring Company. Letter of intent must list the plant to be hired in the Lessor's letterhead. <table><tr><th>Plant</th><th>Points Awarded - if proof of confirmation letter of owner attached</th></tr><tr><td>Milling Machine x1</td><td>6</td></tr><tr><td>Tandem Roller x1 and PTR Roller x1</td><td>4</td></tr><tr><td>Paver x1</td><td>4</td></tr><tr><td>Broce broom x1</td><td>4</td></tr><tr><td>Tack cart x1</td><td>4</td></tr></table> • Provision of proof of ownership (i.e., Registration Document /Certification on company/Director's name) • Leasing: Signed Letter of intent/ Agreement from Hiring Company. Letter of intent must list the plant to be hired in the Lessor's letterhead.	Plant	Points Awarded - if proof of confirmation letter of owner attached	Milling Machine x1	6	Tandem Roller x1 and PTR Roller x1	4	Paver x1	4	Broce broom x1	4	Tack cart x1	4	30
Plant	Points Awarded - if proof of confirmation letter of owner attached													
Milling Machine x1	6													
Tandem Roller x1 and PTR Roller x1	4													
Paver x1	4													
Broce broom x1	4													
Tack cart x1	4													

		Plant	Points Awarded - if proof of owner attached	Points Awarded - if Intent/ Agreement from Hiring Company attached	
		Tipper Truck minimum 6m ³ x 4	8	6	
	4.	<u>Bank Rating Letter</u> Submit bank rating letter not older than 3 months of rating of A,B or C with a dated stamp/ date of issue. (from 20 APRIL 2024)			5
	TOTAL				100

Bidders must complete the following table; points will be allocated for the below mentioned key personnel.

COMPANY KEY PERSONNEL	NAME AND SURNAME
Site Agent/ Contracts Manager	
Site Foreman	
Safety Agent/ Officer	

Bidders must ensure that the same personnel and equipment are made available during site handover. If listed personnel are not available, they must be replaced by personnel with the same or higher qualification and experience.

The recommended bidders company personnel and completed projects may be verified before appointments can be finalised. Misrepresentation of information will lead to disqualification of the bidder and the bidder can be blacklisted on National Treasury database

NB: Of the three projects that are advertised MLM 26/2023/24, MLM 27/2023/24 and MLM 28/2023/24 only one project will be awarded to one service provider

SATISFACTORY LETTER – A	
TO: <u>METSIMAHOLO LOCAL MUNICIPALITY</u>	
I, the undersigned being duly authorized to do so, hereby furnish a reference to Metsimaholo Local Municipality relative to bid MLM 28/2023/24 for the: Appointment of a contractor for resurfacing and resealing of tar roads in Denesville and Oranjeville	
Company Name	
Project Name	
Project Contract number / Tender number / Order number	
Project value / Contract value / Order amount	
Description of scope of work	
Contract Duration / time when the above was provided	
Was their project completed satisfactory? Yes / No	If No, please furnish details:
Was the project constructed as per the approved scope of work? Yes / No	If No, please furnish details:
Was the project completed within the approved timeframe? Yes / No	If No, please furnish details:
Would you recommend this contractor for similar work? Yes / No	If No, please furnish details:
Name of authorized person: Position Signature: Telephone: E-mail: Date: Completed on behalf of (Name of Institution)	
NB: This document must be completed in full by the referee and it to be included in the bid submission. Failure to adhere to this requirement will result in the bidder not being allocated points.	
OFFICIAL INSTITUTION STAMP	

SATISFACTORY LETTER – B	
TO: <u>METSIMAHOLO LOCAL MUNICIPALITY</u> I, the undersigned being duly authorized to do so, hereby furnish a reference to Metsimaholo Local Municipality relative to bid MLM 28/2023/24 for the: Appointment of a contractor for resurfacing and resealing of tar roads in Denesville and Oranjeville	
Company Name	
Project Name	
Project Contract number / Tender number / Order number	
Project value / Contract value / Order amount	
Description of scope of work	
Contract Duration / time when the above was provided	
Was their project completed satisfactory? Yes / No	If No, please furnish details:
Was the project constructed as per the approved scope of work? Yes / No	If No, please furnish details:
Was the project completed within the approved timeframe? Yes / No	If No, please furnish details:
Would you recommend this contractor for similar work? Yes / No	If No, please furnish details:
Name of authorized person: Position Signature: Telephone: E-mail: Date: Completed on behalf of (Name of Institution)	
NB: This document must be completed in full by the referee and it to be included in the bid submission. Failure to adhere to this requirement will result in the bidder not being allocated points.	
OFFICIAL INSTITUTION STAMP	

SATISFACTORY LETTER – C																					
TO: <u>METSIMAHOLO LOCAL MUNICIPALITY</u> I, the undersigned being duly authorized to do so, hereby furnish a reference to Metsimaholo Local Municipality relative to bid MLM 28/2023/24 for the: Appointment of a contractor for resurfacing and resealing of tar roads in Denesville and Oranjeville																					
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Would you recommend this contractor for similar work? ☐ Yes / ☐ No	<i>If No, please furnish details:</i> 																				
Name of authorized person: Position Signature: Telephone: E-mail: Date: Completed on behalf of (Name of Institution) NB: This document must be completed in full by the referee and it to be included in the bid submission. Failure to adhere to this requirement will result in the bidder not being allocated points. OFFICIAL INSTITUTION STAMP																					

SATISFACTORY LETTER – D	
TO: <u>METSIMAHOLO LOCAL MUNICIPALITY</u> I, the undersigned being duly authorized to do so, hereby furnish a reference to Metsimaholo Local Municipality relative to bid MLM 28/2023/24 for the: Appointment of a contractor for resurfacing and resealing of tar roads in Denesville and Oranjeville	
Company Name	
Project Name	
Project Contract number / Tender number / Order number	
Project value / Contract value / Order amount	
Description of scope of work	
Contract Duration / time when the above was provided	
Was their project completed satisfactory? Yes / No	<i>If No, please furnish details:</i>
Was the project constructed as per the approved scope of work? Yes / No	<i>If No, please furnish details:</i>
Was the project completed within the approved timeframe? Yes / No	<i>If No, please furnish details:</i>
Would you recommend this contractor for similar work? Yes / No	<i>If No, please furnish details:</i>
Name of authorized person: Position Signature: Telephone: E-mail: Date: Completed on behalf of (Name of Institution) NB: This document must be completed in full by the referee and it to be included in the bid submission. Failure to adhere to this requirement will result in the bidder not being allocated points. OFFICIAL INSTITUTION STAMP	

WARNING DISCLAIMER.

MISREPRESENTATION OF INFORMATION (FRAUD)

NB: The Municipality reserves the right to blacklist the company & it's directors should it be found to have submitted false documentation. If contract already awarded, it will be terminated and the service provider will be reported to National Treasury for blacklisting.

I, _____, the director
of _____ hereby
declare that all supporting documents (**compliance and functionality**) submitted with
this bid are valid.

Signed at: _____

Signature: _____

Date : _____

Supply Chain Management Unit hereby invites bids for the following requirements:							
Bid No. MLM	Bid Description	Evaluation Criteria	Specific Goals	CIDB	Bid Fee	Closing Date	Technical Contact Person
28//20 23/24	Appointment of a contractor for resurfacing and resealing of tar roads in Deneysville and Oranjeville	80/20 Price and functionality	Locality Details are stipulated in the tender document	4CE/4S B or higher	R 600.00	20 June 2024 @11h00 FINANCE BUILDING FLOOR FOYER	Mr K Radebe 016 973 8326/7

Bids terms and conditions:

- Bids shall be evaluated and adjudicated in accordance with the Supply Chain Management Policy of Metsimaholo Local Municipality.
- WHERE A COMPULSORY BRIEFING SESSION IS REQUIRED, THE ONUS IS ON THE BIDDER TO ATTEND AND ARRIVE ON TIME, AS LATE ARRIVALS SHALL NEITHER BE ALLOWED INTO THE VENUE NOR WILL THEY BE PERMITTED TO SIGN THE ATTENDANCE REGISTER, AND THEREBY THEY WILL BE DEEMED TO BE ABSENT AND THEIR BIDS SHALL NOT BE CONSIDERED.**
- Tender documents will be available on the **7 June 2024** on **E-tender** and **SCM Office, Metsimaholo Local Municipality, Civic Centre, 10 Fichardt Street, Sasolburg, finance building, 1st floor.**
- Non-refundable tender document fee is payable in cash between 07:30am and 15:30pm at the **cashiers in the Rates Hall, Metsimaholo Local Municipality, Civic Centre, 10 Fichardt Street, Sasolburg.**
- TENDER DOCUMENTS CAN ALSO BE DOWNLOADED ON E-TENDER @www.etenders.gov.za.**
- The municipality reserves the right to accept the tender in part or totally reject it.
- Tenders endorsed with their specific Tender Numbers must be placed in the tender box located at Metsimaholo Local Municipality, Ground floor, Finance Building, 10 Fichardt Street, Sasolburg.**
- Late tenders will not be accepted.
- Incomplete tenders may be disqualified.
- No faxed or e-mailed tenders shall be accepted.
- The municipality reserves the right to accept any tender price and not necessarily the lowest, and to withdraw any bid before the award.
- Bidders must comply with the requirements as specified in a tender document; failure to comply may lead to non-consideration (disqualification).
- Bids from the persons in the service of the state such as Councillors, and other elected representative (MPs, MPLs), public servants, national, provincial, and municipal officials, directors of public and municipal entities are barred from engaging in business with the municipality.

F.J Motloun
Municipal Manager

Notice No: 28/2023/2024

F3.4	Opening of Tender Submissions
F3.4.2	Tenders will be opened in public soon after closing time and recording of received documents but not later than 11:00 at the Tender office. Tenderers' names and total prices where practical will be read out
F3.5	A two-envelope procedure will not be followed
F3.8.2	The Employer shall reject a non-responsive tender offer and not allow it to be subsequently made responsive by correction or withdrawal of non-conforming deviation or reservation.
F3.11	Tenders will be evaluated for Functionality. Tenderers who qualify for Functionality will be evaluated further for Price and Preference only. Points for Functionality will not contribute to further evaluation. Tenderers who do not qualify will not be evaluated further. Functionality will be scored out of 100 points. A Tenderer who scores less than 70 points will automatically be disqualified. The 80/20 evaluation criteria will be used where Price will be allocated 80 points and Preference will be scored out of 20 points.
F3.11.1	The procedure for evaluation of responsive Tender Offers will be Method 4: Financial Offer, Functionality and Preferences. The responsive tender with the highest total points as defined below is the preferred tender
F3.11.2	The financial offer will be scored in terms of Formula 2, Option 1 of Table F.1 of SANS 294:2004, which reads as follows: $Nfo = W1 \times A$ Where: Nfo = number of tender evaluation points awarded for the financial offer; W180 points for rand value less than R50 000 000;

Tender data contd.

Sub-clause	Data
F3.13	Acceptance of Tender Offer
F3.13.1	Tender offers will only be accepted if: a) the tenderer is registered on the Central Supplier Database (CSD) for the South African government (see https://secure.csd.gov.za/) b) the tenderer is in good standing with SARS according to the Central Supplier Database; c) the tenderer submits a letter of intent from an approved insurer undertaking to provide the Performance Bond to the format included in Part C1.3 of this procurement document d) the tenderer is registered with the Construction Industry Development Board in an appropriate contractor grading designation; e) the tenderer or any of its directors/shareholders is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector; f) the tenderer has not: i. abused the Employer's Supply Chain Management System; or ii. failed to perform on any previous contract and has been given a written notice to this effect; g) the tenderer has completed the Compulsory Declaration and there are no conflicts of interest which may impact on the tenderer's ability to perform the contract in the best interests of the employer or potentially compromise the tender process; h) the tenderer is registered and in good standing with the compensation fund or with a licensed compensation insurer; i) the employer is reasonably satisfied that the tenderer has in terms of the Construction Regulations, 2014, issued in terms of the Occupational Health and Safety Act, 1993, the necessary competencies and resources to carry out the work safely.
F3.17	The number of paper copies of signed contract to be provided by the Engineer is one (1).



METSIMAHOLO LOCAL MUNICIPALITY

BID NO: MLM 28/2023/24

**APPOINTMENT OF A CONTRACTOR FOR RESURFACING AND RESEALING OF TAR
ROADS IN DENEYSVILLE AND ORANJEVILLE**

PART T2 : RETURNABLE DOCUMENTS

T2.1 LIST OF RETURNABLE DOCUMENTS

The Tender Document must be submitted as a whole. All forms must be properly completed as required, and the document shall not be taken apart or altered in any way whatsoever.

All the certificates and forms to be provided with the tender are listed in the Tender Data under F2.23: Certificates, and under the returnable schedules and forms in T2.2 hereafter.

The list of returnable documents comprises the following:

1. All the certificates listed in the Tender Data under F2.23: Certificates;
2. All the 1nable schedules and forms listed in T2.2.1: Returnable Schedules Required for Tender Evaluation Purposes;
3. All the returnable documents listed in T2.2.2: Preferential Procurement Schedules and Affidavits that will be incorporated into the Contract;
4. All the agreements and forms listed in T2.2.3: Forms to be completed by Successful Tenderer;
5. All the forms and agreements in the Contract Data in C1.2, where some of the forms (agreements) need to be completed only by successful Tenderer;
6. Pricing Data in C2.2: Bill of Quantities.

T2.2 RETURNABLE SCHEDULES

NOTE: The Tenderer is required to complete each and every schedule and form listed above to the best of his ability, as the evaluation of tenders and the eventual contract will be based on the information provided by the Tenderer. Failure of a Tenderer to complete the schedules and forms to the satisfaction of the Employer will inevitably prejudice the tender and may lead to rejection on the grounds that the tender is not responsive.

SCHEDULE A: MUNICIPAL BIDDING DOCUMENTS

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MBD1
PART A
INVITATION TO BID

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE METSIMAHOLO LOCAL MUNICIPALITY					
BID NUMBER:	MLM 28/2023/24	CLOSING DATE:	20 JUNE 2024	CLOSING TIME	11H00
DESCRIPTION	APPOINTMENT OF A CONTRACTOR FOR RESURFACING AND RESEALING OF TAR ROADS IN DENEYSVILLE AND ORANJEVILLE				
THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT (MBD7).					
BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN BOX SITUATED AT (STREET ADDRESS)					
Metsimaholo Local Municipality					
No 10 Fichardt Street					
Finance Building					
Ground Floor					
SUPPLIER INFORMATION					
NAME OF BIDDER					
POSTAL ADDRESS					
STREET ADDRESS					
TELEPHONE NUMBER	CODE		NUMBER		
CELLPHONE NUMBER					
FACSIMILE NUMBER	CODE		NUMBER		
E-MAIL ADDRESS					
VAT REGISTRATION NUMBER					
TAX COMPLIANCE STATUS	TCS PIN:		OR	CSD No:	
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE [TICK APPLICABLE BOX]	☐ Yes ☐ No		B-BBEE STATUS LEVEL SWORN AFFIDAVIT		☐ Yes ☐ No

[A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE/ SWORN AFFIDAVIT (FOR EMES & QSEs) MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE]			
ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?	☐ Yes ☐ No [IF YES ENCLOSE PROOF]	ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS /SERVICES /WORKS OFFERED?	☐ Yes ☐ No [IF YES, ANSWER PART B:3]
TOTAL NUMBER OF ITEMS OFFERED		N/A	N/A
SIGNATURE OF BIDDER		DATE	
CAPACITY UNDER WHICH THIS BID IS SIGNED			
BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO:		TECHNICAL INFORMATION MAY BE DIRECTED TO:	
DEPARTMENT		CONTACT PERSON	MR K RADEBE
CONTACT PERSON		TELEPHONE NUMBER	016 973 8326/7
TELEPHONE NUMBER		FACSIMILE NUMBER	
FACSIMILE NUMBER		E-MAIL ADDRESS	
E-MAIL ADDRESS			

MBD1

PART B

TERMS AND CONDITIONS FOR BIDDING

1. BID SUBMISSION:
1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION. 1.2. ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED– (NOT TO BE RE-TYPED) OR ONLINE 1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.
2. TAX COMPLIANCE REQUIREMENTS
2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS. 2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VIEW THE TAXPAYER'S PROFILE AND TAX STATUS. 2.3 APPLICATION FOR THE TAX COMPLIANCE STATUS (TCS) CERTIFICATE OR PIN MAY ALSO BE MADE VIA E-FILING. IN ORDER TO USE THIS PROVISION, TAXPAYERS WILL NEED TO REGISTER WITH SARS AS E-FILERS THROUGH THE WEBSITE WWW.SARS.GOV.ZA. 2.4 FOREIGN SUPPLIERS MUST COMPLETE THE PRE-AWARD QUESTIONNAIRE IN PART B:3. 2.5 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID. 2.6 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER. 2.7 WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.
3. QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS
3.1. IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)? ☐ YES ☐ NO 3.2. DOES THE ENTITY HAVE A BRANCH IN THE RSA? ☐ YES ☐ NO 3.3. DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA? ☐ YES ☐ NO 3.4. DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA? ☐ YES ☐ NO 3.5. IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION?

☐ YES ☐ NO

IF THE ANSWER IS “NO” TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO REGISTER FOR A TAX

COMPLIANCE STATUS SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF

NOT REGISTER AS PER 2.3 ABOVE.

NB: FAILURE TO PROVIDE ANY OF THE ABOVE PARTICULARS MAY RENDER THE BID INVALID.

NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE.

SIGNATURE OF BIDDER:

CAPACITY UNDER WHICH THIS BID IS SIGNED:

DATE:

MBD 4

DECLARATION OF INTEREST

1. No bid will be accepted from persons in the service of the state¹.
2. Any person, having a kinship with persons in the service of the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid. In view of possible allegations of favoritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to persons in service of the state, it is required that the bidder or their authorised representative declares their position in relation to the evaluating/adjudicating authority.

3 In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.

3.1 Full Name of bidder or his or her representative:.....

3.2 Identity Number:

3.3 Position occupied in the Company (director, trustee, shareholder²):.....

3.4 Company Registration Number:

3.5 Tax Reference Number:.....

3.6 VAT Registration Number:

CSD Number:.....

3.7 The names of all directors / trustees / shareholders members, their individual identity numbers and state employee numbers must be indicated in paragraph 4 below.

3.8 Are you presently in the service of the state?

YES	YES
-----	-----

3.8.1 If yes, furnish particulars.

.....

¹MSCM Regulations: "in the service of the state" means to be –
(a) a member of –

- (i) any municipal council;
 - (ii) any provincial legislature; or
 - (iii) the national Assembly or the national Council of provinces;
-
- (b) a member of the board of directors of any municipal entity;
 - (c) an official of any municipality or municipal entity;
 - (d) an employee of any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No.1 of 1999);
 - (e) a member of the accounting authority of any national or provincial public entity; or
 - (f) an employee of Parliament or a provincial legislature.

² Shareholder” means a person who owns shares in the company and is actively involved in the management of the company or business and exercises control over the company.

3.9 Have you been in the service of the state for the past twelve months?

YES	NO
-----	----

If yes, furnish particulars.....

.....

3.10 Do you have any relationship (family, friend, other) with persons in the service of the state and who may be involved with

YES	NO
-----	----

the evaluation and or adjudication of this bid?

3.10.1 If yes, furnish particulars.

.....

3.11 Are you, aware of any relationship (family, friend, other) between any other bidder and any persons in the service of the state who may be involved with the evaluation and/or adjudication of this bid?

YES	NO
-----	----

3.11.1 If yes, furnish particulars

.....

.....

3.12 Are any of the company's directors, trustees, managers, principle shareholders or stakeholders in service of the state?

YES	NO
-----	----

3.12.1 If yes, furnish particulars.

.....

.....

3.13 Are any spouse, child or parent of the company's director trustees, managers, principle shareholders or stakeholders in service of the state?

YES	NO
-----	----

3.13.1 If yes, furnish particulars.

.....

.....

3.14 Do you or any of the directors, trustees, managers, principle shareholders, or stakeholders of this company have any interest in any other related companies or business whether or not they are bidding for this contract.

YES	NO
-----	----

3.14.1 If yes, furnish particulars:

.....

.....

Full details of directors / trustees / members / shareholders.

Full Name	Identity Number	State Employee Number

NB: If a supplier does not declare their interest correctly on the MBD4 Forms,
then they will not be selected for any awards.

.....

Signature

.....

Date

.....

Capacity

.....

Name of Bidder

MBD 6.1

PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022

This preference form must form part of all tenders invited. It contains general information and serves as a claim form for preference points for specific goals.

NB: BEFORE COMPLETING THIS FORM, TENDERERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF THE TENDER AND PREFERENTIAL PROCUREMENT REGULATIONS, 2022

1. GENERAL CONDITIONS

1.1 The following preference point systems are applicable to invitations to tender:

- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).

1.2 To be completed by the organ of state

- a) The applicable preference point system for this tender is the 80/20 preference point system.
- b) 80/20 preference point system will be applicable in this tender. The lowest/ highest acceptable tender will be used to determine the accurate system once tenders are received.

1.3 Points for this tender (even in the case of a tender for income-generating contracts) shall be awarded for:

- (a) Price; and
- (b) Specific Goals

1.4 To be completed by the organ of state:

The maximum points for this tender are allocated as follows:

	POINTS
PRICE	80
SPECIFIC GOALS	20
Total points for Price and SPECIFIC GOALS	100

1.5 Failure on the part of a tenderer to submit proof or documentation required in terms of this tender to claim points for specific goals with the tender, will be interpreted to mean that preference points for specific goals are

not claimed.

- 1.6 The organ of state reserves the right to require of a tenderer, either before a tender is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the organ of state.

2. DEFINITIONS

- (a) **“tender”** means a written offer in the form determined by an organ of state in response to an invitation to provide goods or services through price quotations, competitive tendering process or any other method envisaged in legislation;
- (b) **“price”** means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts;
- (c) **“rand value”** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;
- (d) **“tender for income-generating contracts”** means a written offer in the form determined by an organ of state in response to an invitation for the origination of income-generating contracts through any method envisaged in legislation that will result in a legal agreement between the organ of state and a third party that produces revenue for the organ of state, and includes, but is not limited to, leasing and disposal of assets and concession contracts, excluding direct sales and disposal of assets through public auctions; and
- (e) **“the Act”** means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000).

3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

1.4. POINTS AWARDED FOR PRICE

3.1.1 THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS

A maximum of 80 or 90 points is allocated for price on the following basis:

80/20 or 90/10

$$Ps = 80 \left(1 - \frac{Pt - P_{\min}}{P_{\min}} \right) \text{ or } Ps = 90 \left(1 - \frac{Pt - P_{\min}}{P_{\min}} \right)$$

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmin = Price of lowest acceptable tender

3.1. FORMULAE FOR DISPOSAL OR LEASING OF STATE ASSETS AND INCOME GENERATING PROCUREMENT

3.2.1. POINTS AWARDED FOR PRICE

A maximum of 80 or 90 points is allocated for price on the following basis:

80/20 or 90/10

$$Ps = 80 \left(1 + \frac{Pt - P_{\max}}{P_{\max}} \right) \text{ or } Ps = 90 \left(1 + \frac{Pt - P_{\max}}{P_{\max}} \right)$$

Where

- Ps = Points scored for price of tender under consideration
 Pt = Price of tender under consideration
 Pmax = Price of highest acceptable tender

4. POINTS AWARDED FOR SPECIFIC GOALS

- 4.1. In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in table 1 below as may be supported by proof/ documentation stated in the conditions of this tender:
- 4.2. In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that, if it is unclear whether the 80/20 or 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of—
- (a) an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system; or
 - (b) any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system,
- then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.

Table 1: Specific goals for the tender and points claimed are indicated per the table below.

(Note to organs of state: Where either the 90/10 or 80/20 preference point system is applicable, corresponding points must also be indicated as such.

Note to tenderers: The tenderer must indicate how they claim points for each preference point system.)

The specific goals allocated points in terms of this tender	Number of points allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (80/20 system) (To be completed by the tenderer)
Locality	80/20	

Points Allocation

Location	Points Allocation
Bidder that is within the boundaries of the Metsimaholo Local Municipality	20

Bidder that is within the boundaries of the Fezile Dabi District Municipality	15
Bidder that is within the boundaries of the Free State Province	10
Bidder that is Outside the boundaries of the Free State Province	05

Proof of locality

Following must be submitted for proof of locality:

- Municipal account in the name of the bidder not older than 90 days, or
- Lease agreement where the bidder is the lessee, or
- An official letter from the bank confirming the registered business address of the bidder.

DECLARATION WITH REGARD TO COMPANY/FIRM

4.3. Name of company/firm.....

4.4. Company registration number:
.....

4.5. TYPE OF COMPANY/ FIRM

- ☐ Partnership/Joint Venture / Consortium
- ☐ One-person business/sole propriety
- ☐ Close corporation
- ☐ Public Company
- ☐ Personal Liability Company
- ☐ (Pty) Limited
- ☐ Non-Profit Company
- ☐ State Owned Company [TICK APPLICABLE BOX]

4.6. I, the undersigned, who is duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the specific goals as advised in the tender, qualifies the company/ firm for the preference(s) shown and I acknowledge that:

- i) The information furnished is true and correct;
- ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;
- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 4.2, the contractor may be required to furnish documentary proof to the satisfaction of the organ of state that the claims are correct;
- iv) If the specific goals have been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the organ of state may, in addition to any other remedy it may have –

- (a) disqualify the person from the tendering process;
- (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
- (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
- (d) recommend that the tenderer or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and
- (e) forward the matter for criminal prosecution, if deemed necessary.

.....

SIGNATURE(S) OF TENDERER(S)

SURNAME AND NAME:

DATE:

ADDRESS:

.....

MBD 8

DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

- 1 This Municipal Bidding Document must form part of all bids invited.
- 2 It serves as a declaration to be used by municipalities and municipal entities in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.
- 3 The bid of any bidder may be rejected if that bidder, or any of its directors have:
 - a. abused the municipality's / municipal entity's supply chain management system or committed any improper conduct in relation to such system;
 - b. been convicted for fraud or corruption during the past five years;
 - c. willfully neglected, reneged on or failed to comply with any government, municipal or other public sector contract during the past five years; or
 - d. been listed in the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004).
- 4 **In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.**

Item	Question	Yes	No
4.1	Is the bidder or any of its directors listed on the National Treasury's Database of Restricted Suppliers as companies or persons prohibited from doing business with the public sector? (Companies or persons who are listed on this Database were informed in writing of this restriction by the Accounting Officer/Authority of the institution that imposed the restriction after the <i>audi alteram partem</i> rule was applied). The Database of Restricted Suppliers now resides on the National Treasury's website(www.treasury.gov.za) and can be accessed by clicking on its link at the bottom of the home page.	Yes ☐	No ☐
4.1.1	If so, furnish particulars:		

4.2	Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)? The Register for Tender Defaulters can be accessed on the National Treasury's website (www.treasury.gov.za) by clicking on its link at the bottom of the home page.	Yes ☐	No ☐
4.2.1	If so, furnish particulars:		
4.3	Was the bidder or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?	Yes ☐	No ☐
4.3.1	If so, furnish particulars:		
Item	Question	Yes	No
4.4	Does the bidder or any of its directors owe any municipal rates and taxes or municipal charges to the municipality / municipal entity, or to any other municipality / municipal entity, that is in arrears for more than three months?	Yes ☐	No ☐
4.4.1	If so, furnish particulars:		
4.5	Was any contract between the bidder and the municipality / municipal entity or any other organ of state terminated during the past five years on account of failure to perform on or comply with the contract?	Yes ☐	No ☐

4.7.1	If so, furnish particulars:
-------	-----------------------------

CERTIFICATION

I, THE UNDERSIGNED (FULL NAME)CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM TRUE AND CORRECT.

I ACCEPT THAT, IN ADDITION TO CANCELLATION OF A CONTRACT, ACTION MAY BE TAKEN AGAINST ME SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....

Signature

.....

Date

.....

Position

.....

Name of Bidder

MBD 9

CERTIFICATE OF INDEPENDENT BID DETERMINATION

- 1 This Municipal Bidding Document (MBD) must form part of all bids¹ invited.
- 2 Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).² Collusive bidding is a *pe se* prohibition meaning that it cannot be justified under any grounds.
- 2 Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:
 - a. takes all reasonable steps to prevent such abuse;
 - b. rejects the bid of any bidder if that bidder or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system; and
 - c. cancel a contract awarded to a person if the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract.
- 4 This MBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.
- 5 In order to give effect to the above, the attached Certificate of Bid Determination (MBD 9) must be completed and submitted with the bid:

¹ Includes price quotations, advertised competitive bids, limited bids and proposals.

² Bid rigging (or collusive bidding) occurs when businesses, that would otherwise be expected to compete, secretly conspire to raise prices or lower the quality of goods and / or services for purchasers who wish to acquire goods and / or services through a bidding process. Bid rigging is, therefore, an agreement between competitors not to compete

MBD 9

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

(Bid Number and Description)

in response to the invitation for the bid made by:

(Name of Municipality / Municipal Entity)

do hereby make the following statements that I certify to be true and complete in every respect:

I certify, on behalf

Of: _____ that:

(Name of Bidder)

1. I have read and I understand the contents of this Certificate;
2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;
3. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
4. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign, the bid, on behalf of the bidder;
5. For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:
 - (a) has been requested to submit a bid in response to this bid invitation;
 - (b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
 - (c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder
6. The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium³ will not be construed as collusive bidding.
7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation,
8. communication, agreement or arrangement with any competitor regarding:
 - (a) prices;
 - (b) geographical area where product or service will be rendered (market allocation)
 - (c) methods, factors or formulas used to calculate prices;
 - (d) the intention or decision to submit or not to submit, a bid;

- (e) the submission of a bid which does not meet the specifications and conditions of the bid; or
- (f) bidding with the intention not to win the bid.
9. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this bid invitation relates.
10. The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

³ Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

.....
Signature

.....
Date

.....
Position

.....
Name of Bidder

SCHEDULE B: RECORD OF ADDENDA TO TENDER DOCUMENTS

I / We confirm that the following communication/s, amending the tender documents, received from the Employer or his representative before the closing date for submission of this tender offer, have been taken into account in this tender offer.

ADD. No	DATE	TITLE OR DETAILS
1		
2		
3		
4		
5		
6		
7		
8		

SIGNATURE:

SCHEDULE C: CERTIFICATE OF AUTHORITY

Indicate the status of the Tenderer by ticking the appropriate box hereunder. The Tenderer must complete the certificate set out below for the relevant category.

(I) COMPANY	(II) CLOSE CORPORATION	(III) PARTNERSHIP	(IV) JOINT VENTURE	(V) SOLE PROPRIETOR

(i) CERTIFICATE FOR COMPANY

I,, Managing Director of the Board of Directors of, hereby confirm that by resolution of the Board (copy attached) taken on 20....., Mr/Ms, acting in the capacity of, was authorized to sign all documents in connection with this tender and any contract resulting from it, on behalf of the company.

Managing Director:

(ii) CERTIFICATE FOR CLOSE CORPORATION

We, the undersigned, being the key members in the business trading as

.....
hereby authorise Mr/Ms, acting in the capacity of, to sign all documents in connection with this tender and any contract resulting from it, on our behalf.

NAME	ADDRESS	SIGNATURE	DATE

Note: *This certificate is to be completed and signed by all of the key members upon whom rests the direction of the affairs of the Close Corporation as a whole.*

(iii) CERTIFICATE FOR PARTNERSHIP

We, the undersigned, being the key partners in the business trading as,

.....

hereby authorize Mr/Ms acting in the capacity of
....., to sign all documents in connection with this
tender and any contract resulting from it, on our behalf.

NAME	ADDRESS	SIGNATURE	DATE

Note: *This certificate is to be completed and signed by all of the key partners upon whom rests the direction of the affairs of the Partnership as a whole.*

(iv) CERTIFICATE FOR JOINT VENTURE

We, the undersigned, are submitting this tender offer in Joint Venture and hereby authorize Mr/Ms
....., authorized signatory of the company,
....., acting in the capacity of lead partner, to sign all
documents in connection with this tender offer and any contract resulting from it, on our behalf. This
authorization is evidenced by the attached power of attorney signed by legally authorized signatories of
all the partners to the Joint Venture.

NAME OF FIRM	ADDRESS	AUTHORIZING SIGNATURE, NAME AND CAPACITY
(Lead partner)		

Note: *This certificate is to be completed and signed by all of the key partners upon whom rests the direction of the affairs of the Partnership as a whole.*

(v) CERTIFICATE FOR SOLE PROPRIETOR

I,, hereby confirm that I am the sole owner of the
business trading as

Signature of Sole owner:

REGISTRATION CERTIFICATE / AGREEMENT / ID DOCUMENT***Important note to Tenderer:***

Registration Certificates for Companies, Close Corporations and Partnerships, or Agreements and Powers of Attorney for Joint Ventures, or ID documents for Sole Proprietors, all as referred to in the foregoing forms and in T2.1, must form part of this submission either separately as separate bunch of supporting documents or at the end of the this bid document and must be properly referenced.

SCHEDULE D: COMPULSORY ENTERPRISE QUESTIONNAIRE

The following particulars must be furnished. **In the case of a Joint Venture, separate enterprise questionnaires in respect of each partner must be completed and submitted. The questionnaires for the other partners must be inserted after this questionnaire.**

Section 1: Name of enterprise:

Section 2: VAT registration number:

Section 3: CIDB registration number:.....

Section 4: Particulars of sole proprietors and partners in partnerships

Name*	Identity number*	Personal income tax number*

* Complete only if sole proprietor or partnership and attach separate page if more than 3 partners

Section 5: Particulars of companies and close corporations

Company registration number

Close corporation number

Tax reference number

Section 6: Record of service of the state

Indicate by marking the relevant boxes with a cross, if any sole proprietor, partner in a partnership or director, manager, principal shareholder or stakeholder in a company or close corporation is currently or has been within the last 12 months, in the service of any of the following:

- | | |
|--|---|
| ☐ a member of any municipal council | ☐ an employee of any provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act 1 of 1999) |
| ☐ a member of any provincial legislature | ☐ a member of an accounting authority of any national or provincial public entity |
| ☐ a member of the National Assembly or the National Council of Province | ☐ an employee of Parliament or a provincial legislature |
| ☐ a member of the board of directors of any municipal entity | |
| ☐ an official of any municipality or municipal entity | |

If any of the above boxes are marked, disclose the following:

Name of sole proprietor, partner, director, manager, principal shareholder or stakeholder	Name of institution, public office, board or organ of state and position held	Status of service (tick appropriate column)	
		current	Within last 12 months

Insert separate page if necessary

Section 7: Record of spouses, children and parents in the service of the state

Indicate by marking the relevant boxes with a cross, if any spouse, child or parent of a sole proprietor, partner in a partnership or director, manager, principal shareholder or stakeholder in a company or close corporation is currently or has been within the last 12 months, been in the service of any of the following:

- | | |
|--|---|
| ☐ a member of any municipal council | ☐ an employee of any provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act 1 of 1999) |
| ☐ a member of any provincial legislature | |
| ☐ a member of the National Assembly or the National Council of Province | |
| ☐ a member of the board of directors of any municipal entity | ☐ a member of an accounting authority of any national or provincial public entity |
| ☐ an official of any municipality or municipal entity | ☐ an employee of Parliament or a provincial legislature |

If any of the above boxes are marked, disclose the following:

Name of spouse, child or parent	Name of institution, public office, board or organ of state and position held	Status of service (tick appropriate column)	
		current	Within last 12 months

Insert separate page if necessary

The undersigned, who warrants that he/she is duly authorized to do so on behalf of the enterprise:

- confirms that neither the name of the enterprise or the name of any partner, manager, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears on the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004;
- confirms that no partner, member, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears, has within the last five years been convicted of fraud or corruption;
- confirms that I / we are not associated, linked or involved with any other tendering entities submitting tender offers and have no other relationship with any of the Tenderers or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest;
- confirms that the contents of this questionnaire are within my personal knowledge and are to the best of my belief both true and correct.

Signed _____ Date _____

Name _____ Position _____

Enterprise Name _____



METSIMAHOLO LOCAL MUNICIPALITY

BID NO MLM 28/2023/24

**APPOINTMENT OF A CONTRACTOR FOR RESURFACING AND
RESEALING OF TAR ROADS IN DENEYSVILLE AND ORANJEVILLE**

THE CONTRACT

PART C1 : AGREEMENTS AND CONTRACT DATA
PART C2 : PRICING DATA
PART C3 : SCOPE OF WORK
PART C4 : SITE INFORMATION

PART C1: AGREEMENTS AND CONTRACT DATA

C1.1 FORM OF OFFER AND ACCEPTANCE

OFFER

The Employer, identified in the Acceptance signature block, has solicited offers to enter into a contract in respect of the following works:

BID NUMBER MLM 28/2023/24: APPOINTMENT OF A CONTRACTOR FOR RESURFACING AND RESEALING OF TAR ROADS IN DENEYSVILLE AND ORANJEVILLE

The Tenderer, identified in the Offer signature block below, has examined the documents listed in the Tender Data and addenda thereto as listed in the Returnable Schedules, and by submitting this Offer has accepted the Conditions of Tender.

By the representative of the Tenderer, deemed to be duly authorized, signing this part of this Form of Offer and Acceptance, the Tenderer offers to perform all of the obligations and liabilities of the Contractor under the Contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the Conditions of Contract identified in the Contract Data.

The offered total of the prices inclusive of Value Added Tax is:

R

(In words)

This Offer may be accepted by the Employer by signing the Acceptance part of this Form of Offer and Acceptance and returning one copy of this document to the Tenderer before the end of the period of validity stated in the Tender Data, whereupon the Tenderer becomes the party named as the Contractor in the Conditions of Contract identified in the Contract Data.

Signature:(of person authorized to sign the tender):

Name: (of signatory in capitals):

Capacity: (of Signatory):.....

Name of Tenderer:
(organisation):.....

Address:
.....
.....
.....

Telephone number: Fax number:

Cell phone number:

Witness:

Signature:

Name: (in capitals):

Date:

ACCEPTANCE

By signing this part of the Form of Offer and Acceptance, the Employer identified below accepts the Tenderer's Offer. In consideration thereof, the Employer shall pay the Contractor the amount due in accordance with the Conditions of Contract as set out in the General and Special Conditions of Contract, and identified in the Contract Data. Acceptance of the Tenderer's Offer shall form an agreement between the Employer and the Tenderer upon the terms and conditions contained in this Agreement and in the Contract that is the subject of this Agreement.

The terms of the contract are contained in

Part 1 Agreement and Contract Data, (which includes this Agreement)

Part 2 Pricing Data, including the Bill of Quantities

Part 3 Scope of Work

Part 4 Site Information

and the schedules, forms, drawings and documents or parts thereof, which may be incorporated by reference into Parts C1 to C4 above.

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Tender Schedules as well as any changes to the terms of the Offer agreed by the Tenderer and the Employer during this process of offer and acceptance, are contained in the Schedule of Deviations attached to and forming part of this Agreement. No amendments to or deviations from said documents are valid unless contained in this Schedule, which must be duly signed by the authorized representatives of both parties.

The Tenderer shall deliver the Guarantee in terms of Clause 7 of the General Conditions of Contract 2004 within the period stated in the Contract Data, and he shall, immediately after receiving a completed copy of this Agreement, including the Schedule of Deviations (if any), contact the Employer's agent (whose details are given in the Contract Data) to arrange the delivery of any other bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the Conditions of Contract identified in the Contract Data, within 14 days of the date on which this Agreement comes into effect. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this Agreement.

Notwithstanding anything contained herein, this Agreement comes into effect on the date when the Tenderer receives the fully completed original of this document, including the Schedule of Deviations (if any). Unless the Tenderer (now Contractor) within five working days of the date of such receipt notifies the Employer in writing of any reason why he cannot accept the contents of this Agreement, this Agreement shall constitute a binding contract between the parties.

Signature:

Name:

Capacity: Municipal Manager

For: METSIMAHOLO LOCAL MUNICIPALITY
10 FICHARDT STREET, SASOLBURG, 4800

Witness:Name:

Date:

SCHEDULE OF DEVIATIONS

The extent of deviations from the tender documents issued by the Employer prior to the tender closing date is limited to those permitted in terms of the Tender Data and the Conditions of Tender.

A Tenderer's covering letter will not necessarily be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid becomes the subject of agreements reached during the process of offer and acceptance, the outcome of such agreement shall be recorded here.

Any other matter arising from the process of offer and acceptance either as a confirmation, clarification or change to the tender documents and which it is agreed by the Parties becomes an obligation of the contract shall also be recorded here.

Any change or addition to the tender documents arising from the above agreements and recorded here, shall also be incorporated into the final draft of the Contract.

1. Subject:

Details:

2. Subject:

Details:

3. Subject:

Details:

4. Subject:

Details:

5. Subject:

Details:

6. Subject:

Details:

By the duly authorised representatives signing this Schedule of Deviations, the Employer and the Tenderer agree to and accept the foregoing Schedule of Deviations as the only deviations from and

amendments to the documents listed in the Tender Data and addenda thereto as listed in the Tender Schedules, as well as any confirmation, clarification or change to the terms of the offer agreed by the Tenderer and the Employer during this process of offer and acceptance.

It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the tender documents and the receipt by the Tenderer of a completed signed copy of this Agreement shall have any meaning or effect in the contract between the parties arising from this Agreement.

FOR THE TENDERER:

Signature:

Name:

Capacity:

Witness:..

Name:

Date:

FOR THE EMPLOYER:

Signature:

Name:

Capacity:

Witness:..

Name:

Date:

C1.2 CONTRACT DATA

C1.2.1 CONDITIONS OF CONTRACT

GENERAL CONDITIONS OF CONTRACT

This Contract will be based on the "General Conditions of Contract for Construction Works –3rd Edition 2015, Third print", issued by the South African Institution of Civil Engineering. (Short title: "General Conditions of Contract 2015").

It is agreed that the only variations from the General Conditions of Contract 2015 are those set out hereafter under "Contract Specific Conditions".

CONTRACT SPECIFIC CONDITIONS

1. GENERAL

These Contract Specific Conditions (CSC) form an integral part of the Contract. The Contract Specific Conditions shall amplify, modify or supersede, as the case may be, the General Conditions of Contract 2015 to the extent specified below, and shall take precedence and shall govern.

The clauses of the Special Conditions hereafter are numbered "CSC" followed in each case by the number of the applicable clause or sub-clause in the General Conditions of Contract 2010, and the applicable heading, or (where a new special condition that has no relation to the existing clauses is introduced) by a number that follows after the last clause number in the General Conditions, and an appropriate heading.

2. AMENDMENTS TO THE GENERAL CONDITIONS OF CONTRACT

CSC 1.1.2 DEFINITIONS, INTERPRETATIONS AND GENERAL PROVISIONS

Add the following definitions:

"Labour-based Construction" means the effective employment of appropriate technologies and labour-intensive construction methods on projects specifically designed to maximize the workforce with limited use of machines.

"Community" shall mean all persons deemed to reside in the immediate vicinity of the project.

CSC1.10 *Add the following Sub-Clause 1.10:*

Training will be provided by the employer through various training providers. Training will be theoretical and practical and will be conducted in class rooms and on site. No separate payment of any nature will be made to the contractor for attendance of training sessions by the contractor or the contractor's staff. The Construction Project Manager will program and manage all training to ensure limited disruption to the contractors and the overall project.

CSC 4.3 Compliance with applicable laws

CSC 3.2.4 Health and Safety

Add the following:

"The Occupational Health and Safety Act No. 85 and Amendment Act No 181 of 1993 and the Construction Regulations 2003 will in all respects be applicable to this contract."

CSC 4.4 Payment to subcontractor

Add the following:

"The above-mentioned procedure shall adhere to the **Preferential procurement regulations, 2011, pertaining to the Preferential Procurement Policy Framework Act, Act No. 5 of 2000, published by National Treasury on 1 December 2011** and to

any prescribed regulations of the FREESTATE Provincial Government pertaining to procurement.

CSC 5.7 PROGRESS OF THE WORKS

Add the following to Sub-Clause 5.7 :

Delete the last sentence and add the following:

The contractor shall within 3 days of receipt of notification submit to the Engineer in writing the action(s) the contractor intends to take to expedite the rate of progress, and within 7 days of receipt of notification implement such steps. The contractor shall as part of his actions submit to the Engineer a detailed revised program accommodating the agreed steps to meet the Due Completion date.

CSC 6.8.2: CONTRACT PRICE ADJUSTMENT SCHEDULE

Paragraph 1

Adjust the definitions of "L", "P", "M" and "F" in the 4th to the 7th subparagraphs with the following:

Definition of "L":

Insert "(Consumer Price Index)" after "P0141.1" in the third line

Insert "(Consumer Price Index and Percentage Change according to Urban Area)" after "Table 21" in the third line

Definition of "P":

Insert "(Production Price Index)" after "P0142.1" in the second line

Insert "(Production Price Index for Selected Materials, item 'Civil Engineering Plant')" after "Table 16" in the second line

Definition of "M":

Insert "(Production Price Index)" after "P0142.1" in the second line

Insert "(Production Price Index for Materials used in Certain Industries, item 'Civil Engineering Plant')" after "Table 15" in the second line

Definition of "F": *Insert "(Production Price Index)" after "P0142.1" in the second line*

Insert "(Production Price Index for Selected Materials, item Diesel Oil – Coast and Witwatersrand)" after "Table 16" in the second line

[Note: The indices are obtainable in www.statssa.gov.za. The latest indices for L (certain urban areas only), P, M and F, are more readily obtainable in www.safcec.org.za under "CPAF Indices"]

Paragraph 2 : Assessment of Amount subject to Adjustment: *Add the following to the paragraph defining "E":*

"Where the amount is based on current costs de-escalated to the base month, or where daywork is calculated at rates tendered in a daywork schedule, the costs shall not be included in the value of "E".

C1.2.2 CONTRACT SPECIFIC DATA

This Contract will be based on the "General Conditions of Contract for Construction Works 3RD Edition 2015", issued by the South African Institution of Civil Engineering. (Short title: "General Conditions of Contract 2015").

The above-mentioned General Conditions of Contract for Construction may be inspected at the offices of the Employer or the offices of the Employer's Agent. Tenderers shall obtain their own copies from the South African Institute of Civil Engineering

It is agreed that the only variations from the General Conditions of Contract 2015 are those set out hereafter under "Special Conditions of Contract".

PART 1: DATA PROVIDED BY THE EMPLOYER

Ref. Clause	Data provided by the Employer
1.1.1.13	The defect liability is 12 months , a time measured from the date of the certificate of Completion
1.1.1.15	The Employer is Metsimaholo Local Municipality
1.1.1.16	The Engineer is the firm Luvhengo Consulting Engineers.
1.2.1	The Employer's address for receipt of communications is: Telephone: +27 16 973 8326/7 E-mail: kgomotso.riba@metsimaholo.gov.za Address (Physical): Municipal Offices, 10 Fichardt Street, Sasolburg, 4800 The Engineer's address for receipt of communications is: Telephone: +27 12 645 1143 E-mail: admin@luvhengoconsulting.co.za Address (Physical): 546 16th Road, Constantia Park, Midrand, 1685
1.3.2	The governing law is the law of South Africa.
3.2.3	The Engineer is required to obtain the specific approval of the Employer for Any expenditure in excess of the Tender Sum plus 10% contingencies..
5.3.1	The documentation required before commencement with Works execution are: • Health and Safety Plan (Refer to Clause 4.3) • Initial programme (Refer to Clause 5.6)(In PDF,MS project) • Security/Performance guarantee (Refer to Clause 6.2) • All-risk Insurance (Refer to Clause 8.6) • Personnel Curriculum Vitae • Construction Methodology

Ref. Clause	Data provided by the Employer
1.1.1.13	The defect liability is 12 months , a time measured from the date of the certificate of Completion
5.3.2	The time to submit the documentation required before commencement with Works execution is 14 days .
5.8.1	The special non-working days are holidays and the builders break as recommended by the yearly BCCEI Circular
5.13.1	The penalty for failing to complete the Works is R2500 Monetary value per day.
6.10.1.5	The percentage advance on materials not yet built into the Permanent Works is 80% percentage.
6.10.3	The limit of retention money is 10%
8.6.1.1.2	All insurances are to be effected by the Contractor. All insurances are to be effected by the Contractor The value of the materials supplied by the Employer to be included in the insurance sum is: Nil.
8.6.1.1.3	The amount to cover the professional fees for repairing damage and loss to be included in the insurance sum is 20% of Contract sum.
8.6.1.3	The amount for the Coupon policy for special risks is The Contract Value
8.6.1.3	The limit of indemnity for liability insurance is R10 million.
6.8.2	Contract price adjustment is <i>NOT</i> applicable to this Contract.
6.8	Price adjustments for variations in the costs of special materials are Not applicable

.....
SIGNATURE

C1.2.3 DATA PROVIDED BY THE TENDERER

Clause 6.8.3 of the GCC 2015:

Special materials	Unit on which variation will be determined *	Rate or price for the base Month (Excl. VAT) **
Not applicable		

Notes:

* Indicate whether the material will be delivered in bulk or in containers.

** The price for special materials is only the price for the material and does not include the cost of transport, labour or any other costs. When called upon to do so, the Tenderer shall substantiate the above prices with acceptable documentary evidence.

.....
SIGNATURE

C1.3 FORM OF GUARANTEE

BID NO MLM 28/2023/24

WHEREAS **METSIMAHOLO LOCAL MUNICIPALITY** (hereinafter referred to as the Employer") entered into, a Contract with:

.....
(hereinafter called "the Contactor") on the day of20.....,
for **APPOINTMENT OF A CONTRACTOR FOR RESURFACING AND RESEALING OF TAR ROADS IN DENEYSVILLE AND ORANJEVILLE** AND WHEREAS it is provided by such Contract that the Contractor shall provide the Employer with security by way of a guarantee for the due and faithful fulfilment of such Contract by the Contractor;

AND WHEREAS has / have at the request of the Contractor, agreed to give such guarantee;

NOW THEREFORE WE do hereby guarantee and bind ourselves jointly and severally as Guarantor and Co-Principal Debtors to the Employer under renunciation of the benefits of division and excussion for the due and faithful performance by the Contractor of all the terms and conditions of the said Contract, subject to the following conditions:

1. The Employer shall, without reference and / or notice to us, have complete liberty of action to act in any manner authorized and/or contemplated by the terms of the said Contract, and/or to agree to any modifications, variations, alterations, directions or extensions of the completion date of the works under the said Contract, and that its rights under this guarantee shall in no way be prejudiced nor our liability hereunder be affected by reason of any steps which the Employer may take under such Contract, or of any modification, variation, alterations of the completion date which the Employer may make, give, concede or agree to under the said Contract.
2. This guarantee shall be limited to the payment of a sum of money.
3. The Employer shall be entitled, without reference to us, to release any guarantee held by it, and to give time to or compound or make any other arrangement with the Contractor.
4. This guarantee shall remain in full force and effect until the issue of the Certificate of Completion in terms of the Contract, unless we are advised in writing by the Employer before the issue of the said Certificate of his intention to institute claims, and the particulars thereof, in which event this guarantee shall remain in full force and effect until all such claims have been paid or liquidated.
5. Our total liability hereunder shall not exceed the Guaranteed Sum of
..... Rand (in words); R
..... (in figures)
6. The Guarantor reserves the right to withdraw from this guarantee by depositing the Guaranteed Sum with the beneficiary, whereupon our liability hereunder shall cease.
7. We hereby choose our address for the serving of all notices for all purposes arising here from as

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



IN WITNESS WHEREOF this guarantee has been executed by us at
on this day of 20

Signature

Duly authorized to sign on behalf of

Address
.....
.....

As witnesses:

1

2

C1.4 ADJUDICATOR'S AGREEMENT (Pro Forma only)

To be entered into when required

This agreement is made on the day of between:

..... (name of company / organisation)

of

..... (address) and

..... (name of company / organization)

of

..... (address)

(the Parties) and

..... (name)

of

.....

(address)

(the Adjudicator).

Disputes or differences may arise/have arisen* between the Parties under a Contract dated and known as. and these disputes or differences shall be/have been* referred to adjudication in accordance with GCC 2004, Clause 58.3, and the Adjudicator may be / has been* requested to act.

* Delete as necessary

IT IS NOW AGREED as follows:

1. The adjudication shall be conducted in accordance with the rights and obligations of the Adjudicator and the Parties as set out in the Procedure as per Clause 58.3.1 of the GCC 04.
2. The Adjudicator hereby accepts the appointment and agrees to conduct the adjudication in accordance with the Procedure.
3. The Parties bind themselves jointly and severally to pay the Adjudicator's fees and expenses in accordance with the Procedure.
4. The Parties and the Adjudicator shall at all times maintain the confidentiality of the adjudication and shall endeavour to ensure that anyone acting on their behalf or through them will do likewise, save with the consent of the other Parties which consent shall not be unreasonably refused.
5. The Adjudicator shall inform the Parties if he intends to destroy the documents which have been sent to him in relation to the adjudication and he shall retain documents for a further period at the request of either Party.
6. The Adjudicator shall be paid at the hourly rate of R. in respect of all time spent upon, or in connection with, the adjudication including time spent travelling.
7. The Adjudicator shall be reimbursed in respect of all disbursements properly made including, but not restricted to:

- (a) Printing, reproduction and purchase of documents, drawings, maps, records and photographs.
- (b) Telegrams, telex, faxes, and telephone calls.
- (c) Postage and similar delivery charges.
- (d) Travelling, hotel expenses and other similar disbursements.
- (e) Room charges.
- (f) Charges for legal or technical advice obtained in accordance with the Procedure.

8. The Adjudicator shall be paid an appointment fee of R This fee shall become payable in equal amounts by each Party within 14 days of the appointment of the Adjudicator, subject to an Invoice being provided. This fee will be deducted from the final statement of any sums which shall become payable under item 6 and/or item 7. If the final statement is less than the appointment fee the balance shall be refunded to the Parties.
9. The Adjudicator is/is not* currently registered for VAT.
10. Where the Adjudicator is registered for VAT it shall be charged additionally in accordance with the rates current at the date of invoice.
11. All payments, other than the appointment fee (item 8) shall become due 7 days after receipt of invoice, thereafter interest shall be payable at 5% per annum above the Reserve Bank base rate for every day the amount remains outstanding.

SIGNED

by: _____

Name:

who warrants that he / she is
duly authorized to sign for and
on behalf of the first Party in the
presence of

SIGNED

by: _____

Name:

who warrants that he / she is
duly authorized to sign for and
on behalf of the second Party in
the presence of

SIGNED

by: _____

Name:

the Adjudicator in the presence
of

Witness

Name:

Address:

Date:

Witness:

Name

Address:

Date:

Witness:

Name:

Address:

Date:

* Delete as necessary



METSIMAHOLO LOCAL MUNICIPALITY

BID NO. MLM 28/2023/24

**APPOINTMENT OF A CONTRACTOR FOR RESURFACING AND RESEALING OF TAR
ROADS IN DENEYSVILLE AND ORANJEVILLE**

PART C2: PRICING DATA

C2.1 PRICING INSTRUCTIONS – CIVIL AND STRUCTURAL WORK

1. Measurement and payment shall be in accordance to SANS 1200.
2. The units of measurement described in the Bill of Quantities are metric units. Abbreviations used in the Bill of Quantities are as follows:

%	=	percent
h	=	hour
ha	=	hectare
kg	=	kilogram
kl	=	kiloliter
km	=	kilometer
km-pass	=	kilometer-pass
kPa	=	kilopascal
kW	=	kilowatt
ℓ	=	liter
m	=	meter
mm	=	millimeter
m ²	=	square meter
m ² -pass	=	square meter-pass
m ³	=	cubic meter
m ³ .km	=	cubic meter-kilometer
MN	=	mega newton
MN.m	=	mega newton-meter
MPa	=	megapascal
No.	=	number
Prov sum	=	Provisional Sum
PC sum	=	Prime Cost Sum
R/only	=	rate only
Sum	=	lump sum
t	=	ton (1000 kg)
W/day	=	work day

3. For the purpose of the Bill of Quantities, the following words shall have the meanings hereby assigned to them:

Unit:	The unit of measurement for each item of work as defined in the SANS 1200
Quantity:	The number of units of work for each item.
Rate:	The agreed payment per unit of measurement.
Amount:	The product of the quantity and the agreed rate for an item.
Lump sum:	An agreed amount for an item, the extent of which is described in the Bill of Quantities but the quantity of work of which is not measured in any units.

4. Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance is made for waste.
5. It will be assumed that prices included in the Bill of Quantities are based on Acts, Ordinances, Regulations, By-laws, International Standards and National Standards that were published 28 days before the closing date for tenders. (Refer to www.stanza.org.za or www.iso.org for information on standards).

6. The prices and rates in the Bill of Quantities are fully inclusive prices for the work described under the items. Such prices and rates cover all costs and expenses that may be required in and for the execution of the Works described in accordance with the provisions of the Scope of Work, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the Contract Data, as well as overhead charges and profit. These prices will be used as a basis for assessment of payment for additional work that may have to be carried out.
7. Where the Scope of Work requires detailed drawings and designs or other information to be provided, all costs associated therewith are deemed to have been provided for and included in the unit rates and sum amounts tendered under such items.
8. An item against which no price is entered will be considered to be covered by the other prices or rates in the Bill of Quantities. A single lump sum will apply should a number of items be grouped together for pricing purposes.
9. The quantities set out in the Bill of Quantities are approximate and do not necessarily represent the actual amount of work to be done. The quantities of work accepted and certified for payment will be used for determining payments due and not the quantities given in the Bill of Quantities.
10. The short descriptions of the items of payment given in the Bill of Quantities are only for the purposes of identifying the items. More details regarding the extent of the work entailed under each item appear in the Scope of Work.
11. The item numbers appearing in the Bill of Quantities refer to the corresponding item numbers in the "SANS 1200 as prepared by South African National Roads Agency Limited" and additional Project Specifications as per the Scope of Work.
12. Those parts of the contract to be constructed using labour-intensive methods have been marked in the Bill of Quantities with the letters LI in a separate column filled in against every item so designated. The works, or parts of the Works so designated are to be constructed using labour-intensive methods only. The use of plant to provide such Works, other than plant specifically provided for in the Scope of Work, is a variation to the contract. The items marked with the letters LI are not necessarily an exhaustive list of all the activities which must be done by hand, and this clause does not over-ride any of the requirements in the generic labour intensive specification in the Scope of Works.
13. Payment for items, which are designated to be constructed labour-intensively (either in this schedule or in the Scope of Works), will not be made unless they are constructed using labour-intensive methods. Any unauthorized use of plant to carry out work which was to be done labour-intensively will not be condoned and any works so constructed will not be certified for payment.

C2.3

BILL OF QUANTITIES

SECTION 1200

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
1200	<u>GENERAL REQUIREMENTS AND PROVISIONS</u>				
B12.01	(i) Payment of community liason officer	Prov Sum	1	R15 000,00	R15 000,00
	(iii) Handling costs and profit in respect of B12.01(i) and (ii) above	%	R15 000,00		
B12.03	Provision for Relocation/Protection of Servises				
	(a) Allow a provisional sum for existing services to be relocated and/or protected as ordered by the engineer	Prov Sum	1	R150 000,00	R150 000,00
	(b) Handling cost and profit in respect of subitem B12.03(a)	%	R150 000,00		
B12.06	Supply and Install Contract Notice boards as instructed by the Engineer (as per drawing)	No.	2		
1200	TOTAL CARRIED TO SUMMARY				

SECTION 1300

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
1300	<u>CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS</u>				
B13,01	The contractors general obligations				
	(a) Fixed obligations	Lump Sum	1		
	(c) Time related obligations	Month	1		
B13.01	(d) Health and safety obligations	Month	1		
	(e) Environmental obligation	Month	1		
1300	TOTAL CARRIED TO SUMMARY				

SECTION 1400

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
1400	<u>HOUSING, OFFICES AND LABORATORIES FOR THE ENGINEER'S SITE PERSONNEL</u>				
14.01	Office and laboratory accommodation: The provision of accommodation as specified, including roof, external and internal walls, windows complete with glazing, doors with locks and fittings, burglar proofing, painting, floors, fencing, the provision of a 220/250 volt electrical installation with wiring, switchboards, etc, water and sewerage installation, and stores, complete, in accordance with the drawings and specifications, except for items scheduled elsewhere: (a) Offices (interior floor space only) (b) Ablution units	m ² Sum	40 1		
14.02	Office and laboratory furniture: (a) Chairs (d) Desks, complete with drawers and locks (f) Conference tables	No. No. No.	10 1 1		
14.03	Office and laboratory fittings, installations and equipment: (a) Items measured by number: (i) 220/250 volt power points (iii) Double 80 watt fluorescent-light fittings complete with ballast and tubes (v) Single incandescent-light fittings complete with 100 watt globes (vi) General-purpose steel cupboards with shelves (b) Prime-cost items and items paid for in a lump sum (v) The provision of a fax apparatus as specified	No. No. No. No. No. No.	3 1 1 1 1 1		
1400	TOTAL CARRIED TO SUMMARY				

METSIMAHOLO LOCAL MUNICIPALITY

CONTRACT NO: 28/2023/24

THE RESEALING OF ROADS IN DENEYSVILLE

SECTION 1500

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
1500	<u>ACCOMMODATION OF TRAFFIC</u>				
15,01	Accommodating traffic and maintaining temporary deviations	Month	1,00		
15,02	Earthworks for temporary deviations:				
	(a) Shaping of temporary deviations	Km	1,00		
B15.03	Temporary traffic-control facilities:				
	(a) Flagmen	man-day	88,00		
	(b) Portable STOP and GO-RY signs	number	6,00		
	(e) Road signs, R- and TR-series, (size indicated)	number	6,00		
	(f) Road signs, TW-series, (size indicated)	number	6,00		
	(g) Road signs, STW-, DTG-, TGS- and TG-series (excluding delineators and barricades)	m ²	6,00		
	(h) Delineators (DTG50J):				
	(i) Single	number	10,00		
	(ii) Mounted back to back	number	10,00		
	(j) Traffic cones 600mm	number	8,00		
	(l) Movable barriers (type indicated)	No	8,00		
	(n) Safety jackets and hats	No	2,00		
15.05	Gravelling and repair of temporary deviations and existing gravel shoulders used as temporary deviations:				
	(a) Temporary deviations	m ³	50,00		
15.06	Watering of temporary deviations	kilolitre	207,00		
1500	TOTAL CARRIED TO SUMMARY				

SECTION 1700

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
1700	<u>CLEARING AND GRUBBING</u>				
17,01	Clearing and grubbing within the road reserve	ha	0,5		
17,02	Removal and grubbing of large trees and tree stumps				
	(a) Grith exceeding 1m up to and including 2m	no	1		
17,04	Clearing and grubbing at inlets and outlets of hydraulic structures and mitre drains	m²	600 450		Rate Only
17,05	Cleaning out of hydraulic structures:				
	(a) Pipes with an internal diameter up to 750mm	m³	2		Rate Only
	(c) Box culverts up to 1.5m vertical dimention	m³	2		Rate Only
1700	TOTAL CARRIED TO SUMMARY				

SECTION 1800

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
1800	DAYWORKS				
B18.01	Personnel:				
	(a) Unskilled labour	h	1		Rate Only
	(b) Semi-skilled labour	h	1		Rate Only
	(c) Skilled labour	h	1		Rate Only
	(d) Ganger	h	1		Rate Only
	(e) Foreman	h	1		Rate Only
B18.02	Equipment:				
	(i) 3 - 5 ton	h	1,00		Rate Only
	(ii) 5.1 - 10 ton	h	1,00		Rate Only
	Loader (0,5m³)	h	1,00		Rate Only
	Grader (CAT 140G or similar)	h	1,00		Rate Only
	LDV	km	1,00		Rate Only
	Compaction rollers:				
	(i) Vibratory roller	h	1,00		Rate Only
	(ii) Tamping roller	h	1,00		Rate Only
	(iii) Grid roller	h	1,00		Rate Only
	(iv) PTR Roller	h	1,00		Rate Only
	Hand controlled compactors				
	(i) Pedestrian roller (Bomag BW90)	h	1,00		Rate Only
	(ii) Vibratory plate	h	1,00		Rate Only
	(iii) Rammers	h	1,00		Rate Only
	Water truck (min. 10000litre)	h	1,00		Rate Only
	Dozer (D7 or similar)	h	1,00		Rate Only
	Excavator	h	1,00		Rate Only
	Milling Machine	h	1,00		Rate Only
	Paver	h	1,00		Rate Only
	Broce Broom	h	1,00		Rate Only
	Tack cart	h	1,00		Rate Only
	6 m³/min. capacity with two pneumatic drills	h	1,0		Rate Only
	Pneumatic-tyred roller with 10 to 25 tons capacity	h	1,0		Rate Only
	350 mm wide	h	1,0		Rate Only
	Flatbed Truck (10 tonnes)	h	1,0		Rate Only
B18.03	(a) Procurement of materials by the Engineer	Prov Sum	1	R150 000,00	R150 000,00
	(b) Contractor's handling cost, profit and all other charges in respect of sub-item B18.03(a)	%	R150 000,00		
1800	TOTAL CARRIED TO SUMMARY				

METSIMAHOLO LOCAL MUNICIPALITY

CONTRACT NO: 28/2023/24

THE RESEALING OF ROADS IN DENEYSVILLE

SECTION 2100

[illegible]

METSIMAHOLO LOCAL MUNICIPALITY
CONTRACT NO: 28/2023/24
THE RESEALING OF ROADS IN DENEYSVILLE

SECTION 2300

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
2300	<u>CONCRETE KERBING, CHANNELING, CHUTES, DOWNPIPES, AND LININGS FOR OPEN DRAINS</u>				
23,01	Concrete kerbing (class 25/20 concrete)				
(a)	Figure 8 kerbing	m	535,9		
(b)	Re-erection of existing kerbs (figure 8)	m	554,3		
23,02	Concrete kerbing-chanelling combination				
(a)	Type A in situ cast side drain, class 25/20 concrete (see drawing 965/D/14)	m	10		
(b)	150mm thick concrete drift, class 25/20 concrete (see drawing 965/I/10)	m³	5		Rate Only
23,03	Concrete chutes				
(a)	Type E in situ cast concrete chute, class 25/20 concrete (see drawing 965/D/14)	m	2		Rate Only
23,05	Inlet, outlet, transition and similar structures:				
(a)	Energy breaker, class 25/20 concrete (see drawing 965/STD/D/14)	No	2		Rate Only
23,12	Steel reinforcing:				
(c)	Welded steel fabric	kg	150		Rate Only
B23.16	Demolition and removal of existing kerbs and/or channel, concrete lined drains	m³	173		
23/51.05	Concrete edge beams (300mm x 300mm, Class 30/20 concrete)	m	119		
2300	TOTAL CARRIED TO SUMMARY				

METSIMAHOLO LOCAL MUNICIPALITY
 CONTRACT NO: 28/2023/24
 THE RESEALING OF ROADS IN DENEYSVILLE

SECTION 3300

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
3300	<u>MASS EARTHWORKS</u>				
33,04	Cut to spoil, including free-haul up to 0.5km. Material obtained from:				
(a)	Soft excavation	m³	846,975		
(c)	Hard excavation	m³	30		Rate Only
33,13	Finish-off cut and fill slopes, medians and interchange areas:				
(a)	Cut slopes/ Fill slopes	m²	5		Rate Only
33/16.02	Overhaul on material hauled in excess of 1.0km (ordinary overhaul)	m³-km	8469,75		
3300	TOTAL CARRIED TO SUMMARY				

METSIMAHOLO LOCAL MUNICIPALITY
CONTRACT NO: 28/2023/24
THE RESEALING OF ROADS IN DENEYSVILLE

SECTION 3400

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
34,03	Pavement layers constructed from gravel obtained from existing pavement layers :				
(l)	Gravel shoulder wearing coarse compacted to 93% mod AASHTO density using	m³	78,66		
(i)	Non-cemented material (150mm thick)	m³	1		Rate Only
B34.14	In situ reworking of existing pavement layers by pre-milling to a depth of 150mm	m³	1		Rate Only
B34.15	In situ recycling of existing pavement layers and compacting to 97% of modified AASHTO (i) Depth of 150mm	Lump Sum	1		Rate Only
B34.16	Establish a recycler on site capable of recycling to a depth of 300mm ((including moving to alternative locations on site and possible re-establishments)	No	1		Rate Only
34,06	E.O. item 34.03 and 34.04 for adding extra material as G5 quality, from commercial source provided by the Contractor as specified in subsubclause 32.07(b)(iii) and including all haul Gravel Base	m³	847,0		
B34,06(c)	Existing Gravel subbase G6 cement stabilised to C4	m³	847,0		
B34.19	Stockpile to layerworks including free haul up to 1,0 km	m³	847		
	Cut to spoil inclusive of disposal at authorised site	m3	1129,3		
3400	TOTAL CARRIED TO SUMMARY				

SECTION 3500

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
3500	STABILIZATION				
	Note : No additional payment for work in restricted areas				
B35,01	Chemical stabilization extra over unstabilized compacted layers :				
(a)	Subbase layer, 150mm thick	m³	847		
35,02	Chemical stabilizing agent				
(a)	Ordinary portland cement	t	42		
35.04	Provision and application of water for curing	kl	320		
35,05	Curing by covering with the subsequent layer	m²	5		
3500	TOTAL CARRIED TO SUMMARY				

SECTION 3800

ITEM N0	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
3800	BREAKING UP EXISTING PAVEMENTS LAYERS				
	Note : No additional payment for work in restricted areas				
38.02	Milling out existing bituminous material with an average milling depth:				
	(b) Exceeding 30mm but not exceeding 60mm	m³	282,33		
	(c) Exceeding 60mm	m³	5,00		Rate only
38.10	Preparing stockpile sites	m²	10,00		Rate only
B38.14	Providing the milling machine on the site capable of milling into existing surfacings and pavements	No	1		Rate only
	OVERHAUL				
38/16.02	Overhaul of material for a distance exceeding 1,0km (ordinary haul)	m³-km	10,00		
3800	TOTAL CARRIED TO SUMMARY				

SECTION 3900

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
39,01	<u>Sawing asphalt or cemented pavement layers for patching</u>				
(a) (i)	Sawing asphalt to an average depth Not exceeding 50 mm	m ²	2		Rate Only
39,02	Excavation in existing pavements for patch				
(b)	Cemented layers	m ³	5		Rate Only
39,03	Backfilling of excavations for patching with				
(a)	(a) Chemically stabilized pavement material (imported G2 material with 3% CEM II IV (B-V) 32,5 N) for a patch or surfacing area compacted to 97% MDD):				
	(i) Not exceeding 5m ²	m ³	2		Rate Only
	(ii) Exceeding 5m ² but not 100m ²	m ³	2		Rate Only
	(b) Base material stabilised with bituminous emulsion (imported G2 material with 60% stable grade emulsion) for a patch with a surface area compacted to 97% MDD:				
	(i) Not exceeding 5m ²	m ³	2		Rate Only
	(ii) Exceeding 5m ² but not 100m ²	m ³	2		Rate Only
39,04	Compacting the floor of excavation for patch	m ²	2		Rate Only
39,05	Cutting back the edges of the existing surfacing for the repairing of edge breaks	m	2		Rate Only
39/41.01	Prime coat on Patches	litre	5		Rate Only
3900	TOTAL CARRIED TO SUMMARY				R0,00

SECTION 4100

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
4100	PRIME COAT				
41.01	Prime coat				
	(e) Invert bitumen emulsion	litre	4 517,20		
41.02	Aggregate for blinding	m²	5 646,50		
	Tack Coat as approved by the Engineer	Litre	3 387,90		
4100	TOTAL CARRIED TO SUMMARY				

SECTION 4200

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
4200	ASPHALT BASE AND SURFACING				
42.02	Asphalt surfacing:				
	(a) Continuously graded, medium grading				
	(ii) 40mm thick (50/70) Penetration grade bitumen	m²	5 646,50		
42.03	Rolled-in chippings (14mm) in surfacing	t	1,00		Rate Only
42.04	Tack coat of 30% stable-grade emulsion	litre	3 387,90		
42.05	Binder variations:				
	(a) 50/70 penetration-grade bitumen	t	1,00		
42.06	Variation in active filler content:				
	(b) Lime	t	1,00		
42.08	100mm Cores in asphalt paving	No.	1,00		
42,2	Backfilling of excavations for patching with:				
	(b) Asphalt surfacing (Continuously medium graded asphalt, using 50/70 penetration grade bitumen)(Compaction 93% MTRD)				
	(i) 30mm nominal thickness	t	1		
42,11	Asphalt layer constructed for rehabilitation purposes in accordance with the provisions of subsubclauses 4213(f)(ii) or 4213(f)(iii):				
	(b) Surfacing or overlay constructed with with 50/70 new asphalt continuously graded, medium grade penetration grade bitumen (compacted to 93% MTRD) 45mm thick	t	1		
42.21	Aggregate variations	t	5,00		
4200	TOTAL CARRIED TO SUMMARY				

SECTION 4400

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
4400	SINGLE SEALS				
B44.01	Single Seal (Grade 1 S-E1)				
	(a) 20mm aggregate				
	(i) Using S-R1 binder	m²	1		Rate Only
44.02	Bituminous binder variations:				
	(g) Bitumen - rubber (S-R1)	litre	1		Rate Only
44.03	Aggregate variation				
	(a) 14 mm aggregate	m³	1		Rate Only
B44.05	Precoating of aggregate (bituminous base precoating fluid)				
	(b) 14mm aggregate at a rate of 16 l / m3	m³	1		Rate Only
B44.10	Precoating fluid variations	litre	1		Rate Only
B45.10	Precoating fluid variations	litre	1		Rate Only
4400	TOTAL CARRIED TO SUMMARY				

SECTION 4500

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
45,01	Double Seal (Grade 1 Bitumen Rubber)				
	(a) 10mm Single seal using (S-R1 binder)	m ²	2		Rate Only
45,02	Bituminous binder variations:				
	(h) Bitumen - rubber (S-R1)	litre	4		Rate Only
	(i) Bitumen (S-E1)	litre	4		Rate Only
45,03	Aggregate variation				
	(a) 20mm aggregate	m ³	2		Rate Only
	(b) 10mm aggregate	m ³	2		Rate Only
45,04	Application of fog spray	litre	4		Rate Only
	(b) 30% spray grade emulsion (anionic)				
B45.05	Precoating of aggregate (bituminous base precoating fluid)				
	(a) 20mm aggregate at a rate of 12 l / m ³	m ³	5		Rate Only
	(b) 10mm aggregate at a rate of 16 l / m ³	m ³	5		Rate Only
B45.10	Precoating fluid variations	litre	4		Rate Only
4500	TOTAL CARRIED TO SUMMARY				

METSIMAHOLO LOCAL MUNICIPALITY

2D

THE RESEALING OF ROADS IN DENEYSVILLE

SECTION 4800

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
48,01	<u>Treatment with diluted bituminous emulsion (Fogspray)</u>				
	(a) 30% bitumen emulsion	litre	5		Rate Only
B48.03	Texture Correction Slurry seal				
	(b) Applied by hand:				
	(i) Texture correction slurry (Table 4302/12) using 180 l/m ³	m ³	3		Rate Only
	anionic emulsion, 1% Cem II 32.5N to an average thickness of 1 - 3mm				
48,04	Screed of asphalt or coarse slurry:				
	(a) Tack coat using 30% stable-grade bitumen emulsion	litre	2		Rate Only
48,05	Repairing edge breaks in surfacing:				
	(a) Tack coat (60% stable grade, 0.6l/m ²)	litre	8		Rate Only
	(b) Reconstructing edges using medium (50/70) continuously-graded asphalt	t	1		Rate Only
	Patching of potholes with cold mix asphalt (rate all inclusive)	m ³	1		Rate Only
48.09	Rolling the cracks	m	5		Rate Only
B48.14	Sealing cracks				
	(b) Cleaning cracks with cold compressed air and sealing using Class C-E1 modified binder crack sealant	m	2		Rate Only
48,06	Cleaning the cracks with compressed air (hot lance)	km	1		Rate Only
48,07	Applying bituminous binders and herbicides for sealing cracks:				
	(d) Type C-E1 modified binder	litre	5		Rate Only
4800	TOTAL CARRIED TO SUMMARY				

SECTION 5100

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
5100	PITCHING, STONEWORK AND PROTECTION AGAINST EROSION				
51.01	Stone pitching:				
	(b) Grouted stone pitching	m²	2,00		Rate Only
51.04	Concrete pitching and block paving:				
	(b) Segmental block paving:				
	(i) Type S-A, 80 mm thick interlocking	m²	3,00		Rate Only
	(ii) Type S-A, 60 mm thick interlocking	m²	4,00		Rate Only
5100	TOTAL CARRIED TO SUMMARY				

METSIMAHOLO LOCAL MUNICIPALITY
CONTRACT NO: 28/2023/24
THE RESEALING OF ROADS IN DENEYSVILLE

SECTION 5600

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
5600	<u>ROAD SIGNS</u>				
B56.01	Road sign boards with painted or coloured semi-matt background. Symbols, lettering and borders in semi-matt black or in Class 1 retro-reflective material, where the sign board is constructed from:				
	(d) Prepainted galvanized steel profiles (200 mm high chromadek or approved equivalent):				
	(i) Area not exceeding 2 m ²	m ²	4,00		
	(ii) Area exceeding 2 m ² but not 10m ²	m ²	4,00		
	(iii) Area exceeding 10m ²	m ²	4,00		
	(e) Chromadek steel plate regulatory warning and information signs				
	(i) Octagonal : 1200mm width	No	5,00		
	(ii) Triangular : 1500mm Sides	No	6,00		
	(iii) Round : 1200mm dia	No	6,00		
56.02	Extra over items 56.01 and using:				
	(a) Background of retro-reflective material				
	(iii) Class III	m ²	1,00		
	(b) Lettering, symbols, numbers, arrows, emblems and borders of retro-reflective material:				
	(iii) Class III	m ²	1,00		
56.03	Road sign supports (overhead road sign structures excluded):				
	(a) Steel tubing	t	1,00		
	(b) Timber				
	(i) 75mm diameter	m	36,00		
	(ii) 150mm diameter	m	36,00		
56.04	Kilometre posts	No.	1,00		
56.05	Excavation and backfilling for road sign supports (not applicable to kilometre posts)	m ³	1,80		
56.06	Extra over item 56.05 for cement-treated soil backfill	m ³	1,80		
56,09	Dismantling and storing road signs with a surface area of:				
	(a) Up to 2m ²	No	2,00		
	(b) Exceeding 2m ² but not 10m ²	No	2,00		
	(c) Exceeding 10m ²	No	2,00		
B56.10	Danger plates at culverts / structures (1200mm x 300mm)	No	12,00		
56.12	Temporary covers for road signs	No	12,00		
56.13	Dismantling and disposing of road signs				
	(a) Hazard marker boards	No	5,00		
	(b) Single sign posts	No	5,00		
	(c) Multiple post ground mounted signs	No	5,00		
5600	TOTAL CARRIED TO SUMMARY				

SECTION 5700

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
5700	ROAD MARKINGS				
57.02	Retro Reflecting Road marking paint				
	(a) White lines (broken or unbroken):				
	(i) 100 mm wide	km	1,18		
	(iii) 200 mm wide	km	0,10		
	(iii) 300 mm wide	km	0,10		
	(b) Yellow lines (broken or unbroken):				
	(i) 100 mm wide	km	0,01		
	(d) White lettering and symbols	m ²	121,80		
	(f) Transverse lines, painted island and arrestor bed markings (any colour)	m ²	15,00		
B57.05	Roadstuds (installation and maintenance):				
	(a) RSA-2	No.	1		
B57.06	Setting out and premarking the lines (excluding traffic-island markings, lettering and symbols)	km	1,00		
57.07	Re-establishing the painting unit at the end of maintenance period	Lump Sum	1,00		
B57.10	Cold plastic road marking material				
	(a) White lettering and symbols	m ²	1,00		
	(b) Yellow lettering and symbols	m ²	1,00		
	(c) Transverse lines, painted island and arrestor bed markings (any colour)	m ²	1,00		
5700	TOTAL CARRIED TO SUMMARY				

SECTION 5900

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
5900	FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS				
59.01	Finishing the road and road reserve:				
	(b) Single carriageway road	km	0,97		
59.02	Treatment of old roads and temporary deviations				
	(b) By ripping and removal:				
	(i) To stockpile	m³	100,00		
	(ii) To spoil	m³	200,00		
5900	TOTAL CARRIED TO SUMMARY				

SECTION 8100

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
8100	<u>TESTING MATERIALS AND</u> <u>WORKMANSHIP</u>				
81,02	Other special tests requested by the Engineer				
(a)	Cost of testing	PC Sum	1	R150 000,00	R150 000,00
(b)	Charge on prive cost sum	%	R150 000,00		
8100	TOTAL CARRIED TO SUMMARY				

SECTION 11000

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
PS11000	<u>MISCELLANEOUS ACTION</u>				
	Traffic Calming Devices				
	(a) Speed Hump detailed as per drawing	No.	4,00		
11000	TOTAL CARRIED TO SUMMARY				

METSIMAHOLO LOCAL MUNICIPALITY
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THE RESEALING OF ROADS IN DENEYSVILLE

<u>SUMMARY OF COST BREAKDOWN</u>			
1200	GENERAL REQUIREMENTS AND PROVISIONS	R	
1300	CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS	R	
1400	HOUSING, OFFICES AND LABORATORIES FOR THE ENGINEER'S SITE PERSONNEL	R	
1500	ACCOMMODATION OF TRAFFIC	R	
1700	CLEARING AND GRUBBING	R	
1800	DAYWORKS	R	
2100	DRAINS	R	
2300	CONCRETE KERBING, CONCRETE CHANNELING, CHUTES AND DOWNPIPES AND CONCRETE LINING FOR OPEN DRAINS	R	
3300	MASS EARTHWORKS	R	
3400	PAVEMENT LAYERS OF GRAVEL MATERIAL	R	
3500	STABILIZATION	R	
4100	PRIME COAT	R	
4200	ASPHALT BASE AND SURFACING	R	
4400	SINGLE SEALS	R	
4500	DOUBLE SEALS	R	
4800	TREATMENT OF AN EXISTING SURFACE WITH DEFECTS	R	
5100	PITCHING, STONEWORK AND PROTECTION AGAINST EROSION	R	
5600	ROAD SIGNS	R	
5700	ROAD MARKINGS	R	
5900	FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS	R	
8100	TESTING MATERIAL AND WORKMANSHIP	R	
PS11000	MISCELLANEOUS ACTION	R	
	TOTAL	R	
<u>CALCULATION OF THE SUM</u>			
	SUMMARY OF SCHEDULE OF QUANTITIES TOTAL	R	
	ADD CONTINGENCIES (10%)	R	
	SUBTOTAL	R	
	ADD VALUE-ADDED TAX (VAT)		
	The tenderer shall add 15% of subtotal for VAT	R	
	TOTAL CARRIED TO FORM OF OFFER	R	



METSIMAHOLO LOCAL MUNICIPALITY

BID NO MLM 28/2023/24

ADVERTISEMENT:

APPOINTMENT OF A CONTRACTOR FOR RESURFACING AND RESEALING OF TAR
ROADS IN DENEYSVILLE AND ORANJEVILLE

C3: SCOPE OF WORK

PART C3: SCOPE OF WORKS

Pages

C3.1 Description of the Works

C3.2 Employer's Agent

C3.3 Procurement

C3.4 Construction (Civil and Structures)

C3.5 Management

Status

Should any requirement or provision in the parts of the Scope of Work conflict with any requirement of any Standardised Specification, or any drawings, the order of precedence, unless otherwise specified, is:

- Project Specifications
- Drawings
- Scope of Works
- The following variations and additions to the SANS 1200 Standardized Specifications referred to shall apply to this Contract.

C3.1 DESCRIPTION OF THE WORKS

C3.1.1 Employer's objectives

The employer's objective is to Rehabilitate 2 streets in Deneysville as well as provision of an Asphalt Surfacing. This project will deliver the following benefits to the users:

- Better road riding quality
- Better stormwater drainage facilities
- Improved road safety

C3.1.2 Overview of the works

The 3 streets are currently in a bad state and are in need of rehabilitation. The key features on the road are as follows

- Surfaced with asphalt surfacing layer
- Carries traffic into and away from the Township
- Has an open drain stormwater collection system
- Has no streetlights
- Has mountable kerbs

C3.1.3 Extent of the works

The works entails:

- Clearing and Grubbing.
- Excavate and Spoil unsuitable material.
- Import material from commercial sources or borrow pits (when required).
- Construction of mass earthworks.
- Construction of layer works
- Construction of Asphalt surfacing

C3.1.4 Location of the works

The project is located in Deneysville under Metsimaholo Local Municipality area.

C3.2 EMPLOYER'S AGENT**C3.2.1 Design**

(a) The Employer is responsible for the design of the permanent Works as reflected in these Contract Documents unless otherwise stated.

(b) The Contractor is responsible for the design of the temporary Works and their compatibility with the permanent Works.

(c) The Contractor shall supply all details necessary to assist the Employer's Agent in the compilation of the as-built drawings.

C3.2.2 Employer's Design

(a) The Employer's design is as detailed in the documentation and on the Drawings.

C3.2.3 Contractor's Design

Where contractor is to supply the design of designated parts of the permanent Works or temporary Works he shall supply full working drawings supported by a professional Employer's Agent's design certificate.

C3.2.4 Drawings

The reduced drawings that form part of the Tender Documents are to be used for tender purposes only.

The Appointed Contractor will be supplied with two (2) A1 paper prints of each of the Drawings.

Any information in the possession of the Contractor that is required by the Employer's Agent's Representative to complete his as-built drawings must be supplied to the Employer's Agent's Representative before a Certificate of Completion will be issued.

Only figured dimensions must be used and Drawings must not be scaled unless required by the Employer's Agent. The Employer's Agent will supply any figured dimensions that may have been omitted from the Drawings.

The levels given on the Drawings, if applicable, are subject to confirmation on the Site and the Contractor shall submit all levels to the Employer's Agent for confirmation before he commences construction of any structure. The Contractor shall also check all clearances given on the Drawings and shall inform the Employer's Agent of discrepancies.

One full size set of prints of the Drawings shall be kept by the Contractor on the site and these shall at all reasonable times be available for inspection and use by the Employer's Agent and Employer's Agent's Representative, or by any other persons so authorised by the Employer's Agent in writing.

The Contractor shall notify the Employer's Agent in writing of any additional drawings or specifications required for the proper execution of the works, a reasonable period before these is required.

The issue of Contract drawings to the Contractor is on the explicit condition that they shall only be used for the execution of the works.

C3.2.5 Design procedures

All designs and modifications thereto shall be communicated in writing and the Contractor and Employer's Agent shall maintain master lists to record and track all transactions.

C3.2.6 Construction in confined areas

It may be necessary for the Contractor to work in confined areas. No additional payment will be made for work in "restricted areas" as described in Section 6100 of the Standard Specifications. In certain areas the width of the fill material and pavement layers may reduce to zero and the working space may be confined. The method of construction in these confined areas depend on the Contractor's Constructional Plant. However, the Contractor must note that measurement and payment will be in accordance with the specified cross-sections and dimensions, irrespective of the methods used to achieve these cross-sections and dimensions, and that the rates and amounts tendered will be deemed to include full compensation for any special equipment or construction methods or for any difficulty encountered in working in confined areas and narrow widths, and at or around obstructions, and that no extra payment will be made nor will any claim for payment be considered on account of these difficulties.

C3.2.7 Water for construction purposes

The Contract will be undertaken in an arid area with scarce water resources. The Contractor needs to make his own arrangements for water to be used in the Construction Works.

C3.2.8 Construction Programme**(a) General**

The Contractor's programme to be submitted in terms of Clause 5.6 of GCC 2015 shall take full account of all matters that may impact on the sequence of executing the various components of the Works and the requisite rate of progress of the Works, as are specified in or reasonably to be inferred from the Contract. The programming of the works must be agreed with the Client.

(b) Format

The construction programme to be submitted by the Contractor in accordance with the provisions of Clause 5.6 of GCC 2015 shall:

- (i) be in accordance with the phasing of the construction as agreed with the Client;
- (ii) be in the form of a bar chart;
- (iii) clearly indicate the start and end dates and duration of all construction activities and identify the critical path; and
- (iv) take full cognizance of all the Contractor's risks and obligations in terms of the Contract.

C3.3 PROCUREMENT**C3.3.1 Preferential procurement procedures**

The works shall be executed in accordance with the Preferential Procurement Policy Framework Act and Preferential Procurement Regulation 2011.

C3.3.2 Scope of mandatory subcontract work

The Contractor shall without delay enter into contract with the subcontractor based on their accepted quotation. The Contractor shall remain responsible for providing the subcontracted portion of the works as if the work had not been subcontracted.
Procurement will purely be based on price.

C3.4 CONSTRUCTION

C3.4.1 STANDARD SPECIFICATIONS

(a) The following specifications shall apply for the construction of the Works.

The COLTO Standard Specifications for Road and Bridge Works for State Road Authorities (1998).

The Contractor may purchase copies of Volume (i) from the South African Institution of Civil Engineer's Agents.

SAICE

Waterfall Park	Postnet Suite 81	Tel: 011 805-5947
Howick Gardens	Private Bag X65	Fax: 011 805-5971
Vorna Valley	Halfway House	Contact Person: Angeline Aylward
Becker Street	1685	
Midrand		

(b) SABS or BS Specifications and Codes of Practice

Wherever any reference is made to the South African Bureau of Standards (SABS) and the British Standards Specification (BSS) in either these Bill of Quantities or the Specification of Materials and Methods to be Used (OOG-001E), this reference shall be deemed to read "SABS or equivalent standard and BS or equivalent standard" respectively.

(c) Various other specifications specified in the COLTO Standard Specifications or the Project Specifications.

The Project Specifications form an integral part of the Contract Documents and supplement the Standard Specifications.

In the event of any discrepancy with a part or parts of the standard specifications, the schedule of rates or the Drawings, the project specifications shall take precedence.

The Standard Specifications which form part of this contract have been written to cover all phases of work normally required for road contracts and may therefore cover items not applicable to this particular contract.

C3.4.2 PROJECT SPECIFICATIONS: GENERAL

C3.4.2.1 Accommodation of traffic

The Contractor shall organise the work to cause the least possible inconvenience to the public, the service providers to the factory and to the factory operations. In this respect the Contractor's attention is drawn to Clause 8.1.2 of GCC 2015.

All powered vehicles used on the Contract shall be fitted with warning signboards mounted across the back and front of the vehicle. These boards shall be the same width as the vehicle, 400 mm high, display the word "CONSTRUCTION VEHICLE" in bold black lettering on a yellow background and be subject to the approval of the Employer's Agent.

In addition, all vehicles and items of mobile plant operating on site shall be supplied with electrically operated amber rotating beacons of robust construction. The amber lens shall have a height of at least 200 mm and an output of at least 50 W. The beacons shall be placed to be clearly visible from all directions for approximately 300 metres.

No additional payments shall be made for the furnishing of these boards and rotating beacons.

The Contractor shall provide, at his expense, reflective waistcoats, overalls, protective goggles, gloves, hard hats, waterproof clothing etc., which may be necessary for the execution of the contract.

All normal work will be limited to the periods specified in the Conditions of Contract.

Where temporary road signs are required, this will be provided by the Contractor and the Contractor shall at all times ensure proper maintenance thereof.

Failure to maintain road signs, warning signs or rotating lights, etc., in a good condition shall constitute ample reason for the Employer's Agent to bring the works to a stop until the defective items have been repaired to the satisfaction of the Employer's Agent.

The Contractor may not commence constructional activities before adequate provision has been made to accommodate the traffic as agreed with the Client and/or instructed by the Employer's Agent.

Any cost associated with the accommodation of traffic must be included in the relevant payment items.

C3.4.2.2 Contractor's camp site

The Contractor shall make his own arrangements for a suitable site for his camp.

C3.4.2.3 Security

The Contractor shall be responsible for the security of his personnel and equipment on and around the site of the works and for the security of his camp. No claims in this regard will be considered.

C3.4.2.4 Power supply and other services

The Contractor must make his own arrangements concerning the supply of electrical power and all other services. No direct payment will be made for the provision of electrical and other services. The cost of providing these services will be deemed to be included in the rates and amounts tendered for the various items of work for which these services are required.

C3.4.2.5 Existing services

At commencement of the Works, the Client will indicate all known services to the Contractor. The Contractor will nevertheless be required to be continually vigilant of the possibility of the existence of other services that may affect the works.

The Contractor is responsible for the protection of all services and will be held accountable in the event of any damage caused by him or by his subcontractors or staff. The Contractor will also be accountable where damage is caused by a third party which can be attributed to negligence on the Contractor's part on providing adequate protection.

C3.4.2.6 Samples

The Contractor has to ensure that the building material provided, conforms to the specifications.

C3.4.3 PROJECT SPECIFICATIONS RELATING TO STANDARD SPECIFICATIONS

C3.4.3.1 General Conditions of Contract Referred to in the Standard Specifications

The references to the General Conditions of Contract appearing in the COLTO Standard Specifications refer to the COLTO General Conditions of Contract which is superseded in this contract by the General Conditions of Contract for Construction Works 2015. The

corresponding clause in the latter document pertaining to the reference in the COLTO Standard Specifications is listed in the table below.

Clause No. in the Standard Specifications	Clause No. in COLTO General Conditions	Equivalent Clause No. in General Conditions of Contract 2015
1202	15	5.6
1206	14	Deleted
1209	52	6.10
1210	54	5.14
1212(1)	49	6.8
1215	45	5.12
1217	35	8.2
1303	49	6.8
1303	53	6.11
1303	12	5.7
1303	45	5.12
1403	40(1)	5.7
1505	40	5.7
31.03	40	5.7
3204(b)	40	5.7

C3.4.3.2 Amendments to the Standard Specifications

As at 22 April 2018 no amendments have been issued.

C3.4.3.3 Project Specifications Relating to Standard Specifications

The following COLTO Standard Specification sections are included:

B1	SECTION B1100 : DEFINITIONS AND TERMS	C3.11
B2	SECTION B1200 : GENERAL REQUIREMENTS AND PROVISIONS	C3.16
B3	SECTION B1300 : CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS	C3.28
B4	SECTION B1400 : HOUSING, OFFICES AND LABORATORIES FOR THE EMPLOYER'S AGENT'S SITE PERSONNEL.....	C3.29
B5	SECTION B1500 : ACCOMMODATION OF TRAFFIC.....	C3.30
B6	SECTION B2200 : PREFABRICATED CULVERTS	C3.37
B7	SECTION B2300 : CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES AND CONCRETE LINING FOR OPEN DRAINS.....	C3.40
B8	SECTION B3300 : MASS EARTHWORKS	C3.41
B9	SECTION B3400 : PAVEMENT LAYERS OF GRAVEL MATERIAL.....	C3.43
B10	SECTION B3500 : STABILISATION	C3.46
B11	SERIES 4000 : ASPHALT PAVEMENTS AND SEALS.....	C3.64
B12	SECTION B5600 : ROAD SIGNS.....	C3.83
B13	SECTION B5700 : ROAD MARKINGS.....	C3.85
B14	SECTION B7300 : CONCRETE BLOCK PAVING FOR ROADS	C3.91

B1 SECTION B1100: DEFINITIONS AND TERMS

B1115 GENERAL CONDITIONS OF CONTRACT

Replace clause 1115 with the following:

"The General Works Conditions applicable to this Contract shall be the *General Conditions of Contract for Construction Works*, Third Edition, 2015, 2nd Print, published by the South African Institution of Civil Engineering (SAICE), referred to as GCC 2015.

All references to the *COLTO General Conditions of Contract 1998* in the *COLTO Standard Specifications for Road and Bridge Works for State Road Authorities, 1998* are to be deleted and replaced, where applicable, by references to the Conditions of Contract stated in this clause as detailed in the table hereunder. The context of the reference to the GCC is also noted.

The Contractor shall note that whereas every effort has been made to include all of the affected clauses in the table, there may be some omissions. In every case, however, the Conditions of Contract specified in this clause and amended in the Contract Document shall apply and the Contractor shall be responsible for interpretation of the equivalent clause.

COLTO STANDARD SPECIFICATIONS	COLTO GENERAL CONDITIONS OF CONTRACT, 1998 (GCC)	GENERAL CONDITIONS OF CONTRACT FOR CONSTRUCTION WORKS, SECOND EDITION, 2015
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Clause number	Page number	Clause number	Description or reference	Clause number	Description or reference amended to
1115	1100-2		Definition of GCC		Definition GCC 2015
1202	1200-2	15	Construction programme	5.6	Programme
1204	1200-2		General reference to GCC		Applicable to GCC 2015
1206	1200-3	14	Setting out of works		Clause amended in 1206 of specifications
1209(a)	1200-4		General references to GCC		Applicable to GCC 2015
1209(e)	1200-5	52	Valuation of material brought onto site	6.10	Valuation of material brought onto site
1210	1200-5	54	Certificate of practical completion	5.14	Certificate of practical completion
1212(1)	1200-7	49	CPA on alternative designs	6.8	CPA on alternative designs
1215	1200-9	45	Extension of time for completion due to abnormal rainfall.	5.12	Extension of time for completion due to abnormal rainfall.
1217	1200-10	35	Care of the Works	8.2	Care of the Works
1303(ii)	1300-1		General reference to GCC		Applicable to GCC 2015
1303(iii)	1300-1	49	Price adjustment item 13.01(a)	6.8	Price adjustment item 13.01(a)
1303(iii)	1300-2	49	Price adjustment item 13.01(b)	6.8	Price adjustment item 13.01(b)
1303(iii)	1300-1	53	Variations exceeding 15%	6.11	Variations exceeding 15%
1303(iii)	1300-2	53	Variations exceeding 15%	6.11	Variations exceeding 15%
1303	1300-2	12	Payment item 13.01(c)	5.3	Payment item 13.01(c)
1303	1300-2	45	Payment item 13.01(c)	5.12	Payment item 13.01(c)
1403(c)(ii)	1400-4	40(1)	Variation for rented accommodation	6.4	Variation for rented accommodation
1505	1500-3	40	Variation for temporary drainage	6.4	Variation for temporary drainage
Item 15.08	1500-8	48	Payment of provisional sum	6.6	Payment of provisional sum
Item 15.09	1500-8	48	Payment of provisional sum	6.6	Payment of provisional sum
Item 15.11	1500-8	48	Payment of provisional sum	6.6	Payment of provisional sum
Note (2)	3100-4	40	Payment for prospecting for materials	6.4	Payment for prospecting for materials
3204(b)(iii)	3200-2	40	Payment for oversize material	6.4	Payment for oversize material
3303(b)	3300-2	2	Employer's Agent's decisions, with reference to materials classification	3	Employer's Agent's decisions, with reference to materials classification
Item 44.06	4400-3		General reference to GCC, PC sums		General reference to GCC, PC sums
Item 45.06	4500-3		General reference to GCC, PC sums		General reference to GCC, PC sums
5803(c)	5800-3	40	Variation, for landscaping	6.4	Variation, for landscaping
5805(d)	5800-4	40	Variation, for grassing	6.4	Variation, for grassing
Item 58.10	5800-10	48	Payment for extra work	6.6	Payment for extra work
8103(c)	8100-1	40	Variation, for testing material	6.4	Variation, for testing material
Item 81.02	8100-26		General reference to GCC, provisional sums		General reference to GCC, provisional sums
Item 81.03	8100-26	22	Clearance of site on completion, with reference to core drilling	5.15	Clearance of site on completion, with reference to core drilling

B1136 ROAD PRISM

Add the following at the end of the first paragraph:

"The road prism shall also mean the prism of the runways, taxiways and aprons."

B1155 WORK IN RESTRICTED AREAS *Add the following:*

"Any omission of payment items from the Pricing Schedules with regard to additional or extra over payment for work in restricted areas should be regarded as deliberate and any additional cost incurred shall be included in the bulk rate. (Refer also to sub-clause B1209(g) except for work near structures as defined in Section 6100.)"

Add the following clauses:

"B1156 OTHER DEFINITIONS

The COLTO *Standard Specification for Roads and Bridges* has been written for all Contractors, Employers and Employer's Agents. Similarly, the Works and the Site are not defined and the general nature of the entities and elements that collectively constitute construction under a contract are characterised by the use of lower case letters throughout.

These project specifications continue to use lowercase spellings in order to avoid the appearance of the capitalised and non-capitalised words to describe or prescribe the same elements of work required on this project.

B1158 SABS SPECIFICATIONS

Where reference is made in this specification or the standard specifications to SABS specifications, the latest published national standard shall be applicable. Use:

[https://www.sabs.co.za/content/uploads/files/SABS%20Catalogue%20February%202012%20\(abridged\).pdf](https://www.sabs.co.za/content/uploads/files/SABS%20Catalogue%20February%202012%20(abridged).pdf)

for the most up-to-date versions of the various standards.

B1159 AGGREGATE SIZE

Where reference is made in this specification or the standard specifications to aggregate size, nominal aggregate size or maximum aggregate size, the aggregate size as listed shall be replaced with the new corresponding aggregate size as indicated in the following table:

AGGREGATE SIZE	NEW AGGREGATE SIZE
26,5	28
19	20
13,2	14
9,5	10
6,7	7
4,75	5
2,36	2
1,18	1

B1160 BITUMEN-RUBBER

A hot blend of penetration-grade bitumen and fine rubber crumbs. In asphalt work the blend of penetration-grade bitumen and rubber crumbs shall be made before the mixing of modified binder with the aggregates (wet method).

B1161 PATCHING

Patching shall be any repair work to existing pavement layers with the purpose of repairing local failures with a surface area of more than 1,0 m² but less than 100 m². Repairs in excess of 100 m² shall be considered to be reconstruction.

B1162 POTHOLE

Potholes are local failures covering a surface area of less than 1,0 m².

B1163 REPAIR

Measures aimed at maintaining or improving the condition and/or riding comfort of an existing road.

B1164 STRESS-ABSORBENT MEMBRANE INTERLAYER (SAMI)

A layer of stone chippings and bitumen-rubber constructed between successive pavement layers for the purpose of absorbing stress.

B1165 PROCESS CONTROL

Process control is the responsibility of the Contractor and refers to all testing required to ensure that the completed permanent works comply with the specifications and drawings. All such testing will be subject to inspection and approval by the Employer's Agent.

Process control testing shall be carried out at the cost of the Contractor.

B1166 ACCEPTANCE CONTROL

Acceptance control means whatever testing the Employer's Agent carries out over and above the process control testing already constructed in order to decide on the acceptability of any work submitted by the Contractor. Such testing will be carried out at the cost of the Employer.

B1177 PARTY, PARTIES AND THIRD PARTY

'Party' and 'Parties' means the Client and the Consultant and 'Third Party' means any other person or entity as the Contract requires."

SECTION 1200: GENERAL REQUIREMENTS AND PROVISIONS**B1202 SERVICES**

ADD THE FOLLOWING:

"A number of existing services occur within the extent of the Works that will affect the Contractor's programme of work. It is therefore of the utmost importance for the Contractor to work in close conjunction with the owners or authorities controlling these services to ensure that the services are not disrupted in any way as a result of the Works.

Before work commences, the Contractor shall contact all private owners or public authorities controlling services to allow them to protect, move or relocate a service as required, or to confirm that all such work has been completed.

No payment will be made for inconvenience to the Contractor due to services crossing the Site or any authority working on such services, nor will delays caused by such works be accepted as a basis for claiming an extension of time for completing the Works."

B1204 PROGRAMME OF WORK

INSERT THE FOLLOWING BEFORE THE FIRST PARAGRAPH:

"A network-based programme in accordance with the precedence method shall be provided, showing the various activities in such detail as the Employer's Agent may require. The programme shall be updated monthly in accordance with the progress made by the Contractor. Failure to comply with these requirements entitles the Employer's Agent to use a programme based on his own assumptions to evaluate claims for extension of time for completion of the works, or for additional compensation."

B1206 THE SETTING-OUT OF WORK AND PROTECTION OF BEACONS

REPLACE THE FIRST PARAGRAPH WITH THE FOLLOWING:

"The Contractor shall comply with all legal provisions in regard to surveying and setting out work."

B1209 PAYMENT

(b) Rates to be inclusive

Add the following to the first paragraph:

" VAT shall be excluded from the rates"

Insert the following after "construction plant" in lines six and seven of the first paragraph. " (distinguish between operational costs and hire costs)"

IN THE THIRD LINE OF THE FIRST PARAGRAPH, INSERT "together with the payment of VAT as a separate item," AFTER THE WORD "quantities,".

ADD THE FOLLOWING SUBCLAUSES:

"(g) Payment certificates

With reference to Clause 6.10 of the General Conditions of Contract, the Employer's Agent's Certificate will only be issued after he has received a draft certificate prepared by the Contractor at his own expense in the form prescribed by the Employer's Agent. The cost of duplicating and delivering copies of the certificate to the Contractor, the Employer's Agent and the Employer shall be borne by the Contractor. The Employer's Agent and the Employer require a total of three sets of A4-sized paper copies.

(h) Trade names

Where materials are specified under trade names, tenders must be based on those specified materials. Alternative materials may be submitted as alternative tenders and

the Employer's Agent may, after receipt of tenders, approve the use of equivalent materials."

DS1 Work in confined areas

Except where provided for in the specifications AND the bill of quantities, no extra payment shall be made nor shall any claim for additional payment be considered for construction in restricted or confined areas. The omission of standard pay items from the bill of quantities shall be taken to be deliberate and any additional costs incurred shall be included in the tendered rates.

DS2 Work in existing watercourse

No extra payment shall be made nor shall any claim for additional payment be considered for the control and safe management of the flow in the watercourse during construction. The omission of pay items from the Bill of Quantities shall be taken to be deliberate and any additional costs incurred shall be included in the tendered rates."

B1210

CERTIFICATE OF PRACTICAL COMPLETION OF THE WORKS

ADD THE FOLLOWING PARAGRAPH:

"In addition to the listed specified items of work and regardless of the degree of beneficial occupation by the Employer, no sections of the Works, individually or collectively, shall be considered for practical completion unless the following criteria have been met also:

DS3 In the case of partial completion, the estimated cost to complete the outstanding work is less than 2% of the estimated cost to construct the whole section or sections.

DS4 In the case of the whole Works, the estimated cost to complete the outstanding work is less than 2% of the tendered value of work plus the cost of any variation or extra work orders, but excluding CPA and VAT.

DS5 The written list of outstanding items of work can be completed within 28 days of the list having been accepted in writing by the Contractor."

B1214

CONTRACTOR'S ACTIVITIES IN RESPECT OF PROPERTY OUTSIDE THE ROAD RESERVE AND OF SERVICES MOVED, DAMAGED OR ALTERED

ADD THE FOLLOWING TO THE LAST PARAGRAPH OF SUBCLAUSE (d):

"These written statements shall be handed to the Employer's Agent before the final certificate will be issued. Failing to obtain these written statements from all landowners and authorities concerned, the period of maintenance will be extended including all conditions related to such an extension, until such time that all these statements are obtained.

The obtaining of any such written statements will not relieve the Contractor of the execution of any of his obligations to the satisfaction of the landowner or authority concerned, and to the approval of the Employer's Agent."

B1215

EXTENSION OF TIME RESULTING FROM ABNORMAL RAINFALL

ADD THE FOLLOWING:

"The rainfall records at Rainfall Station No 0677802 Pietersburg WO for the period 01-01-2003 to 31-12-2012 are reproduced in table B1215/1 on the next page, and the monthly averages (Nn and Rn) for this period will be taken as the normal rainfall for the purposes of this Contract. The appropriate values of the constants X and Y in the rainfall formula are those stated in the Standard Specifications.

To illustrate the possible effect the rainfall formula may have on the extension of time V, the latter was calculated for each month and year of the period concerned and is indicated in the table. The values of V were obtained by applying the rainfall formula and by using the actual rainfall figures and the calculated values of Nn and Rn as indicated in the table."

B1222**USE OF EXPLOSIVES**

REPLACE PARAGRAPH (g) WITH THE FOLLOWING:

"(g) The Contractor shall, seven (7) days before each blasting operation is carried out, advise the Employer's Agent thereof in writing. Any such blasting operation shall be confirmed with the Employer's Agent twenty-four (24) hours prior to execution. The Contractor shall make all the necessary arrangements to keep the public and the provincial traffic authorities fully informed with regard to the closures of the road for blasting purposes."

ADD THE FOLLOWING PARAGRAPH:

"(h) Where blasting needs to be carried out within the road reserve of the existing road, it shall only be allowed between 11:00 and 14:00. The road may not be closed for a period longer than thirty (30) minutes during which time all blasting shall be carried out, debris removed from the road surface and the road made safe and passable for traffic."

TABLE B1215/1: RAINFALL TABLE

RAINFALL RECORDS FOR PERIOD: 01-01-1999 TO 31-12-2008
RAINFALL STATION: 0403062 MIDDEN
SOURCE OF INFORMATION: SOUTH AFRICAN WEATHER SERVICE

	COEF	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	TOTAL
Ave	Nn	2.5	2.1	3	1.2	0.6	0.1	0	0.2	0	1.8	2.5	3.7	17.7
	Rn	77.3	73.2	91.6	37.5	13.3	3.2	1.0	5.0	6.4	53.1	71.9	100.4	533.9
1999	Nw	0	*	1	0	2	0	0	0	0	2	2	6	13
	Rw	20.6	*	21.4	0.0	38.0	0.0	0.0	0.0	0.4	58.2	31.9	159.0	329.5
	V	-2.5	*	-3.0	-1.2	2.6	-0.1	0.0	-0.2	0.0	0.5	-2.5	5.3	-1.1
2000	Nw	5	2	6	0	2	0	0	0	0	4	4	7	30
	Rw	131.9	74.1	112.9	23.5	27.3	2.2	0.0	0.0	0.0	134.3	108.3	109.6	724.1
	V	5.2	-0.1	4.1	-1.2	2.1	-0.1	0.0	-0.2	0.0	6.3	3.3	3.8	23.2
2001	Nw	3	2	3	3	2	1	0	0	0	4	5	2	25
	Rw	65.5	77.2	102.4	96.5	51.0	22.0	0.0	0.0	55.0	97.2	153.5	YEAR	807.8
	V	-0.1	0.1	0.5	4.7	3.3	1.8	0.0	-0.2	2.4	4.4	6.6	-2.3	21.3
2002	Nw	3	4	1	0	0	0	0	0	0	0	1	6	15
	Rw	73.8	114.6	23.6	6.0	0.0	7.0	0.0	6.0	0.0	20.1	15.2	191.0	457.3
	V	0.3	3.9	-3.0	-1.2	-0.6	0.1	0.0	-0.2	0.0	-1.8	-2.5	6.9	2.0
2003	Nw	2	2	2	1	0	0	0	0	0	1	6	*	14
	Rw	37.0	39.9	62.5	25.0	0.0	0.0	0.0	1.5	0.0	19.0	121.9	*	306.8
	V	-2.5	-1.8	-2.5	-0.8	-0.6	-0.1	0.0	-0.2	0.0	-1.8	6.0	*	-4.2
2004	Nw	1	3	5	2	0	0	0	0	0	1	0	4	16
	Rw	47.5	144.5	183.2	52.0	0.0	0.0	10.0	9.3	0.0	25.0	4.1	109.5	585.1
	V	-2.5	4.4	6.6	1.5	-0.6	-0.1	0.5	0.0	0.0	-1.8	-2.5	0.8	6.3
2005	Nw	4	4	1	4	0	0	0	0	0	*	4	2	19
	Rw	125.0	114.0	32.7	113.5	5.0	0.0	0.0	0.0	0.0	*	127.5	77.0	594.7
	V	3.9	3.9	-3.0	6.6	-0.6	-0.1	0.0	-0.2	0.0	*	4.3	-2.8	11.9
2006	Nw	5	*	10	1	0	0	0	2	0	1	3	4	26
	Rw	213.3	*	338.1	28.7	8.0	0.0	0.0	33.5	0.0	23.0	138.0	95.5	878.1
	V	9.3	*	19.3	-0.6	-0.6	-0.1	0.0	3.2	0.0	-1.8	3.8	0.1	32.6
2007	Nw	2	0	1	1	0	0	0	0	0	3	0	0	7
	Rw	48.0	9.0	32.0	30.0	0.0	0.0	0.0	0.0	8.5	97.0	11.8	6.9	243.2
	V	-2.0	-2.1	-3.0	-0.6	-0.6	-0.1	0.0	-0.2	0.1	3.4	-2.5	-3.7	-11.2
2008	Nw	0	0	0	0	0	0	0	0	0	0	0	2	2
	Rw	10.2	11.9	7.5	0.0	3.8	1.2	0.0	0.1	0.0	3.7	6.3	68.0	112.7
	V	-2.5	-2.1	-3.0	-1.2	-0.6	-0.1	0.0	-0.2	0.0	-1.8	-2.5	-3.3	-17.3
Total		25	17	30	12	6	1	0	2	0	16	25	33	167
		772.8	585.2	916.3	375.2	133.1	32.4	10.0	50.4	63.9	477.5	718.5	904.0	5039.3

B1228**LEGAL PROVISIONS**

The Contractor shall be required to comply with the Occupational Health and Safety Act, No 85 of 1993: Construction Regulations, 2014 (the regulations) as promulgated in Government Gazette No 25207 and Regulation Gazette No 37305 of 7 February 2014. Non-compliance with these regulations, in any way whatsoever, will be adequate reason for suspending the Works.

The proposed type of work, materials to be used and potential hazards likely to be encountered on this Contract are detailed in the Project Specifications, Schedule of Quantity and Drawings, as well as in the Employers' health and safety specifications (regulation 4(1)) of the Construction Regulations 2014, which are bound in the Contract document.

The Contractor shall in terms of regulation 7(1) provide a comprehensive health and safety plan detailing his proposed compliance with the regulations, for approval by the Employer.

The Contractor shall at all times be responsible for full compliance with the approved plan as well as the Construction Regulations and no extension of time will be considered for delays due to non-compliance with the abovementioned plan or regulations.

A payment item is included in the Schedule of Quantities to cover the Contractor's cost for compliance with the OHS Act and the abovementioned regulations.

B1229**SABS CEMENT SPECIFICATIONS**

ADD THE FOLLOWING TO THIS SUBCLAUSE:

"Where reference is made in this Specification or the Standard Specifications to the cement specifications, e.g. SABS 471: Portland cement and rapid hardening Portland cement, it shall be replaced with the new specification:

SABS EN 197-1 Cement composition, specifications and conformity criteria Part 1: Common cements.

On this Contract CEM II A-V.

TABLE: SABS CEMENT SPECIFICATIONS

Cement Grade	Cement Type	Approximate old product name	New				
			Alpha	Blue Circle	NPC	PPC	Slag cement
52,5	CEM 1	Rapid hardening	Rapid Hard	Duracast	Eagle Super	-	-
42,5 R	CEM 1	Rapid hardening	-	-	-	Rapo	-
42,5	CEM 1	OPC *	Portland cement	Duratech	-	OPC	-
	CEM 1	LASRC	-	-	-	LASRC	-
	CEM II A-S	PC 15SL	-	-	Eagle Plus	-	-
	CEM II B-S	RH30SL	-	-	Eagle Plus	-	-
32,5R	-	-	-	-	-	-	-
32,5	CEM II A-V	PC 15FA	All Purpose Cement	-	-	Surebuild	-
	CEM II A-W	PC 15FA	-	-	-	Surebuild	-
	CEM II A-L	-	All Purpose Cement	-	-	Surebuild	-
	CEM II B-V or W	PC25FA/PFA C**	-	Structrete	-	Surecrete	-
	CEM III A	PBFC	-	BFC	Eagle Pro	-	PBFC
	CEM IIIA	RHSL	-	-	-	-	RHSL
22,5	MC 22.5X	PFAC ***	Multi-purpose cement	Durabuild	-	-	-
	MC22.5X	PFAC***	-	Buildcrete	-	-	-
12,5	MC 12,5	Walcrete	Mortar cement	Wallcrete	-	Masonry	-

Notes: * OPC cements previously performed approximately as CEM 1 32,5R products.

DS6 PC25FA cements under the old standards achieved lower compressive strengths than the OPCs of the time.

DS7 Some PFAC cements meet the new standard for MC 22,5X. Others required modification before meeting the requirements for MC 22,5X.

ADD THE FOLLOWING CLAUSES:

"B1230 REPORTING OF ACCIDENTS

The Contractor shall report every accident which occurs on the road, within the extent of the Works, to the Employer's Agent, within twenty-four (24) hours of such accident occurring, irrespective of whether such accident has a bearing on 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 Employer's Agent has the right to conduct any or all enquiries, either on 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 Employer's Agent on demand.

"B1231 MATERIALS

The Contractor, when using materials that are required to comply with any standard specification, shall, if so ordered, furnish the The Employer's Representative with certificates showing that the materials do so comply.

Where so specified, materials shall bear the official mark of the appropriate authority. Samples ordered or specified shall be delivered to the The Employer's Representative's office on the site free of charge.

B1232
MEASUREMENT AND PAYMENT
Item
Unit
B12.01 Training:

- (a) Generic training provisional (Prov) sum
- (b) Student training (2 students, one each for contractor and Employer's Agent) provisional (Prov) sum
- (c) Contractor's handling costs, profit and all other charges in respect of sub items B12.01(a) and B12.01(b) above:
 - (i) Generic training percentage (%)
 - (ii) Student training percentage (%)

Payment under sub items B12.01(a) and B12.01(b) shall be the amounts actually paid to the training institutions and shall be made in accordance with the provisions of Clause 6.6 of GCC 2015.

The percentages tendered for sub item B12.01(c) shall be the percentages of the amounts actually reimbursed to the Contractor under sub items B12.01(a) and B12.01(b) and shall be in full and final compensation in respect of the Contractor's handling costs, profit, mentoring, record-keeping, reporting and all other charges in connection with providing the services.

Item
Unit
B12.02 Remuneration of the project liaison officer and members of the project steering committee to be paid in equal monthly payments over 6 months:

- (a) Project liaison officer provisional (Prov) sum
- (b) Project steering committee provisional (Prov) sum

DS8

Contractor's handling costs, profit and all other charges in respect of subitems B12.02(a) and B12.02(b) above:

- (i) Project liaison officer..... percentage (%)
- (ii) Project steering committee percentage (%)

Payment under subitems B12.02(a) and B12.02(b) will be the amounts actually paid to the project liaison officer and members of the project steering committee as agreed upon by the Employer, the Employer's Agent, the project liaison officer and the members of the project steering committee. Payment shall be made in accordance with the provisions of Clause 6.6 of GCC 2015.

The percentages tendered for subitem B12.02(c) shall be the percentages of the amounts actually reimbursed to the Contractor under subitems B12.02(a) and B12.02(b) and shall include full compensation in respect of the Contractor's handling costs, profit and all other charges with regard to the appointment and remuneration of the project liaison officer, and the establishment and remuneration of the project steering committee.

Item
Unit

B12.05 Compliance with OHS Act and Regulations including the Construction Regulations 2014.....Month

The tendered rate shall include full compensation to the Contractor for compliance with all requirements of the OHS Act and Regulations (including the Construction Regulations, 2014) at all times for the full duration of the contract, as described in the clause B1228 of the project specifications. The successful Tenderer shall provide the Employer's Representative with a complete breakdown of this tendered sum.

This sum will be paid to the Contractor in equal monthly amounts subject to proper and/or substantial compliance

Item	Unit
-------------	-------------

B12.06 Protection, removal, replacement of and realignment of existing services

(i) Protection, removal, replacement of and realignment of existing services Prov Sum

(ii) Handling costs and profit in respect of sub item B12.06(a)(i) above..... %

The tendered sum for subitem B12.06(a) shall include full compensation for temporary close-off of existing services, protection of these services and the relocation and replacement of these services as indicated on the drawings.

The tendered sum for subitem B12.03(b) shall include full compensation for the installation of street lighting on site according to the specifications and drawings.

Item	Unit
-------------	-------------

B12.07 Construction of Lay-By complete as per typical lay-by drawing except for road marking and road signs.....No.

The unit of measurement, in the case of item B12.07 above, shall be the completed lay-by as shown on the drawings, including excavation, construction of pavement layers, kerbing, interlocking paving blocks, walkway and cycle lanes and saw-cutting the existing asphalt surfacing and all activities for construction of the tie-in with existing pavement layers as directed by the Employer's Representative

The tendered rates shall include full compensation for constructing the lay-by as per the drawings including procurement of materials

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

B1302 GENERAL REQUIREMENTS

(c.) Legal and contractual requirements and responsibility to the public

ADD THE FOLLOWING PARAGRAPH:

"The Contractor shall comply with all statutory and contractual requirements of the Environmental Management Programme, as included in the Project Specifications."

ADD THE FOLLOWING NEW SUBCLAUSE:

"(d) Contractor's ablution facilities

The Contractor shall, at each construction section, provide sufficient portable chemical latrine units. The latrine units shall be serviced daily and kept in a hygienic and orderly state to the approval of the Employer's Agent. No separate payment shall be made for this requirement and the costs thereof shall be deemed to be included in the rates tendered for the Contractor's time-related obligations."

B1303 PAYMENT

Item	Unit
------	------

B13.01 The Contractor's general obligations:

ADD THE FOLLOWING SUBITEM:

"(d) Environmental obligation month

REPLACE "... for sub item (c) shall, for the three sub items together ..." IN THE FIRST PARAGRAPH WITH "... for sub items (c) and (d) shall, for the four sub items together ...".

ADD THE FOLLOWING AFTER THE ON THE FIRST PARAGRAPH

"This section also covers "the contractor's general obligations" for all sub-contractors appointed by the main contractor. No additional payment shall be paid for sub-contractor's general obligations".

ADD THE FOLLOWING AFTER THE FOURTH PARAGRAPH:

"The combined total tendered for sub items (a), (b) and (c) shall not exceed 20% of the Tender Sum."

SECTION 1500: ACCOMMODATION OF TRAFFIC**B1501 SCOPE**

ADD THE FOLLOWING:

"This section also covers the provision of additional information signs for motorists and the release of any notices to the media and public."

B1502 GENERAL REQUIREMENTS**DS9 Providing temporary deviations**

ADD THE FOLLOWING PARAGRAPH:

"The Contractor shall keep the municipal traffic department and the Employer's Agent fully informed of changes in the normal traffic flow and obtain their approval for these changes."

DS10 Approval of temporary deviations

ADD THE FOLLOWING:

"If, after any temporary deviation has been constructed, any changes are considered necessary or desirable, the proposal shall be submitted to the Employer's Agent for his approval."

DS11 Traffic Safety Officer

ADD THE FOLLOWING AFTER THE SECOND PARAGRAPH:

"The Contractor shall submit a Curriculum Vitae of the candidate to the Employer's Agent for approval before the Traffic Safety Officer is appointed. The Traffic Safety Officer shall make himself available to discuss road safety and traffic accommodation matters whenever required by the Employer's Agent."

I. REPLACE SUBSUBCLAUSES (ii) AND (iii) WITH THE FOLLOWING:

"(ii) Record on neat and dimensioned sketches and submit to the Employer's Agent the position and sign reference number where applicable of each sign, barricade, delineator, cone, amber flicker light, guardrail and permanent or temporary painted road marking feature. The position of each shall be adequately referenced to identifiable permanent features located along the site of the Works.

These records shall also show the date and time at which the recorded traffic accommodation features are certified correct by the Traffic Safety Officer, and shall be signed by the Traffic Safety Officer before being submitted to the Employer's Agent.

The records shall be amended whenever changes are made in the field and the revised detailed sketches shall be submitted to the Employer's Agent. This shall include the recording of the position of flagmen and stop/go control men and their associated traffic accommodation equipment wherever they are used.

- DS12 Personally inspect the position and condition of each traffic accommodation feature on the whole site of the Works twice each day, 7:30 and 15:30, to record all irregularities discovered and the remedial action taken, and to sign off as correct and submit to the Employer's Agent such record sheets by 08:30 and by 16:30 each day. The Traffic Safety Officer shall keep a duplicate book for this specific purpose.

The Traffic Safety Officer shall also submit to the Employer's Agent by 10:00 each morning, a record of all matters pertinent to site safety and traffic accommodation throughout the site of the Works the previous day. He shall also record the daily labour returns of flagmen, stop/go and traffic signal control men employed."

ADD THE FOLLOWING SUBCLAUSES:

"(j) Failure to comply with provisions

Failure or refusal on the part of the Contractor to take the necessary steps to ensure the safety and convenience of the public traffic, accommodation of traffic, plant and personnel in accordance with these specifications or as required by statutory authorities or ordered by the Employer's Agent, shall be sufficient cause for the Employer's Agent to deduct penalties as follows:

- DS13 A fixed penalty of R5 000,00 per occurrence shall be deducted for each and every occurrence of non-compliance with any of the requirements of Section 1500 of the Standard Specifications and/or the Project Specifications.
- DS14 A time-related penalty of R500,00 per hour over and above the fixed penalty shall be deducted for non-compliance to rectify any defects in the accommodation of traffic within the allowable time after an instruction to this effect has been given by the Employer's Agent. The Employer's Agent's instruction shall state the allowable time, which shall be the time in hours for reinstatement of the defects. Should the Contractor fail to adhere to this instruction, the time-related penalty shall be applied from the time the instruction was given.

B1503 TEMPORARY TRAFFIC-CONTROL FACILITIES

DS15 Road signs and barricades

ADD THE FOLLOWING AFTER THE LAST PARAGRAPH:

"The Contractor shall be responsible for the protection and maintenance of all signs, and shall at his own cost replace any that have been damaged, or lost, or stolen.

All temporary road signs shall be mounted on portable supports for the easy moving of signs to temporary positions. The only permitted ballasting of the sign supports shall be by using durable sandbags filled with sand of adequate mass to prevent signs from being blown over by wind. The cost of the sandbags shall be included for in the tendered rates for the various types of temporary road signs.

The traffic-control devices, temporary signs and devices required in the Contract are those designated in Part 13 of Volume 2 of the South African Road Traffic Signs Manual.

No work may proceed on any section where accommodation of traffic is required until such time as the relevant requirements with regards to signposting are met and written approval of the Employer's Agent is obtained. The Contractor shall keep sufficient surplus signs, delineators and barricades on the site to allow for the immediate replacement of damaged or missing items, in any case, within three hours of instructions having been given by the Employer's Agent. Delineators shall be of the flexible plastic reversible variety and not of the rigid metal variety.

Should the Contractor fail to respond to an instruction to re-erect a road sign within three hours or fail to comply to the requirements, the work on that section will be suspended without any compensation to the Contractor."

DS16 Channelization devices and barricades

ADD THE FOLLOWING PARAGRAPHS:

"Drums shall not be used as channelization devices.

TW 401 and TW 402 delineators shall comply with the following requirements:

- DS16.1 They shall be manufactured from a flexible material and shall comply with SANS 1555. The blade portion of the delineator shall be positively affixed to a base unit which in turn shall be stable on its own or be stabilized by means of sandbags when used on the road.
- DS16.2 The blade shall be retro-reflectorised, with Class I yellow sheeting on the side facing oncoming traffic.
- DS16.3 It shall be nominally 1 000 mm high x 250 mm wide and the bottom edge of the delineator shall not be more than 200 mm above the road surface.
- DS16.4 The delineators shall be subject to the approval of the Employer's Agent.
- DS16.5 The maximum spacing between centres of delineators shall be as shown on the Drawings or as directed by the Employer's Agent.
- DS16.6 Traffic cones made of a fluorescent red-orange or red plastic material, shall be used only at short-term lane deviations during daylight. Cones used on all deviations shall be 750 mm high. Lane closures which continue into the night time shall be demarcated by delineators only."

ADD THE FOLLOWING SUBCLAUSES:

"(g) Safety jackets

The Contractor shall ensure that all his personnel, excluding those who are permanently office bound, are equipped with reflective safety jackets and that these are worn at all times when working on or near to the travelled way. Any person found not wearing a reflective jacket under these circumstances shall be removed from the Site until such time as he is in possession of and wearing a reflective jacket. Reflective safety jackets shall be kept in good condition and any jackets that are, in the opinion of the Employer's Agent, ineffective shall be replaced immediately by the Contractor.

The Employer's Agent, his personnel and visitors shall wear safety jackets at all times when they move about the Site. The Contractor shall provide the Employer's Agent with four (4) safety jackets. The safety jackets shall be orange in colour and shall be submitted for the Employer's Agent's approval before they are purchased. No separate payment will be made for the safety jackets and full compensation therefor shall be included in the rates tendered for in Section 1500.

DS17 Other signs or facilities

The Employer's Agent may instruct the Contractor to provide any other road sign, reflective tape, etc. not measured in standard pay items. The road signs shall conform to the requirements of Part 13 of Volume 2 of the South African Road Traffic Signs Manual, or specification provided by the Employer's Agent.

The Contractor shall inform the general public of the intended road works, construction period and accommodation of traffic proposal through press releases in local and provincial newspapers."

B1504 WIDTH AND LENGTH OF TEMPORARY DIVERSIONS

REPLACE THE CONTENTS OF THIS CLAUSE WITH THE FOLLOWING:

"The effective carriageway width for any two-way traffic accommodated on an existing No bituminous surfaced road shall not be less than 6,8 m. single lane shall be less than 3,4 m wide.

Where the traffic is accommodated in half-widths, the effective lane width for one-way traffic shall not be less than 3,4 m."

B1507 GRAVELLING OF TEMPORARY DEVIATIONS OR OF EXISTING ROADS USED AS TEMPORARY DEVIATIONS

ADD THE FOLLOWING TO THE SECOND PARAGRAPH:

"The gravel material for diversions shall comply with the following:

Maximum size	:	37,5 mm
Oversize index (Io)	:	0 (% retained on 37,5 mm sieve)
Shrinkage products (Sp)	:	100 - 240 (linear shrinkage x % passing 0,425 mm sieve)
Grading coefficient (Gc)	:	16 - 34 [(% passing 26,5 mm - % passing 2,0 mm) x % passing 4,75 mm/100]
CBR	:	15 at 93% of modified AASHTO density."

B1517 MEASUREMENT AND PAYMENT

Item

B15.01 Accommodating traffic and maintaining temporary deviations

ADD THE FOLLOWING AFTER THE SECOND PARAGRAPH:

"The accommodation of traffic and the maintenance of deviations shall be measured once only along the centre line of the road, irrespective of the type of work to be executed or the number of times necessary to accommodate traffic over any particular part of the road.

The limits for any particular section of road over which traffic has to be accommodated and deviations have to be maintained shall be the distance measured between the limits of construction of the particular section of road under consideration. Only the net distance of the road shall be measured and overlapping distance during staged rehabilitation shall not be measure

Item	Unit
------	------

B15.03 Temporary traffic-control facilities:

REPLACE THE DESCRIPTION OF SUBITEMS (g) AND (h) WITH THE FOLLOWING:

- | | | |
|------|--|--------------------------------|
| "(g) | Rectangular road signs, TGS-, TIN-, and TW-series (excluding TW-series delineators and barricades) | square metre (m ²) |
| | | |
| (h) | Delineators TW 401 or TW 402 (250 mm x 1 000 mm sides): | |
| (i) | Single sided | number |
| (ii) | Double sided | number" |

ADD THE FOLLOWING TO THE LAST PARAGRAPH:

"Payment for the provision of temporary traffic-control facilities shall be paid for once only, irrespective of the type of work to be executed or the number of times that the temporary traffic-control facilities have to be moved and re-used."

ADD THE FOLLOWING SUBITEMS:

- | | | |
|------|--|------------------------|
| "(n) | Other signs or facilities: | |
| (i) | Provision of other signs or facilities | provisional (Prov) sum |

DS18	Handling costs and profit in respect of subsubitem B15.03(o)(i) percentage (%)"
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ADD THE FOLLOWING AFTER THE PARAGRAPH FOR SUBITEM (m):

- "(n) A Provisional Sum has been included in the Schedule of Quantities to allow for the supply and installation of any additional signs, reflective tape or other materials as instructed by the Employer's Agent and in accordance with clause B1503.

The tendered percentage is a percentage of the actual amount spent under subsubitem B15.03(n)(i), which shall include full compensation for the handling costs of the Contractor, and profit on the provision of other signs and facilities required by the Employer's Agent."

SECTION 1700: CLEARING AND GRUBBING

B1701 SCOPE

Add the following after "grubbing" in the first paragraph:

"including the demolishing and disposal of structures, shelters, dwellings and outbuildings within the new road reserve at a site provided by the Contractor and approved by the Employer's Agent."

B1702 DESCRIPTION OF WORK

DS19 Conservation of topsoil

Replace the second paragraph of this clause with the following:

"After clearing and grubbing, all topsoil shall be removed to either windrows alongside the construction area or to stockpile. Where ordered by the Employer's Agent, any topsoil that shall be required for the top soiling of new banks and cuts, but which cannot be accommodated within the construction site, shall be loaded and hauled to the designated stockpile area where it shall be placed in temporary stockpiles for later use in the rehabilitation of the site affected by construction activities. Where new borrow pits are to be opened up, the topsoil shall first be removed (independently of the overburden) and placed in temporary stockpiles at the edge of the borrow pit. The moving of topsoil from windrow or the loading of topsoil from temporary stockpiles and the placing and spreading thereof on cut or fill slopes or on borrow pit spoil sites, is covered in Section 5800."

Add the following subclauses:

"(e) Clearing household refuse from the construction area

Where household refuse has been deposited within the construction area, it shall be removed to approved dumping sites provided by the Contractor."

B1703 EXECUTION OF WORK

DS20 Areas to be cleared and grubbed

Replace the first sentence of the first paragraph with the following:

"The portions of the road reserve falling within the limits of the road prism along temporary deviations/roads and certain borrow areas, shall be cleared and grubbed using conventional (non-labour-intensive) methods."

Delete "normally" in the second line of the second paragraph.

Replace the second sentence of the fourth paragraph with the following:

B1704 MEASUREMENT AND PAYMENT

Add the following payment item:

Item	Unit
B17.08 Demolition, removal and disposal off site of miscellaneous structures consisting of:	
(a) Unreinforced concrete.....	m ³
(b) Masonry and stone pitching.....	m ³
(c) Reinforced concrete	m ³

The unit of measurement shall be the cubic metre of undesired concrete, masonry or stone pitching to be demolished, which includes all materials both above and below the ground level.

The tendered rate shall also include full compensation for all work necessary for the removing of all undesired concrete as directed by the Employer's Representative including the haulage and spoiling of all material from demolition activities to an approved landfill site. The contractor may sell demolition materials to offset haulage costs."

SECTION B2100: DRAINS

B2104 SUBSOIL DRAINAGE

DS21 Materials

DS22 Pipes

Amend this subclause by adding the following to the end of the third paragraph:

"(category - heavy duty) or SANS 1601 (stiffness Class 400)

The pipes to be used shall be either slotted uPVC pipes or perforated HDP pressure pipes, 100 mm ID.

Pipes must be stored in a shaded area without exposure to direct sunlight."

DS23 Natural permeable material

Add the following to the third paragraph:

"The crushed stone shall be fine (14 mm nominal) and shall be washed clean of all fines."

DS24 Materials

DS25 Synthetic-fibre filter fabric

Replace this subclause with the following:

"(iii) Synthetic-fibre filter fabric or geotextile

DS26 Composition and manufacturing

The geotextile shall be a synthetic polymer material manufactured in a continuous permeable homogeneous sheet (in rolls) by one of the following methods:

woven

non-woven, mechanically bonded (continuous fibre spunbonded, needle-punched)

non-woven, chemically bonded

combination of woven and non-woven.

The synthetic polymer shall be one or more of the following:

polyester

polypropylene

polyethylene.

On account of the temperature and moisture susceptibility of polyamide, this synthetic product is not considered acceptable.

DS27 Classification

Geotextiles shall be classified into the following main grades according to typical usage.

Grade 1: Very good installation conditions, e.g. subsurface drains with relatively smooth trench walls, small to medium size filter stone (10 mm to 20 mm) dumped from the edge of a shallow drain, and where careful handling of the geotextile is expected.

Grade 2: Normal installation conditions, not as good as Grade 1, e.g. larger subsurface drains with rough trench walls, large size filter stone (37,5 mm) dumped from a height onto the geotextile-lined drain, and where normal handling of geotextile is expected.

Grade 3: Adverse conditions, e.g. foundation drainage, gabions and gabion mattresses, light rock protection, rock fills and light separation of materials, separation and reinforcement of fill layers, light river protection works, and where rough handling of the geotextile is expected.

Grade 4: Adverse conditions where strength is more important than permeability, e.g. foundation drainage, gabions and gabion mattresses, rock protection, earth encapsulation, separation and reinforcement of fill and rockfill layers, heavier river protection works, and where rough handling of the geotextile is expected.

Grade 5: As for Grade 4 but where additional strength is required, e.g. in heavy separation, earth and rock encapsulation, river protection works and shore revetment works.

Grade 6: As for Grade 5 but where maximum strength is required and where permeability will be relatively unimportant.

The minimum requirements for each grade are listed below in Table B2104/2. Under normal circumstances Grades 1, 2, 3, 4 and 5 will be specified while Grade 6 will be specified in special cases where maximum strength is required by special design considerations.

The various grades and the corresponding typical usage above shall be regarded as a guideline only. The actual grade of geotextile to be used on the work will be as stated in the Pricing Schedules as required by the Employer's Agent.

DS28 Durability

A geotextile is required to comply with the following specification:

DS29 Resistance to chemical attack:

The geotextile shall withstand the level of aggressiveness of the soil and ground water given below without significant loss of its strength and hydraulic properties during its design life of twenty-five (25) years:

Soil and ground water with a pH in the range of 4 to 12 (pH to be determined by Method A20, TMH1, 1986).

Soil (as paste) and ground water containing salts with a conductance of up to 1,0 S/m (conductivity to be determined by Method A21T, TMH1, 1986).

DS30 Resistance to ultra-violet light:

The geotextile shall maintain at least 80% of its original strength after direct exposure to sunlight of 1 500 hours.

DS31 Resistance to rot:

The geotextile shall be entirely rot-proof and shall not support the growth of algae.

DS32 Selection

The geotextile required shall satisfy the criteria for the grade of geotextile as specified in the Pricing Schedules or project specifications.

The Contractor shall, at least forty-five (45) days before the installation of the geotextile, submit to the Employer's Agent samples of the geotextile he proposes to use, so that the Employer's Agent may carry out the appropriate tests specified in subclause B2104(a)(iii)(6) and in clause 8114, and confirm the use thereof if he is satisfied that the geotextile meets the specified requirements. No extra payment shall be made for providing the samples for testing.

DS33 Properties

The various grades of geotextile as classified above shall comply with the general requirements as listed below in Table B2104/2.

TABLE B2104/2: GRADES OF GEOTEXTILES

PROPERTIES	LIMITING VALUES*					
	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
Thickness	As specified by the manufacturer					
Mass per unit area g/m ²	100	140	200	240	300	350
Tensile strength kN/m	6	10	13	18	25	30
Penetration load kN	1	1,5	2,5	3	4	5
Penetration resistance* (max.) mm	35	30	25	18	16	10
Permeability litre/s/m ²	25	20	15	15	10	5

Notes:

DS34 •The minimum values of properties are listed, except for penetration resistance where the maximum values are given.

Thickness shall be as specified by the manufacturer for the specific product offered.

DS34.1 The values given in the table shall apply to all geotextiles, irrespective of the type of material used. Where these values differ from the values in Table 1 of the Code of Practice SANS 10221: The testing of geotextiles, the values of Table B2104/2 shall apply.

DS35 Testing

The tests to be carried out on geotextiles relate to the material and the method of manufacture and are used mainly to ascertain that the correct grade of geotextile is supplied, and that the material is equivalent in quality to that selected and specified for use on the Works. The Contractor will be required, at the request of the Employer's Agent, to submit a certificate by an approved laboratory to prove compliance with the specified qualities without additional cost to the Employer.

Thickness (mm): The thickness of the material shall be specified by the Contractor (or supplier). Thickness and compressibility tests shall be carried out in accordance with SANS 10221 to check that the material supplied conforms to the thickness specified by the Contractor.

Mass per unit area (g/m²): Testing shall be carried out in accordance with SANS 10221.

Tensile strength (kN/m): Testing shall be carried out in accordance with SANS 10221.

Penetration load (kN): Testing shall be carried out in accordance with SANS 10221.

Puncture resistance (mm): Testing shall be done in accordance with test procedures laid down by the CSIR, Pretoria, and repeated in clause B8114.

Permeability (litre/s/m²): Testing shall be carried out in accordance with SANS 10221."

DS36 Galvanized woven wire mesh

Replace the contents of this subclause with the following:

"Galvanized woven wire mesh manufactured from 3,5 mm diameter wire, 250 mm x 250 mm in area with 12 mm x 12 mm maximum mesh size, and fitted with a frame made from 25 mm x 5 mm galvanized flat steel, shall be secured at the outlets of subsoil drainage systems with 4 x M6 galvanized bolts, in accordance with the details on the drawings. The mesh shall be welded to the frame before the whole unit is galvanized."

DS37 Construction of subsoil drainage system

Add the following subclause:

"(v) Proving of pipes in subsoil drainage systems

On completion of the pipe laying and prior to backfilling, all pipe joints shall be surveyed as proof of their installation to line and level.

On completion of the pipe laying and backfilling, the pipes shall be proved by pulling through a cylindrical cleaning brush followed by a wooden mandrel ± 400 mm long and having a diameter 5,0 mm less than the bore of the pipe. Proving of pipes shall not be paid for separately and the cost thereof shall be deemed to be included in the rate tendered for laying the pipe."

B2107 MEASUREMENT AND PAYMENT

Item

B21.01 Excavation for open drains

Add the following to the third paragraph:

"The tendered rate shall also include full compensation for trimming the open drains."

SECTION B2200: PREFABRICATED CULVERTS

B2203 MATERIALS

DS38 Portal and rectangular prefabricated concrete culvert units

Replace this subclause with the following:

"Precast concrete units shall comply with the requirements of the latest SANS 986:2006 specification.

Prior to the manufacture of any units the manufacturer shall submit his quality plan to be approved by the Employer's Agent before delivery of any units to site. As part of the quality plan submitted for approval copies of calibration certificates of both gauges used for proof loads and cover meters used at the factory shall be supplied to the Employer's Agent. The originals of these certificates shall at all stages also be available for inspection at the factory premises. The manufacturer shall check each precast unit for cover compliance. Random checking of units shall not be permitted. The Employer's Agent's Representative may visit the factory at any stage to ascertain adherence to the quality plan, as well as to check covers before delivery to site. Any substandard cover shall result in the batch being rejected. If the manufacturer is not adhering to their quality plan, the Employer's Agent may exercise the right to reject the use of products from the manufacturer concerned. The Employer shall also be informed in all such cases.

For durability requirements: Due to the reduced cover provided for pre-cast culverts all durability testing shall be done in accordance with subclause B6404(h) and fall within the severe category. For units within the 5,0 km zone from the coast the very severe category shall be used and increased cover shall be as specified by the Employer's Agent."

B2204 CONSTRUCTION METHODS

Replace the second paragraph with the following:

"Culverts shall generally be lengthened according to the 'embankment method'. The Contractor shall ensure that the existing drainage is maintained and any damage caused as a result of blocked culverts during construction shall be repaired at the Contractor's expense.

New culverts shall generally be constructed according to the 'embankment method' unless otherwise indicated on the drawings or directed by the Employer's Agent.

The bottom of the excavation for culverts that are to be replaced or lengthened shall be inspected by the Employer's Agent prior to the placing of the bedding material. If the material is found to be suitable, it shall be ripped to a depth of 150 mm below the bottom of bedding level and re-compacted to at least 93% of modified AASHTO density.

Where the material is found to be unsuitable, it shall be removed to a depth specified by the Employer's Agent and then replaced with G5 material compacted to at least 93% of modified AASHTO density in layers not exceeding 150 mm thickness."

B2207 UNSUITABLE FOUNDING CONDITIONS

Replace "... one diameter or span, as the case may be, ..." in the second paragraph with "...1,0 m ...".

B2210 LAYING AND BEDDING OF PREFABRICATED CULVERTS

DS39 Portal and rectangular culverts

DS40 Placing the portal portions of culverts

Add the following before the first paragraph:

"The manufacturer's installation manual shall be followed with respect to the provision of a 10 mm gap between units and the staggering of portal joints and base joints."

B2211 BACKFILLING OF PREFABRICATED CULVERTS

Replace the second sentence in the ninth paragraph with the following:

"The cement/soil mixture shall consist of cement and of an approved soil or gravel of subbase quality mixed in proportion of 1:12."

B2212 INLET AND OUTLET STRUCTURES, CATCHPITS AND MANHOLES

Replace the heading and first paragraph with the following:

"B2212 INLET AND OUTLET STRUCTURES, CATCHPITS, MANHOLES AND SKEW-END PIECES FOR PORTAL AND RECTANGULAR CULVERTS

Inlet and outlet structures for prefabricated culverts, catchpits, manholes, and skew-end pieces for portal and rectangular culverts shall be constructed in accordance with the details on the drawings."

DS41 Excavation and backfilling

Replace the first paragraph with the following:

"The width of excavation shall be the net external dimensions of structure plus 0,5 m working space along or around the structure. The specifications given elsewhere in this section for backfilling the culverts shall apply mutatis mutandis to inlet and outlet structures, catchpits and manholes. If wet soilcrete is used with vibrators the extra working space shall be reduced to 150 mm."

Add the following subclauses:

"(k) Building in pipework

Pipework shall be built into concrete as shown on the drawings. The pipework shall be set into exact position in the shutters before the concrete is placed and the concrete thoroughly compacted and worked around the pipework. Alternatively, at the discretion of the Employer's Agent and at no extra cost, unless specifically provided for in the Pricing Schedules, holes may be left or formed in the concrete into which the pipework shall be set, whereupon the space around the pipework shall be caulked with concrete having just sufficient water to ensure watertightness and thereafter the caulking shall be properly cured.

The joint between the old and fresh concrete shall be made in accordance with clause 6408: Construction joints.

DS42 Manholes for Telkom

Manholes required for Telkom shall be for jointing, pulling or for change of direction and shall be constructed in accordance with the details shown on the drawings. As these manholes generally finish somewhere in the layerworks of the pavement, these layerworks shall first be constructed to the level of the top of the manhole roof slab. Excavation for the manhole shall then be carried out as neatly as possible, the manhole constructed and the minimal backfill space filled with either soil cement for brick walls or combined with the concrete if the walls are concrete. Finally, once all structural concrete has attained its design strength, the overlying layerworks and then the manhole shaft/opening shall be constructed so that the cover is completely flush with the adjacent asphalt surfacing.

The Contractor shall allow in his programme for a suitable delay in the layerworks while the various Telkom manholes are being constructed."

B2214 JOINING NEW WORK TO OLD

Add the following after the last sentence of the first paragraph:

"Where existing pipe culverts are to be extended, the contact surface shall be cut and cleaned, as described in this clause, prior to joining new prefabricated culvert units with existing culverts. Such cutting is to be undertaken with electrical- or mechanical-driven equipment."

Add the following after the first paragraph:

"New prefabricated culvert units are to be joined onto existing culverts by means of a cast in situ concrete encasing (collar)."

B2215 SERVICE DUCTS

Add new subclause heading before first paragraph:

“(a) General”

Replace the last paragraph with the following:

"The end of each duct shall be marked with a 300 mm x 300 mm x 100 mm class 20/19 concrete marker block. A 200 mm x 100 mm galvanized steel or aluminium plate with the size, number and depth of pipes stamped on the surface shall be affixed to the top of the marker block. Each duct marker shall be at least 50 mm proud of the finished surface level."

Insert the following at the end of the first paragraph:

“(v) HDPE Sleeve Pipes

HDPE sleeve pipes shall be:

- DS43 Corrugated cable ducts complying with the requirements of SANS 61386-24 for sleeves to be laid in trenches.
- DS44 HDPE pipes for drilling shall be manufactured from PE63 – PN4 and shall comply with the requirements of SANS 4427."

Insert the following as a new fourth paragraph:

"Where drilling is required for installation of service ducts, a drilling pit shall be excavated on the one side of the road from where drilling is to be conducted. The pit shall be of adequate size to permit free standing of the operator and drilling equipment. On the other side of the road, a receiving pit is to be excavated. Both pits shall be backfilled after completion of the drilling, using the excavated material compacted in 150 mm layers to a minimum density of 93% of modified AASHTO. Drilling shall be carried out from the one side of the road in positions and to levels as shown on the drawings and/or as instructed by the Employer's Agent. The hole shall be of adequate size to accommodate the required service duct. The permissible deviation in level of the hole between the two (2) sides of the road shall not exceed 500 mm. The service duct shall be installed through the drilled hole and shall be extended to above ground."

Add the following at the end of the penultimate paragraph:

"Before closing, all sleeves or ducts shall be proved as specified in subclause B2104(b)(v)."

Add the following to the seventh paragraph:

"The Telkom uPVC ducts for the optical fibre cable are required to be placed in special bedding, padding and backfilling as specified in clause B2219."

Add the following subclause:

DS45 Drilling of sleeves underneath roads

A drilling pit shall be excavated on the one side of the road from where drilling is to be conducted. The pit shall be of adequate size to permit free standing of the operator and drilling equipment. On the other side of the road, a receiving pit is to be excavated. Both pits shall be backfilled after completion of the drilling, using the excavated material compacted in 150 mm layers to a minimum density of 90% of modified AASHTO.

Drilling shall be carried out from the one side of the road in positions and to levels as indicated on the plans and/or as instructed by the Employer's Agent. The hole shall be of adequate size to accommodate the required sleeve. The permissible deviation in level of the hole between the two (2) sides of the road shall not exceed 500 mm.

The sleeve shall be installed through the drilled hole and shall be extended to above ground. A 3,15 mm galvanized draw wire shall be installed through the sleeve and the sleeve ends shall be blocked temporarily."

Add the following new clause:

"B2219 TELKOM DUCTS FOR OPTICAL CABLES

DS46 This clause specifies the characteristics, testing and installation of bedding, padding and backfilling material for Telkom uPVC ducts.

The following conditions apply:

Bedding: The material constituting the even floor of an excavated trench onto which a pipe or a bank of pipes is/are laid; either undisturbed in situ material or an imported layer of suitable material as specified hereinafter.

Padding: The material installed around and/or between pipes up to a level of at least 150 mm above the pipe or bank of pipes: The padding material must be 150 mm below and to the sides of ducts.

Backfilling: The material installed above the padding material layer to complete the refilling of an excavated trench.

DS47 Bedding, padding and backfill material shall be installed with a moisture content as near to optimum as possible to ensure that optimum compaction is achieved. The Employer's Agent may, if he considers it necessary, direct the Contractor to carry out tests, which the Employer's Agent shall specify, to determine the optimum and actual moisture content of any material being used. Should the results of such tests require it, the Employer's Agent may direct the Contractor to add water to material which is too dry or to dispose of material which is too moist or to import suitable material.

DS48 Under no circumstances shall material which is saturated with water, be used for bedding, padding and backfill.

DS49 The Contractor shall pay particular attention to the proper compaction of bedding, padding and backfill material.

A higher standard of compaction effort will be insisted upon in all cases where fine materials are approved as bedding and padding.

DS50 The bedding shall cover the full width of the trench in a uniform layer of the required thickness and shall be compacted by means of one pass by a vibratory plate compactor.

DS51 Care must be taken to ensure that the ducts are completely surrounded by the padding material.

On completion of the placement of the padding material, the top surface shall be compacted by means of one pass by a vibratory plate compactor.

DS52 The compaction of backfill shall be by means of a vibratory plate compactor.

DS53 During the compaction of padding and backfill material, the Contractor shall exercise due care to ensure that pipes and pipe joints are not disturbed or damaged in any way.

The material to be used for the bedding and padding shall be coarse-grade crushed stone as specified in subclause 2104(a) of the standard specifications.

The crushed stone shall be graded crushed stone conforming to the following grading requirements:

Sieve size	% passing
28 mm	100%
14 mm	60% to 85%
7,0 mm	minimum 15%
2,0 mm	maximum 15%

Note: The following items will be supplied by Telkom and delivered to site:

- DS54 uPVC pipes
- DS55 copper earth conductor wires
- DS56 danger tape conductor

The Contractor must inform Telkom at least three (3) weeks before the pipes are required for installation.

DS57 Where directed by the Employer's Agent, copper earth conductors shall be installed. Joints in conductors shall be by means of approved clamps.

DS58 Where indicated on the drawings, ducts shall be protected with precast concrete slabs."

B2218 MEASUREMENT AND PAYMENT

Item	Unit
B22.01 Excavation:	m³

Replace the fifth paragraph with the following:

"The tendered rates shall include full compensation for all excavation, temporary timbering, shoring and shuttering for preparing the bottom of the excavation for the culvert beds, including proof rolling, the disposal of excavated material unsuitable for backfilling, keeping excavations safe, dealing with surface or subsurface water, and for any other operations necessary for completing the work as specified."

Add the following subitem:

"(c) Extra over subitem B22.01(a) for excavation by hand cubic metre (m³)

The unit of measurement shall be the cubic metre of material excavated by means of labour using hand tools only. This item shall only apply where the dimensions of the area to be excavated are such as to render excavation by machinery impractical and where the Employer's Agent has specifically ordered or authorised excavation by hand. This item shall not apply where machine excavation would have been possible but the Contractor chooses to use hand excavation instead.

The tendered extra over rate shall include full compensation for all additional costs in excavating the material using hand held tools."

Item	Unit
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B22.03 Concrete pipe culverts

Add the following to the fourth paragraph:

"The standard length of a concrete pipe is 2,44 m."

Replace payment item 22.26 with the following:

Item	Unit
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B22.29 Headwalls complete.....	No.
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The tendered rate shall also include full compensation for the construction of the headwalls complete as shown on the drawings including all labour, materials and equipment required to complete the Works

SECTION B2300: CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES, AND CONCRETE LININGS FOR OPEN DRAINS

B2302 MATERIALS

DS59 Kerbing and channelling

Add the following after the first sentence:

"Irrespective of the minimum transverse strength specified in SANS 927, all concrete shall be of class 30/19."

DS60 Joint sealant

Delete the third paragraph and substitute with the following:

"(iii) Silicone-based joint sealants shall comply with the requirements of subclauses 7102(e)(iii) and 7102(e)(iv)."

B2304 CONSTRUCTION

DS61 Excavation and preparation of bedding

Replace the heading of subclause B2304(a)(i) with the following:

"(i) Kerbs, channels and edge beams"

DS62 Prefabricated concrete kerbing and channelling

Add the following:

"A 10 mm wide joint formed in inert filler shall be provided every 20 m through the kerbing and channelling. The colour of the filler shall match the colour of the kerbing."

Curved kerbing of radius less than 1,0 m shall be cast in situ. Units for curved kerbing of radius greater than 1,0 m up to 4,0 m shall be of nominal length 0,3 m. Units for curved kerbing of radius greater than 4,0 m up to 20 m shall be of nominal length 0,5 m. Units for radius exceeding 20 m shall be of nominal length 1,0 m. Any associated channelling shall also comply with the above requirements."

DS63 Cast in situ kerbs and channels

Add the following:

"Cast in situ kerbs, channels and edge beams shall be provided with a contraction joint every 2,0 m and an expansion joint every 20 m. The contact area of the contraction joint shall be painted with two (2) coats of bitumen. Alternatively, joints may be cut and finished to a depth of 50 mm. The expansion joint shall consist of 12 mm thick Flexcell or an approved equivalent placed between adjoining concrete sections. The top part of the joint shall be sealed with a 12 mm x 12 mm silicone sealant. All joints shall be provided for the full depth of the concrete."

DS64 Concrete-lined open drains

Add the following:

"When instructed by the Employer's Agent, the surfaces on which concrete lining is to be cast shall be sprayed with invert bituminous emulsion as soon as possible after the excavations have been trimmed. The sprayed surfaces shall be maintained until the concrete lining is cast. The nominal rate of application of the emulsion shall be 0,5 litre/m² unless otherwise instructed by the Employer's Agent. The tolerance in the rate of application shall be $\pm 5\%$ of the specified rate."

DS65 Construction sequence

Add the following:

"(iv) Where concrete edge beams are constructed at intersection areas and access points.

The specifications for subclauses B2304(a)(i), B2304(a)(ii) and B2304(a)(iii) shall apply mutatis mutandis to edge beams."

DS66 Cutting existing bituminous surfacing and pavement layers

Replace the paragraph with the following:

"Where the Employer's Agent instructs kerbing, edge beams, channelling or concrete-lined drains to be constructed against existing bituminous surfacing and pavement layers, the full depth of the bituminous surfacing and pavement layers shall be accurately cut with a mechanical saw to the required line and level before the kerbing, edge beams, channelling or concrete-lined drain is constructed. The cut edge shall be vertical for kerbing, edge beams, concrete-lined drains and channelling. The concrete shall be placed directly against the cut edge without formwork. All material outside the cut edge shall be removed to the required depth before the concrete is placed, and the debris shall be disposed of at approved dumping sites provided by the Contractor. The bituminous surfacing shall be protected and kept clean to the Employer's Agent's satisfaction."

RDP1(E) Add the following subclauses:

"(I) Demolition of existing concrete-lined drains, kerbs and channels

Where shown on the drawings and/or indicated by the Employer's Agent, the existing kerb and channel and concrete-lined drains shall be demolished to a specified maximum size, removed and transported to an approved site as provided by the Contractor."

B2307 MEASUREMENT AND PAYMENT

Replace the description of payment item 23.01 with the following:

Item	Unit
B23.01 Concrete kerbing, including joints (class of concrete indicated for in situ concrete)	metre (m)"

Add the following to the payment paragraph:

"The tendered rates shall also include full compensation for the construction of expansion and contraction joints as specified."

"Item

Units**B23.17 Removal of existing kerbing metre (m)"**

B23.17 Removal of existing kerbingmetre (m)

The unit of measurement shall be the metre of kerbing removed as instructed by the Employer's Representative

The tendered rates shall include full compensation for all work necessary for removing all undesired kerbing including transportation and disposal of all material

SECTION B3100: BORROW MATERIALS

B3103 OBTAINING BORROW MATERIALS

Add the following new paragraph:

"The Contractor shall adhere to the requirements within the environmental management plan for the preparation of the area to be utilised as a borrow pit. This shall include the removal and storage of the topsoil within the affected area, maintenance of the area during use and the rehabilitation of the area to its natural state on completion. A photographic record shall be kept of all borrow pit areas. Any construction material spoiled within these sites shall be buried to a depth of no less than 300 mm below the surface soil. No construction material of any nature shall be left visible after topsoiling. The Employer's Agent shall confirm this before grassing commences."

B3104 OPENING AND WORKING BORROW PITS AND HAUL ROADS

Add the following:

"After initial shaping has been undertaken, all excess overburden removed at borrow pits shall be replaced in an even layer over the entire area of the borrow pit. Payment for this requirement shall be deemed to be included in payment item B31.01."

DS67 Removing topsoil

Add the following:

"The topsoil shall not be stockpiled for longer than six (6) months, nor shall the stockpile be higher than 1,0 m."

DS68 Excess overburden

Add the following:

"In the case of quarries and borrow pits, suitable overburden shall be used as fill. The Contractor must plan his operations accordingly as no payment will be made for stockpiling."

DS69 Excavating borrow material

Add the following:

"The Contractor shall at all times ensure that the removal of the material is carried out in such a manner that the stability of the exposed faces is not prejudiced and safe working conditions are maintained."

B3105 FINISHING-OFF BORROW AREAS AND HAUL ROADS

DS70 Borrow areas

Add the following after the fourth paragraph:

"The finishing-off of the borrow areas shall also be in accordance with the approved EMP."

B3108 MEASUREMENT AND PAYMENT

Notes:

DS71 Borrow material

Add the following after the second paragraph of this subclause:

"The tendered rate shall include full compensation for all monies payable and all expenses incurred by the Contractor for the acquisition of material for the proper completion of the Works, irrespective of whether the material is obtained from borrow pits identified by the Employer, from commercial sources or provided by the Contractor himself."

SECTION B3300: MASS EARTHWORKS**B3302 MATERIALS****b) Fill**

DS72 Compaction requirements, minimum in situ dry density

Add the following after the first paragraph:

"All fills shall be compacted to 93% of modified AASHTO density, unless otherwise specified by the Employer's Agent."

Add the following to subclause B3302(b)(iv):

"The maximum swell at 100% of modified AASHTO compaction shall not be more than 2%."

B3303 CLASSIFICATION OF CUT AND BORROW EXCAVATION**DS73 a) Classes of excavation**

DS74 Intermediate excavation

Replace the paragraph with the following:

"No distinction shall be made between soft and intermediate excavation, and all intermediate excavation shall be classified and measured as soft excavation."

B3306 CUT AND BORROW**DS75 Borrow**

Replace the first sentence of the second paragraph of this subclause with the following:

"Where insufficient material is available for fill from open drain excavations, material will be imported from commercial sources, designated borrow pits or Employer-identified sources. The Contractor shall use only material that conforms to specification."

DS76 The temporary stockpiling of materials

Replace the contents of this subclause with the following:

"The Contractor shall plan his activities in such a manner so that materials excavated from borrow areas and cuttings can be directly transported to and placed at the designated points."

The temporary stockpiling of material will not be paid for separately unless instructed by the Employer's Agent. Full compensation will be deemed to have been included in the rates tendered for the various payment items for work for which the stockpiled material is to be used."

B3308 FINISHING THE SLOPES

DS77 General

Add the following:

"Where existing slopes are excessively eroded or where slippages occurred in slopes, the slopes are to be reinstated by backfilling with suitable gravel material. All loose material and vegetation shall first be removed from the eroded slopes before backfilling may commence from the bottom of the cut or fill. The backfill material shall be benched into the existing slopes and compacted to 93% of modified AASHTO density, utilising suitable small compaction equipment, e.g. Bomag walk-behind rollers or handheld compaction tools. Benching shall be executed to the dimensions shown on the drawings. Upon completion of the backfilling operation the cut and fill slopes shall be neatly finished as specified."

B3310 CONSTRUCTION TOLERANCES

DS78 Levels

The level tolerances referred to in clauses 8205 and 8305 shall be as follows for all fill layers:

H ₉₀	=	22 mm
H _{max}	=	30 mm

Add the following subclause:

"(c) Layer thicknesses

The thickness tolerances referred to in clauses 8205 and 8305 for the 150 mm to 200 mm natural gravel fill layer compacted to 93% of modified AASHTO density, shall be as follows:

	D ₉₀	D _{max}	D _{average}
Fill layer	30 mm	40 mm	10 mm"

B3312 MEASUREMENT AND PAYMENT

Amend the description of payment item 33.01 as follows:

"Item

B33.01 Cut and borrow to fill, including all haul"

Replace the fifth measurement and payment paragraph with the following:

"The tendered rates shall include full compensation for procuring, furnishing and placing the material, including excavating as if in soft excavation, the cutting of benches, the transporting of material for the entire haul distance, for the preparing, processing, shaping, watering, mixing, and compacting of the materials to the densities or in the manner specified herein, and for removing and disposing of up to 5% oversize material from the road after processing, including all haul."

Add the following paragraph after paragraph 5

The tendered rate shall include the extra over rates applying to excavation in intermediate excavation in item 33.01 and shall include full compensation for additional costs to excavate and break down the various classes of material, including the cost of all the necessary additional effort, plant, tools, materials, labour and supervision.

B33.04 Cut to spoil, including all haul"

Replace the fourth measurement and payment paragraph with the following:

"The tendered rates for cut to spoil shall include full compensation for excavating from the road prism and roadbed in the various classes of excavation for loading, transporting the material for a free-haul distance of

1.0km, off-loading and disposing of the material as specified, including shaping and levelling-off any piles of spoil material.

B33.07 Removal of unsuitable Material, including free haul of 1.0km"

Replace the fourth measurement and payment paragraph with the following:

The tendered rate shall include full compensation for the removal of all classes of unsuitable material and shall distinguish only between stable and unstable material and layer thicknesses of less than and exceeding 200mm. It will also include compensation for free haul of 1.0km.

"Item	Unit
--------------	-------------

B33.20 Cut to temporary stockpile including free haulage Material obtained from:

DS79	(a) Soft excavation.....	m ³
DS80		
DS81	(b) Existing Pavement layers.....	m ³

The unit of measurement shall be the cubic metre of material measured in its original position in cut and computed by the method of average end areas from the levelled cross-sections taken along the ground line after clearing and grubbing and the removal of topsoil, if any, but prior to excavating the cut, with the cut super, imposed thereon at intervals not exceeding 20m along the centre line of the road

The tendered rates shall include full compensation for excavating from the road prism and roadbed in the various classes of excavation, for loading, transporting the material for a free-haul distance of 0.5km, off-loading and stockpiling of the material as specified, including shaping and levelling-off the piles of stockpile

"Item	Unit
--------------	-------------

B33.21 Fill constructed with material obtained from commercial sources or sources provided by the contractor, including all haul

(a)	Gravel material in compacted layer thicknesses of 200 mm and less:	
i)	Compacted to 90% of modified AASHTO density cubic metre (m ³)	
(ii)	Compacted to 93% of modified AASHTO density cubic metre (m ³)	
(iii)	Eight-roller-passes compaction cubic metre (m ³)	
(b)	Rock fill (as specified in subclause 3209(c))	cubic metre (m ³)
(c)	Rock protection at the toes of fills.....	cubic metre (m ³)
(d)	Pioneer layer (as specified in subclause 3307(c))	cubic metre (m ³)

The unit of measurement is the cubic metre of material measured in the compacted fill. The quantity measured shall be calculated by the method of average end areas from levelled cross-sections prepared from the ground line after clearing and grubbing and the removal of topsoil and the completion of any preparatory roadbed treatment which may have been ordered by the Employer's Representative, but prior to the construction of the fill, and the final specified or authorised fill cross-section superimposed at 20 m intervals along the centre line of the road. All measurement shall be neat and no payment will be made for that part of the fill placed in excess of the authorised cross-section shown on the drawings or instructed by the Employer's Representative, irrespective of the tolerances in workmanship allowed under the contract. Where the roadbed has subsided under the fills, the quantities shall be adjusted to make allowance for such subsidence, as set out in the note at the beginning of clause 3312. Measurement of fill shall distinguish between the alternative methods of processing and compacting.

Where measurement by cross-sections is considered by the Employer's Representative to be impractical, the compacted volume of the material may be taken as equal to 70% of the loose volume of material in the hauling vehicles as an alternative method of measurement.

The tendered rates shall include full compensation for the costs of negotiations and payment of royalties, for procuring, furnishing and transporting the materials over an unlimited free-haul distance from the sources to the site, for placing, preparing, processing, shaping, watering, mixing and compacting the materials to the densities or in the manner specified, and for removing and disposing of all oversize material from the road after processing, including transport for the haul distance to approved dumping sites provided by the contractor.

Payment shall distinguish between the various methods of processing and compacting specified, as itemised above.

SECTION B3400: PAVEMENT LAYERS OF GRAVEL MATERIAL

B3402 MATERIALS

DS82 General

Replace the first paragraph with the following:

"Gravel material shall be obtained from approved commercial sources or approved sources provided by the Contractor."

Replace "and 3402/4" in the third line of the second paragraph with ", 3402/4 and 3402/5".

Add the following after the second paragraph:

"The wet-dry durability (Table 3402/5) limits for subbase if tested according to TMH1 Method A19, but using samples as prepared for the modified AASHTO method, shall be as follows:

C3: 20% maximum (modified AASHTO density briquettes)

C4: 30% maximum (modified AASHTO density briquettes)"

Replace the grading section in Table 3402/1 with:

"

GRADING	NOMINAL APERTURE SIZE OF SIEVE (mm)	PERCENTAGE PASSING THROUGH SIEVE BY MASS			The percentage by mass passing the 2,0 mm sieve shall not be less than 20% not more than 70%
		CRUSHED MATERIAL		UNCRUSHED MATERIAL	
		NOMINAL MAX. SIZE			
		37,5 mm	28 mm		
	53			100	
	50			95 - 100	
	37,5	100		85 - 100	
	28	86 - 95			
	20	73 - 86	87 - 96	61 - 91	
	14	61 - 76	73 - 86		
	5	37 - 54	43 - 61	31 - 66	
	2	23 - 40	27 - 45	20 - 50	
	0,425	11 - 24	13 - 27	10 - 30	
	0,075	4 - 12	5 - 12	5 - 15	

Note:

Refer to standard COLTO table for COLTO grading if required."

Replace Table 3402/5 with:

"TABLE B3402/5: REQUIREMENTS FOR CHEMICALLY STABILIZED LAYERS

CLASSIFICATION	C1	C2	C3	C4
Material before treatment	At least Type G2 quality	At least Type G4 quality	At least Type G5 quality	At least Type G6 quality
PI after treatment	Non-plastic	Non-plastic	6 max. ⁽¹⁾	6 max. ⁽¹⁾
UCS (MPa) ⁽²⁾	6 min.	4 min.	1,5 min.	0,75 min.
ITS (kPa) ⁽³⁾	-	-	250 min.	200 min.
WDD (% loss) ⁽⁴⁾	5 max.	10 max.	20 max.	30 max.

Note:

- DS83 For materials derived from the basic crystalline rock group, the plasticity index after stabilization shall be non-plastic.
DS84 Unconfined compressive strength at 100% of modified AASHTO density
DS85 Indirect tensile strength at 100% of modified AASHTO density
DS86 Wet-dry durability according to Method B8110"

DS87 Compaction requirements

Change the compaction requirements for stabilized subbases to read as follows:

"96% and 97% as required for lower subbase and upper subbase respectively, for chemically stabilized material."

Add the following subclause:

"(d) Material requirements

When the values listed in Tables 3402/1, 3402/2, 3402/3 and 3402/4 cannot be attained with the type and quantity of stabilizing agent specified in Section 3500 in the project specifications and on the borrow-pit plans, the Employer's Agent will authorise the Contractor to vary and/or amend the quantity and possibly also the type of stabilizing agent in order to obtain the required values."

B3406 QUALITY OF MATERIALS AND WORKMANSHIP

Replace the second paragraph with the following:

"Test results and measurements will be assessed in accordance with the provisions of Section 8200."

B3407 MEASUREMENT AND PAYMENT

Delete the first paragraph and replace it with the following:

"No additional or extra over payment will be made for work in restricted or confined areas."

B34.06 Extra over item 34.04 for adding extra material as specified in subclause 3207(b)(iii)

Replace the second paragraph with the following

The tendered rate shall include full compensation for procuring and adding the material to the insitu broken down pavement layer including temporary blading to windrow, stockpiling, excavating material in existing pavement layers (including in restricted areas), placing and compacting of gravel. The tendered rate shall include full compensation for all costs for placing and compacting the material in restricted areas.

Add the following payment items:

"Item	Unit
B34.14 Pavement layers constructed from gravel obtained from commercial sources or approved sources provided by the Contractor, including procurement, cost of material and all haul:	

"Item	Unit
(a) Gravel Selected Layer compacted to:	
(i) 93% modified AASHTO density in 150mm lower Selected Sub-Grade layers.....	cubic metres (m ³)
(ii) 95% modified AASHTO density in 150mm upper G6 Selected Sub-Grade layers.....	cubic metres (m ³)
(b) Gravel subbase (chemically stabilised material) compacted to	
(i) 95% of modified AASHTO density in 150mm thick lower C4 subbase layers.....	cubic metres (m ³)
(ii) 97% of modified AASHTO density in 150mm thick upper C4 subbase layers.....	cubic metres (m ³)
(c) G5 Gravel base for the NMT lanes (chemically unstabilised material) compacted to 95% of modified AASHTO density in 150mm thick layer	

The unit of measurement shall be the cubic metre of compacted pavement layer constructed with material obtained from commercial sources or approved sources provided by the Contractor, the quantity of which shall be calculated in accordance with the authorised dimensions of each separate completed layer by the method of average end areas from levelled cross-sections prepared from the ground line prior to the construction of new pavement layers, and the final specified or authorised layer cross-section superimposed at 20 m intervals along the centre line of the road.

The tendered rates shall include full compensation for the costs of negotiations and payments of royalties, for procuring, furnishing, placing, spreading, mixing imported and in situ material if required, breaking down, shaping, watering, preparing and compacting the material, for hauling the material over an unlimited free-haul distance from the source to the point of use, for protecting and maintaining the layer and for conducting control tests, all as specified. The tendered rates shall include full compensation for blading all oversize material off the road into windrows, for loading and transporting the material for an unlimited free-haul distance to approved dumping sites provided by the Contractor, and for off-loading and spreading the material, all as specified

No overhaul shall be payable on any material obtained from commercial sources.

SECTION B3500: STABILIZATION

B3501 SCOPE

Add the following paragraph:

"The Contractor shall take and submit samples of materials and/or mixtures to the Employer's Agent who must approve the stabilization mix designs before construction work can commence."

B3502 MATERIALS

Add the following:

"The stabilizing agent shall be Class CEM II A-S cement conforming to SANS 50197-1, or as directed by the Employer's Agent. The nominal rate of application for tender purposes as a percentage of the mass of the material to be stabilized and compacted to the required modified AASHTO density shall be as follows:

Upper subbase: 2,5%

Lower subbase: 2,5%

The Employer's Agent may instruct the Contractor to amend the percentage and possibly the type of stabilizing agent if necessary after tests on the Site during construction.

Enough stabilizer should be added, over and above the design value, to allow for wastage during too high preshaping levels and inaccuracies during the spreading operation."

B3503 CHEMICAL STABILIZATION

DS88 Preparing the layer

Insert the following before the first paragraph:

"Moisture content tests shall not be undertaken more than one (1) day in advance of in situ stabilization operations. Care shall be taken to ensure that samples are representative of the in situ material. Checks shall be conducted when wet weather occurs between initial testing and work commencing on any section."

Add the following:

"The material to be stabilized shall be spread and pre-shaped, so that a true cross fall is obtained. The upper level of the spread material shall be such that any indentations and depressions caused by construction equipment shall be above or at final cutting level. Enough extra material must be allowed for, so that no filling whatsoever is carried out. The final operation on the base prior to final compaction will be cutting and never making up of levels."

DS89 Applying the stabilizing agent

Add the following to the first paragraph:

"The Contractor's spreading method must be submitted to and approved by the Employer's Agent before any spreading can take place."

Replace the second sentence of the second paragraph with the following:

"Spreading shall only commence when the Employer's Agent is satisfied that the correct quantity of stabilizing agent has been placed on the layer and has given permission that the stabilizing agent may be spread uniformly over the entire surface to be treated."

DS90 Curing the stabilized work

Add the following to subclause 3503(h)(ii):

"The covering material shall be placed by end-tipping, and compaction of this covering layer shall be delayed until the underlying layer has cured for seven (7) days."

Add the following subclauses:

"(j) General

The Contractor shall at all times supply all workers exposed to chemical stabilizing or modifying agents with approved protective apparel, eyewear and masks. No person without such apparel, eyewear and masks may be permitted to work with or be exposed to the chemical agents. Precautionary measures shall also be taken to ensure that any livestock and the public will not be exposed to the chemical agents, for instance when they are carried by the wind.

Any biscuit layers or bowls, identified by the hollow sound caused when a chain is dragged over the stabilized layer, shall be removed and repaired prior to surfacing. The repairs shall be for the account of the Contractor. Before surfacing is allowed, ball penetration tests shall be carried out.

DS91 Stabilization agent application rate

At least three (3) weeks before start of stabilization the Contractor shall submit samples of proposed subbase material and stabilization agent for the Employer's Agent's approval and strength design testing. Testing will be undertaken at the Contractor's expense in order to determine the optimal application rate to achieve the specified strength.

DS92 Rejection

A stabilized layer that has failed or has been rejected shall be removed and reconstructed with fresh material."

B3509 QUALITY OF MATERIALS AND WORKMANSHIP

Replace the second paragraph with the following:

"Test results and measurements will be assessed in accordance with the provisions of Section 8200."

B3513 PROTECTION AND MAINTENANCE

DS93 Trafficking the completed layer

DS94 Cementitious stabilization

Under no circumstance shall traffic be allowed to travel on layers of cement stabilized material.

B3515 PLANT AND EQUIPMENT

Sufficient watering, mixing and compacting plant and equipment in good working order shall be provided to ensure that the specified quantities of water and stabilizing agent can be mixed in and the required degree of compaction obtained within the working periods specified in subclause B3505(g)."

B3510 MEASUREMENT AND PAYMENT

Replace the first paragraph with the following:

"No additional or extra over payment shall be made for stabilization work in restricted or confined areas."

Item**B35.01 Chemical stabilization extra over unstabilized compacted layers**

Replace the first paragraph with the following:

"The unit of measurement shall be the cubic metre of stabilized material, the quantity of which shall be determined in accordance with the final in situ authorised dimensions of the layers treated as instructed by the Employer's Agent. Additional material pre-shaped to allow for finishing by cutting only will not be included in the measurement."

Add the following to the payment paragraph:

"The tendered rate shall also include full compensation for working in restricted areas on top of and alongside culverts where necessary."

Item**B35.02 Chemical stabilizing agent**

Replace the full stop at the end of the third paragraph with the following:

"and layer dimensions."

Replace the third paragraph with the following:

"Subject to the provisions of clause 1220, the quantity of stabilizer will be determined in accordance with the authorised rate of application and layer dimensions. Extra stabilizer added for wastage and higher pre-shaping levels will not be included in the quantity."

SECTION B3800: BREAKING UP EXISTING PAVEMENT LAYERS**B3807 MEASUREMENT AND PAYMENT****DS95 Overhaul**

Delete and replace with the following:

"No overhaul shall be paid on material originating from the milling of the existing asphalt layers, irrespective of whether the Contractor intends to utilise the material for recycling or reworking or whether the material is transported to a dump site. The Contractor shall include for overhaul in the rates tendered.

No additional or extra over payment shall be made for excavating existing pavement materials in restricted or confined areas."

Delete subclause 3807(c) and replace with the following:

"(c) No additional or extra payment shall be made for work in restricted or confined areas."

SECTION B4100: PRIME COAT**B4102 MATERIALS****DS96 Priming material**

Add the following:

"The Contractor shall note that no tar-based products shall be permitted on this Contract.

The prime coat shall be MC-30 cut-back bitumen."

DS97 Aggregate for blinding

Add the following:

"Blinding of the primed surface with aggregate shall only be permitted to facilitate vehicular access to adjoining properties."

B4103 EQUIPMENT

Add the following before the first paragraph:

"Before any storage, dilution or spraying operations commence, the Contractor has to provide a safety and security and environmental protection method statement for approval of the Employer's Agent. All personnel involved, including brooming, prime distributor, storage and production yard operators and labour, shall wear the necessary protective clothing. Appropriate fire extinguishers and medical aid devices must be in working order. The Employer's Agent reserves the right to stop the Contractor's operation or order any person from the Site who does not adhere to the above."

DS98 B4104 WEATHER AND OTHER LIMITATIONS

Replace subclause B4104(g) with the following:

"(g) when any position within the layer the moisture content of a crushed-stone base determined according to TMH1 Method A7 is more than 50% of the optimum moisture content. In the event of rain after priming, the base shall be allowed to dry out to meet the above moisture content requirement prior to surfacing."

B4106 APPLICATION OF THE PRIME COAT

Add the following to subclause B4106(b):

"The temperature for storage and spraying of prime coat shall be in accordance with the supplier's specification."

Add the following to subclause B4106(c):

"The nominal application rate of the prime shall be 0,7 litre/m². Unless directed otherwise by the Employer's Agent or indicated on the drawings, the width of the primed surface shall be 150 mm wider than the edges of the surfacing on each side."

B4108 TOLERANCES

Add the following to this clause:

"Any unauthorised increase outside these limits shall not be paid for. However, the Employer's Agent shall have the right to instruct the Contractor to make up any deficiency or blind any over-application of prime without additional payment. If under-spraying occurs and it is accepted by the Employer's Agent, only the actual quantities applied shall be paid for."

B4109 TESTING

Add the following:

"No payment shall be made if this condition is not adhered to. The Contractor shall provide, at his own cost, representative samples of every batch of prime delivered onto site."

"

SECTION B4200: ASPHALT BASE AND SURFACING

B4202 MATERIALS

DS99 Bituminous binders

DS100 Conventional binders

Add the following:

"The binders to be used shall be as follows:

DS101 Continuously graded surfacing course: 50/70 penetration grade bitumen."

DS102 Aggregates

Add the following paragraph to the introductory description:

"Asphalt mixes shall be manufactures using different individual single size coarse aggregates fractions and crushed fine aggregates blended to conform to the specified grading requirements. The use of natural sands shall only be permitted if approved by the Employer's Agent and shall be limited to a maximum of 5% for continuously graded mixes. All aggregate in excess of 5mm shall consist of individual nominal single sized aggregate. For stone mastic asphalt mixes all aggregate fractions in excess of 2 mm shall consist of individual single size fractions. The Contractor shall note that commercial suppliers may not be able to supply all the required single size aggregates, in which instance arrangements will have to be made for additional on-site screening. No additional payment shall be made for screening aggregate. The use of run of crusher type materials shall not be permitted."

DS103 Absorption

Add the following sentence:

"In addition, the total binder absorption of the combined coarse and fine aggregate blend shall not exceed 0,5%"

DS104 Grading

Delete the second paragraph commencing with "The target grading..." and add the following paragraph:

"The grading limits for the combined aggregate grading for the asphalt surfacing shall be as specified in table 4202/7: Continuously graded medium grade."

DS105 Rolled-in chippings

Replace Table 4202/11 with:

"TABLE B4202/11

Sieve size (mm)	Chip size - Percentage passing by mass	
	20 mm	14 mm
20,0	100	
14,0	0 – 20	100
10,0	0 – 5	0 – 20
7	0 – 1	0 – 5
0,425	0,5 max	0,5 max

Note:

Refer to standard COLTO table for COLTO grading if required"

Add the following new sub-item:

"(xi) Moisture content

The moisture content of aggregates, sampled from the cold feed belt, shall not exceed the following limits at the time that it is introduced into the mix:

- Coarse aggregate 2%
- Fine aggregate 4%"

B4203 COMPOSITION OF ASPHALT BASE AND SURFACING MIXTURES

In the first paragraph, third last line, after "or active filler content" add:

"or aggregate content"

Replace the fifth paragraph with the following:

"The design of the asphalt mixes shall be in accordance with "Interim Guidelines For The Design Of Hot-Mix Asphalt In South Africa (June 2001)", and appropriate research results. The mix properties and requirements shall be as specified in the project specifications."

The relevant asphalt mixes for the base and surfacing layers shall comply with the requirements in Table B4203/1.

Replace Table 4202/6 with:

"TABLE B4202/6

	Sieve size (mm)	Maximum nominal size (mm)			
		Semi-gap		Continuously graded	
		37,5	28	37,5	28
		Percentage passing sieve by mass			
	37,5	100		100	
	28	87 – 100	100	86 – 95	100
	20	77 – 96	93 – 100	73 – 86	87 - 96
	14		83 – 94	61 – 76	73 - 85
	10	61 – 81	73 – 88	52 - 68	64 - 79
	7		62 – 77		
	5	46 – 61	51 – 65	37 – 54	43 – 61
	2	39 – 51	39 – 51	23 - 40	28 - 44
	1	35 - 46	35 – 46	17 - 32	20 - 35
	0,600	32 – 42	32 – 42		15 – 30
	0,300	22 – 35	22 – 35	9 – 21	11 – 24
	0,150	10 – 20	10 – 20	6 – 17	8 – 19
	0,075	4 - 10	4 – 10	4 - 12	5 - 12
Nominal Mix Proportions by Mass when Bitumen is Used	Aggregate	93,5%		95%	94,5%
	Bitumen (grade according to project specifications)	5,5%		4%	4,5%
	Active filler*	1,0%		1,0%	1,0%

* Active filler for tender purposes to be hydrated lime.

- Notes:
- For recycled asphalt the nominal mix ratios of recovered asphalt, new aggregate, new bituminous binders, and active mineral filler to be used for tender purposes, shall be as specified in the project specifications.
 - Refer to standard COLTO table for COLTO grading if required."

Replace Table 4202/7 with:

"TABLE B4202/7 PART 1

	Sieve size (mm)	Mix Type				
		Gap graded			Semi-gap graded	
		Stone content			Maximum stone size	
		High	Intermediate	Low	28 mm	20 mm
PERCENTAGE THROUGH SIEVE BY MASS	28				100	
	20	100	100	100	93 – 100	100
	14	78 – 100	78 – 100	78 – 100	83 – 94	83 – 94
	10	67 – 87	71 – 91	71 – 91	73 – 88	74 – 87
	5	52 – 62	61 – 71	66 – 76	51 – 65	46 – 61
	2	45 – 55	53 – 63	60 – 70	39 – 51	39 – 51
	1	45 – 55	53 – 63	60 – 70	35 – 45	35 – 45
	0,600	36 – 52	45 – 63	55 – 70	32 – 42	32 – 42
	0,300	25 – 45	35 – 55	45 – 65	22 – 35	22 – 35
	0,150	12 – 32	15 – 35	20 – 40	10 – 20	10 – 20
	0,075	5 – 12	5 – 12	5 – 12	4 – 10	4 – 10
NOMINAL PROPORTIONS BY MASS	AGGREGATE	92,0%	92,0%	92,0%	93%	93%
	BITUMEN (GRADE ACCORDING TO PROJECT SPECIFICATIONS)	7,0%	7,0%	7,0%	6,0%	6,0%
	ACTIVE FILLER	1,0%	1,0%	1,0%	1,0%	1,0%

Note:

Refer to standard COLTO table for COLTO grading if required.

TABLE B4202/7 PART 2

		Continuously graded			Semi-open graded
		Coarse	Medium	Fine	
BY MASS	28	100			
	20	88 – 100			100
	14	73 – 86	100		75 – 100
	10	64 – 77	85 – 100	100	53 – 85
	5	44 – 62	56 – 77	66 – 89	20 – 41
	2	27 – 45	33 – 48	42 – 59	7 – 20
	1	21 – 35	25 – 40	31 – 51	4 – 13
	0,600	16 – 28	18 – 32	24 – 40	3 – 10
	0,300	12 – 20	11 – 23	16 – 28	3 – 8
	0,150	8 – 15	7 – 16	10 – 20	2 – 6
	0,075	4 – 10	4 – 10	4 – 12	1 – 4
BY MASS	AGGREGATE	93,5%	93,5%	93,0%	90,5%
	BITUMEN (GRADE ACCORDING TO PROJECT SPECIFICATIONS)	5,5%	5,5%	6,0%	8,5%
	ACTIVE FILLER	1,0%	1,0%	1,0%	1,0%

Note:

Refer to standard COLTO table for COLTO grading if required"

Replace Table 4202/8 with:

"TABLE B4202/8

Sieve size (mm)	Continuously graded	
	Maximum stone size	
	14 mm	20 mm
20		100
14	100	86 - 97
10	83 – 100	72 – 86
5	53 – 72	47 – 64
2	30 - 47	26 – 43
1		17 - 30
0,600	13 – 25	13 – 25
0,300	8 – 18	10 – 18
0,150		6 – 13
0,075	4 - 8	4 - 10
Nominal mix proportions		
Aggregate	91%	91%
Modified binder	7%	7%
Active filler	2%	2%

Note:

Refer to standard COLTO table for COLTO grading if required"

Replace Table 4203/1 with:

"TABLE B4203/1: ASPHALT MIX REQUIREMENTS: BASE AND SURFACING

PROPERTY	CONTINUOUSLY GRADED BASE MIXES (37,5 AND 26,5 mm AGGREGATES)	CONTINUOUSLY GRADED SURFACING MIXES (COARSE AND MEDIUM GRADED)	BITUMEN-RUBBER SEMI-OPEN GRADED ASPHALT (BRASO) SURFACING
Marshall stability (kN)	8 – 18	8 – 18	Report
Marshall flow (mm)	2 – 6	2 – 6	Report
Stability /flow (kN/mm)	> 2,5	> 2,5	Report
VMA (%)	> 14	> 15	> 14
VFB (%)	65 – 75	65 – 75	Report
Air voids (%) after standard Marshall compaction	4 – 6	4 – 6	4 – 6
Air voids (%) after standard Marshall compaction times 2 ⁽³⁾	Report	Report	Report
Indirect tensile strength at 25 °C (kPa)	1 000 – 1 300	1 000 – 1 500	> 400
Dynamic creep modules at 40 °C (MPa)	> 20	> 20	-
Modified Lottman at 7% voids (TSR)	> 0,7	> 0,8	> 0,7
Air permeability at 7% voids (cm ²)	< 1 x 10 ⁻⁸	< 1 x 10 ⁻⁸	< 1 x 10 ⁻⁸
Binder film thickness (microns)	5,5 – 8,0	5,5 – 8,0	11 – 15
Filler bitumen ratio	1 – 1,5	1 – 1,5	-
Immersion index (%)	0,75	0,75	-
Cantabro abrasion loss at 25 °C (%)	-	-	2,5 max
MMLS3, 100 000 cycles of a 2,9 kN wheel load. Speed: 7 200 load repetitions per hour (95% probability level) ⁽¹⁾	2,2 mm at 50 °C	2,5 mm at 55 °C	1,8 mm at 55 °C
Min. voids content of after 300 gyrations with gyratory compactor, according to SHRP testing protocol	Report	Report	Report

Notes:

(1)

MMLS3 testing or similar shall be conducted on production mixes used on the trial sections. The Contractor shall allow in his rates for the cost of all the testing required for the final mix approval, including one MMLS3 test per approved mix. Should more MMLS3 testing be required on request of the Employer's Agent, the cost of the test will be borne by the Employer, unless the test had to be repeated due to previous unsuccessful mixes. MMLS3 testing is conducted on 150 mm diameter briquettes or cores.

DS106 For asphalt bases made with aggregates of 37,5 mm of maximum nominal size, the Hugo compactor shall be used to compact 150 mm diameter briquettes.

DS107 'Standard Marshall compaction times 2' stands for the compaction of Marshall briquettes as in accordance with TMH1 Method C2, but with 150 blows on each of the faces of the briquette instead of the standard 75 blows per face."

B4204 PLANT AND EQUIPMENT

DS108 Vehicles

Replace the second paragraph with the following:

"To minimize temperature loss all vehicles used for transporting asphalt to the site shall be fitted with thermal asphalt covers (canvas covers not acceptable) irrespective of the prevailing climatic conditions or distance of transport."

Add the following subclause:

"(h) Transfer of mix to paver

Asphalt shall be transferred from the haul trucks to the paver by means of a materials storage and transfer vehicle ("shuttle buggy") and no material shall be transferred directly from the haul vehicle into the paver.

The material storage and transfer vehicle must be able to store and transfer hot-mixed asphalt material from a truck to a paver to ensure continuous paving. It must contain an anti-segregation auger which remixes materials just before they are delivered to the asphalt paver."

B4205 GENERAL LIMITATIONS AND REQUIREMENTS AND THE STOCKPILING OF MIXED MATERIAL

DS109 Moisture

Insert "and/or primed base" after "surfacing" in the third line of the first sentence.

Replace the last sentence with "In such case the base shall be allowed to dry out to meet the above moisture content requirement prior to placing the surface layer."

DS110 Surface Requirements

DS111 Tack Coat

Add the following paragraph:

"Hand spraying shall only be permitted on areas approved by the Employer's Agent. The binder distributor shall be capable to apply the binder evenly over the full area. The equipment shall comply with clause 4103. Tack coat shall be applied to all transverse and longitudinal joints by hand utilizing a paint brush."

B4206 PRODUCING AND TRANSPORTING THE MIXTURE

DS112 b) Production of the mixture

DS113 (ii) Using drum-type mixer plants

Add the following:

"Pre-blending of aggregate fractions shall not be permitted and the contractor shall ensure that sufficient cold-feed bins are installed to accommodate each individual aggregate fraction, including the filler."

DS114 c) Transporting the mixture

Delete the second sentence in this paragraph.

Add the following sub-clause:

"f) Approval of asphalt mixture

Before any asphalt is placed on the road, the Employer's Agent shall approve the mix design. The approval process shall be as follows:

The contractor shall prepare and submit a laboratory design mix with test results at four different bitumen contents. The design mix shall be submitted on the prescribed form D3 of TMH 10: "Instruction for the Completion of As-Built Materials Data Sheets" with all the necessary test results completed. In addition, the proposed asphalt mixture shall be subjected to gyratory testing. All the expenses in preparing and submitting the laboratory design mix shall be to the contractor's cost.

Samples of all aggregate and bitumen shall be submitted with the laboratory design mix to enable the Employer's Agent to carry out check design testing as necessary. The above design and aggregate shall be submitted to the Employer's Agent at least six weeks before it is intended to commence with any asphalt production.

After approval is obtained for the laboratory design mix, a plant mix at varying binder contents of approximately 5 to 10 tons each shall be produced. The purpose of the plant mix is for the contractor to prove that the laboratory design mix can be produced successfully. The Employer's Agent shall conduct the necessary testing on the plant mix. The plant mix shall not be placed on the road. During the production of the plant mix, the Employer's Agent shall be afforded the opportunity to inspect the asphalt plant.

After the plant mix is approved, permission shall be given for laying a trial section at varying binder contents in accordance with the requirements of section 4211 of the specifications. The Employer's Agent may require that the mix be further assessed by means of CSIR Wheel Tracking or MMLS testing, the cost of which will be borne by the Employer. Mass production of asphalt shall only commence after approval of the trial section, which should be given within a maximum of ten days.

The Employer's Agent may instruct the contractor at any time to halt his paving process and to review the whole or part of the above process should a change of aggregate properties occur, the specified asphalt requirements not being met and/or a consistent asphalt mixture not be produced."

The inertial laser profilometer shall be used to record the longitudinal profile in both wheel tracks of each traffic lane or shoulder wider than 2.0m as determined according to the final line markings that will be applied after construction. Should the two tracks not be measured simultaneously during the same pass, then procedures shall be implemented to ensure that the longitudinal profile data recorded for the two-wheel tracks are at the same longitudinal location on the road.

The measured longitudinal profiles will then be processed using the Quarter Car Simulation model with parameter values as defined in ASTM standard (E1170-97) for **Ride Meter Vehicle Mounted**. The simulated suspension mentioned will then be linearly accumulated and divided by the length to yield 100m IRI (international Roughness Index) values in units of mm/m or m/km for each wheel track. The last 50m and the joining first 50m of adjacent sections will be evaluated as a 100m section in the direction of vehicle travel. For each measured lane the left and the right 100m IRI values from the three runs will then be averaged to produce the average IRI as follows

Run1 IRI_{100 Ave}=

$$(100\text{m IRI left wheel track} + 100\text{m IRI Right Wheel track})/2$$

$$\text{Run2 IRI}_{100\text{ Ave}} =$$

$$(100\text{m IRI left wheel track} + 100\text{m IRI Right Wheel track})/2$$

$$\text{Run3 IRI}_{100\text{ Ave}} =$$

$$(100\text{m IRI left wheel track} + 100\text{m IRI Right Wheel track})/2$$

$$\text{Average IRI}_{100\text{m}} =$$

$$(\text{Run 1 IRI}_{100\text{m Ave}} + \text{Run2 IRI}_{100\text{m Ave}} + \text{Run3 IRI}_{100\text{m Ave}})/3$$

The average IRI_{100m} value is then evaluated and judged according to Table B4213/2 to determine whether the 100m section needs corrective work or payment adjustments.

For the Asphalt Base, the values in payment bracket 6 in Table B4213/2 shall be applied as the payment adjustment factors for the Asphalt Base on the contract or section.

For the Asphalt Surfacing, the applicable Payment Bracket in Table B4213/2 for the measured lanes and shoulders will be determined as follows:

- 1 Calculate the applicable Target IRI_{100m Ave} for full payment as follows:
Target IRI_{100m Ave} = Greater of 1.05 or [IRI_{b Ave} * {1 - (NAT/100)}]

Where:

IRI_{b Ave} = Average IRI_{100m} before the construction of the asphalt surfacing as determined from

- i) the average IRI_{100m} as calculated from the network roughness measurements performed by the employer not more than 12 months prior to commencement of the contract or
- ii) the Average IRI_{100m} as calculated from the measurements performed as part of the assessment of the new constructed base (refer to B3405(f) for granular base and B4213(a) for asphalt base.

Table 1: PAYMENT ADJUSTMENT FACTORS FOR ASPHALT BASES AND ASPHALT SURFACINGS

Target IRI _{100m Ave} (m/km)	PAYMENT ADJUSTMENT FACTORS							
	Full Payment Bracket 1	Full Payment Bracket 2	Full Payment Bracket 3	Full Payment Bracket 4	Full Payment Bracket 5	Full Payment Bracket 6	Full Payment Bracket 7	Full Payment Bracket 8
<0.8	1.050	1.050	1.050	1.050	1.050	1.050	1.050	1.050
0.81 to 0.90	1.025	1.050	1.050	1.050	1.050	1.050	1.050	1.050
0.91 to 1.0	1.010	1.025	1.050	1.050	1.050	1.050	1.050	1.050
1.01 to 1.10	1.00	1.010	1.025	1.050	1.050	1.050	1.050	1.050
1.11 to 1.20	0.99	1.000	1.010	1.025	1.050	1.050	1.050	1.050
1.21 to 1.30	0.975	0.99	1.000	1.010	1.025	1.050	1.050	1.050
1.31 to 1.40	0.955	0.975	0.999	1.00	1.010	1.025	1.050	1.050
1.41 to 1.50	0.930	0.955	0.975	0.990	1.000	1.010	1.050	1.050
1.51 to 1.60	0.900	0.930	0.955	0.975	0.990	1.00	1.025	1.050
1.61 to 1.70	0.865	0.900	0.930	0.955	0.975	0.990	1.00	1.025
1.71 to 1.80	Reject	0.865	0.900	0.930	0.955	0.975	0.990	1.00
1.81 to 1.90	Reject	Reject	0.865	0.900	0.930	0.955	0.975	0.990
1.91 to 2.00	Reject	Reject	Reject	0.865	0.900	0.930	0.955	0.975
2.01 to 2.10	Reject	Reject	Reject	Reject	0.865	0.900	0.930	0.955
2.11 to 2.20	Reject	Reject	Reject	Reject	Reject	0.865	0.900	0.930
2.21 to 2.30	Reject	Reject	Reject	Reject	Reject	Reject	0.865	0.900
2.31 to 2.40	Reject	Reject	Reject	Reject	Reject	Reject	Reject	0.865
>2.41	Reject	Reject	Reject	Reject	Reject	Reject	Reject	Reject

B4208 JOINTS

Add the following to this clause:

"Where the difference in level between the new work and the existing road surface exceeds 25mm, joints shall be treated as follows:

Transverse steps at the end of a day's work shall be tapered off at a slope of 1 vertical to 20 horizontal (1:20) to tie in with the existing surface. The tapered section shall be removed before surfacing is recommenced and a joint formed in accordance with clause 4208 of the specification.

Longitudinal joints exposed to traffic shall be provided with a taper of compacted asphalt material over the full length of the exposed joint. The width of the taper shall be at least 5 times the difference in level between the old and new work.

All costs involved in the provision and removal of these temporary ramps shall be deemed to have been included in the rates tendered for the relevant asphalt payment item."

B4213 CONSTRUCTION TOLERANCES AND FINISH REQUIREMENTS

DS115 Gradings

Replace Table 4213/1 with:

"TABLE B4213/1: AGGREGATE GRADING TOLERANCES

Size of aggregate passing Sieve size (mm)	Permissible deviation from target grading (%)
28	± 5
20	± 5
14	± 5
10	± 5
7	± 5
5	± 4
2	± 4
1	± 4
0,600	± 4
0,300	± 3
0,150	± 2
0,075	± 1*

* When statistical methods are applied the permissible deviation for the 0,075 fraction is ± 2%."

B4214 QUALITY OF MATERIAL AND WORKMANSHIP

DS116 Coring of asphalt layers

Add the following:

"A suitable coring machine shall be available on a daily basis when asphalt paving is taking place. Cores shall only be drilled, when the road temperature is 20°C or less. Core holes shall be filled with hot mix asphalt and compacted, all within 24 hours of the core being drilled. Coring shall be carried out within 48 hours after the paving has been completed and supplied to the Employer's Agent. The test results of cores shall be submitted to the Employer's Agent within 24 hours after coring."

DS117 Routine inspection and tests

Add the following paragraphs:

"The contractor shall keep accurate records of:

DS118 The position where every truckload of asphalt is paved (chainage, lane, time and date).

DS119 The temperatures of the asphalt in the trucks both at the mixing plant and at the paving equipment immediately prior to discharging the load.

DS120 The truck and load number from which control samples are taken. All samples taken shall be appropriately numbered.

Test results and measurements will be assessed in accordance with the provisions of section 8200."

SECTION B5700: ROAD MARKINGS

B5701 SCOPE

Replace "South African Road Traffic Signs Manual" in the second paragraph with:

"SADC Road Traffic Signs Manual"

Replace the words "ordinary road-marking paint" with "solvent borne road-marking paint".

Replace "BS 3262" with "EN 1436".

Replace "Hot melt plastic road marking" with "thermoplastic road marking".

After the last paragraph, add the following:

"Provision is made in the Pricing Schedules for different road-marking materials. The Contractor shall take note that the Employer reserves the right to utilise any, or all, or a combination of any of these road-marking materials at any stage during the construction period. The utilisation of the road-marking materials as indicated cannot be regarded as grounds for any claim by the Contractor."

B5702 MATERIALS

Insert the following before subclause B5702(a):

"The selection of appropriate road-marking paint and materials for permanent road markings to ensure conformance with the requirements of this specification rests with the Contractor. Road-marking materials for temporary road markings as clarified in SANS 731-1 shall be equal to or more durable than the road-marking paint specified in subclauses B5702(a)(i) and B5702(a)(ii), provided it meets the specified initial performance criteria. Road-marking materials for permanent road markings as clarified in SANS 731-1 shall be hot-melt thermoplastic or cold plastic equal to or more durable than the plastic road-marking material specified in subclause B5702(a)(iii), provided it meets the specified initial performance criteria. Should the Contractor propose alternative materials for permanent road markings, the onus is on the Contractor to provide the Employer's Agent with sufficient supporting evidence to assess the extent to which the alternative product(s) meet the requirements of subclause B5702(a)(iii)."

DS121 Paint

DS122 Road-marking paint

Replace subclause B5702(a)(i) with the following:

"Road-marking paint shall be Type 1 as specified in SANS 731-1. Only paint, manufactured in a SANS approved and accredited facility shall be accepted. The no-pick-up time of road-marking paint shall comply with the Type 1 requirement in accordance with SANS 731-1.

The paint shall be delivered at the Site in sealed containers marked in accordance with SANS 731-1.

The viscosity of the paint shall be such that it can be applied without being thinned down."

Add the following:

"When measured in accordance with SANS 6261 within a period of two (2) weeks ($\pm$ one (1) week) after application, the coefficient of retro-reflected luminance, R_L , of temporary road markings shall be at least 150 mcd/m².lx for white markings and 100 mcd/m².lx for yellow markings."

DS123 Roadstuds

Replace the second sentence with the following:

"All square roadstuds shall have a footprint of 100 mm x 100 mm and a height of at least 20 mm. Round roadstuds shall be 100 mm in diameter and not less than 20 mm in height.

Only non-metallic products with glass as reflective material shall be used. Shank roadstuds shall be used on the outside slow lane shoulders and only where the pavement layers are appropriate."

Add the following subclauses:

"(c) Retro-reflective beads

Retro-reflective glass beads shall be applied to the wet paint, thermoplastic and cold plastic.

The beads shall comply with Class A beads in accordance with SANS 51424 (EN 1424), with the following requirements or as approved by the Employer's Agent:

colour	:	crystal clear
roundness	:	> 80%
size range of	:	14 - 200 US Mesh (75 – 1 400 Microns)
refractive index	:	> 1,5
specific gravity	:	± 2,5
granulometry	:	

CUMULATIVE RETAINED MASS		
SIEVE	MIN.	MAX.
1 700	0	2
1 400	0	10
1 180	5	30
850	40	80
600	70	100
425	80	100
355	90	100
212	95	100
PAN	100	100

The beads shall be delivered to the Site in sealed bags, marked with the name of the manufacturer, the batch number and an inspection seal of SABS, confirming that the beads form part of a lot tested by SABS and comply with the requirements of SANS 51424 (EN 1424). Alternatively, the Contractor shall at all times have a SABS certificate on the Site, identifying the batches to which the inspection seals apply and certifying that they have been tested by SANS, and comply with the requirement of SANS 51424 (EN 1424)."

B5704 MECHANICAL EQUIPMENT FOR PAINTING

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

"The road-marking machine shall be fitted with a device to guide the operator to the centre of the line to be painted. This device shall be used at all times of operation."

Add the following:

"The machine shall always operate in the direction of the traffic when applying lane markings."

B5705 SURFACE PREPARATION

Add the following at the end of the second paragraph:

"The onus is on the Contractor to ensure that the surface on which the road markings are to be applied is sufficiently clean and dry to ensure that the quality of the road markings will not be adversely affected. The Contractor is also responsible for protecting roadstuds from being painted over, and the subsequent cleaning thereof if such over-painting did occur. (The cleaning of the roadstuds shall be done in such a manner that the functionality of the roadstuds will not be detrimentally affected by the cleaning agent.)"

Add the following after the first sentence of the third paragraph:

"The Employer's Agent may also instruct the Contractor to remove existing road markings by means of sandblasting."

B5706 SETTING OUT THE ROAD MARKINGS

Add the following:

"Where road markings are to be replaced after construction activity, it is essential that all existing road markings be accurately surveyed and referenced before commencement of such construction activities will obliterate the existing road markings. The position of the new road markings shall be reassessed on site by the Employer's Agent before the Contractor commences with the road marking.

For safety purposes, premarking of the final road markings shall be done on a daily basis at the end of each working shift for the construction of the final overlays."

B5707 APPLYING THE PAINT

Insert the following before the first paragraph:

"The Contractor's establishment on site and general obligation shall be deemed to fully include the establishment of the road-marking team, irrespective of the number of times the road-marking team is required to be on site or is required to move within the Site."

B5708 APPLYING THE RETRO-REFLECTIVE BEADS

In the first paragraph, replace the nominal application rate of 0,8 kg/litre with "400 gm/m²".

Replace the second sentence of first paragraph with the following:

"The rate of application of the beads shall be such that the coefficient of retro-reflected luminance, R_L , specified in subclause B5702(a)(ii), is achieved."

Delete the second paragraph.

Add the following:

"Beads shall be applied in accordance with SANS 51424."

B5709 ROADSTUDS

Add the words: "or as instructed by the Employer's Agent" in the first sentence after the words "as shown on the drawings".

Add the following:

"Where applicable, the Contractor shall remove existing roadstuds from the road surface as instructed by the Employer's Agent. Wedges shall be driven in from four sides between the road surface and the roadstud that has to be removed. Where the roadstuds to be removed have been cored into the existing surface the Contractor shall propose an acceptable method of removing the existing studs or rendering them ineffective prior to the replacement thereof. The Contractor shall take the necessary measures to protect the road surface, the Works and the safety of persons when roadstuds are removed."

Add the following after the second paragraph:

"The final roadstuds shall be installed immediately after the full length of a particular construction zone has received an overlay. The Contractor will not be permitted to occupy a new construction zone before the final roadstuds for the current construction zone have not been installed."

B5710 TOLERANCES

DS124 Alignment of markings

Add the following paragraphs:

"When an unbroken line and a broken line are painted alongside each other, the beginning and the end of the unbroken lane shall coincide with the beginning of one (1) broken line and the end of another broken line. When existing lines are repainted, the new markings shall not deviate more than 100 mm in the longitudinal direction or 10 mm in the transverse direction from the existing marking.

The alignment of the roadstuds shall not deviate from the true alignment by more than 10 mm and shall be positioned so that the reflective faces are within 5 degrees of a right angle of the centre line of the road."

B5711 GENERAL

Insert the following into the last sentence of the last paragraph between "black paint" and "or chemical paint remover":

", bituminous emulsion, slurry"

Add the following to the last paragraph:

"Where black paint is used, it shall be matt."

B5712 FAULTY WORKMANSHIP OR MATERIALS

Add the following paragraphs:

"Should less than 95% of the road markings comply with the specified coefficient of retro-reflected luminance when measured in accordance with SANS 6261 at a 5% sample level, the Contractor shall repaint the works at his own cost.

The Contractor shall rectify in an acceptable manner and at his own costs; all markings that do not comply with the specified requirements.

While work is in progress, tests shall be carried out on materials and/or the quality of work to ensure compliance with the specified requirements. The sampling methods are specified in SANS 731-1. The sampling methods described in TMH5 shall be followed where applicable."

B5713 PROTECTION

Add the following paragraph:

"Traffic cones shall not be smaller than 750 mm in height and shall be placed on the road not further than 48 m apart. Cones shall not be removed before the paint on the road has hardened to such an extent that it will not be damaged by traffic and the adhesive of the roadstuds has hardened to such an extent that the studs will not turn or become loose. All marks on the road caused by traffic driving over wet paint shall be removed by the Contractor at his own cost."

B5714 MEASUREMENT AND PAYMENT

Add the following note immediately after the heading of clause B5714 Measurement and Payment:

"Note:

The Contractor shall note that, notwithstanding the fact various payment items indicate that haul, overhaul and all associated items will be paid for separately, this shall not apply to this section."

SECTION B5800: LANDSCAPING AND PLANTING PLANTS

B5801 SCOPE AND DEFINITION

DS125 Scope

Delete this paragraph and replace with:

"This section includes all areas affected by construction activities. It includes landscaping, grassing, rehabilitation, erosion protection and the planting of trees and shrubs."

DS126 Definition

Weeds

Delete "(as listed in Bulletin 413 issued by the Department of Agriculture, Directorate of Agricultural Information)" and replace it with "(as listed in the Conservation of Agricultural Resources Act)".

B5802 MATERIALS

DS127 Fertiliser/soil-improvement material

Replace the contents of this subclause with the following:

"The fertiliser/soil-improvement materials to be used shall be one (1) or more of the following types, or as prescribed by the Employer's Agent:

- DS128 Lime
- DS129 Superphosphate (10,5)
- DS130 Limestone ammonium nitrate
- DS131 2:3:2(22) + Zn
- DS132 3:2:1(25)
- DS133 Monophosphate
- DS134 Ureum (46)
- DS135 Potassiumchloride (50)"

DS136 Grass seeds

Add the following:

"The grass seed mixture shall be *Cynodon dactylon*.

The Contractor shall note that normally grass seeds are to be ordered at least six (6) months in advance so that the necessary harvesting can take place well in time.

Grass seeds shall be mixed with a mulch of either chopped straw, sawdust or sand in order to prevent the separation of seeds of different size, weight and shape. Prior to seeding, trials shall be carried out to determine which of these materials is most effective in preventing the separation of seeds. 2.3.2(22) Zn fertiliser shall be added to the seed mixture prior to broadcasting."

DS137 Topsoil

Add the following at the end of the first paragraph:

"The Contractor shall be responsible for the control of any germination of weed seeds within the topsoil used on site."

Add the following at the end of the second paragraph:

"Areas such as stockpiles, borrow pits and spoil sites shall be stripped of all topsoil before work may commence within the area. Should a larger site for any of the above be required during construction, the Contractor shall refer to the DEO for best practice methods on ensuring the preservation of the additional stripped topsoil."

Add the following new paragraph:

"The topsoil shall be kept free of all foreign material generated during construction. This shall include all stone and bituminous products. Topsoiling shall not be accepted should it contain any of the above material."

B5804 PREPARING THE AREAS FOR PLANTS

DS138 Areas which do not require topsoil

Replace "50 mm" with "20 mm" and "150 mm" with "20 mm".

Add the following:

"In areas with large natural rock, i.e. not blasted or excavated rock, these rocks may be placed so as to look like a natural part of the landscape."

Add the following new subclause:

"(g) Removal of undesirable vegetation

During the course of the Contract the Employer's Agent may instruct the Contractor to physically remove undesirable vegetation from within the road reserve. Such an operation will take place before the flowering stage of the undesirable vegetation upon written instruction from the Employer's Agent, but shall not relieve the Contractor of his obligation towards weeding sodded, grassed areas as described under subclause 5806(a) and any area directly affected by any construction activity. Should the Contractor fail to respond to the written instruction from the Employer's Agent for the removal of the aforementioned undesirable vegetation before flowering, the Contractor shall be held contractually responsible for any growth or seeding of said vegetation for a period of not less than twenty-four (24) months in the affected area."

B5805 GRASSING

DS139 Sowing by hand

Delete the following:

"If approved by the Employer's Agent,"

Replace the second sentence with:

"The top 20 mm of prepared topsoil shall be raked away in sections and the seed spread uniformly within the prepared area. The top 20 mm of topsoil shall then be raked over the seedbed, ensuring an even thickness. This method is to be systematic, and where applicable, follow the contours of any slopes."

Add the following:

"The thickness of the topsoil layer shall be as specified by the Employer's Agent. The preparation of the soil for the areas to be grassed is to include scarifying just before sowing the grass seed. Should erosion of any kind (by animal, wind or rain) have occurred before the Contractor applies the grass seed, the slope shall be reinstated at the Contractor's cost to its original erosion-free state before seeding."

The types and mixtures of the seeds to be used shall be as specified in the project specifications. The Contractor shall be solely responsible for establishing an acceptable grass cover. Any approval by the Employer's Agent of seed mixtures intended for use by the Contractor shall not relieve him of his responsibility."

B5808 GENERAL

Add the following subclauses:

"(g) Weeding

The Contractor shall maintain all areas affected by construction activities free of all undesirable plant species. They shall be removed before the flowering stage of each species. Should the Contractor fail to remove the alien plant species before flowering, he shall be held responsible for alien plant removal within the affected area for an additional period of one (1) year, over and above the contractual Defects Liability Period.

The method for the removal of undesirable plant species shall be either by hand, which shall include the removal of the complete root system, or by chemical means, through the use of a registered selected herbicide. Only a registered, licensed pest control operator, licensed for the industrial application of herbicides, shall administer the application of the herbicide."

DS140 Establishment of vegetation within areas disturbed by construction activities

The Employer's Agent shall assess any area within the construction boundaries that has been disturbed by construction activities, but which is not scheduled for formal revegetation within the Contract. The assessment shall include whether re-vegetation is required. These disturbed areas nonetheless remain the Contractor's responsibility for the removal of alien vegetation (see subclause B5804(g)) for which no additional payment will be made.

Any area outside the roadwork area, namely on existing cut and fill slopes, as well as between toe-lines and the reserve boundaries that has been disturbed by spoiled material or any other activities whatsoever by the Contractor shall be reinstated to its original condition. The Employer's Agent will prescribe the necessary reinstatement that may include removal of the spoiled material, ripping, placing of new topsoil and grassing. No payment will be made for the reinstatement and repairs of these areas."

B5809 MEASUREMENT AND PAYMENT

Add the following note immediately after clause B5809 Measurement and Payment clause heading:

"Note:

The Contractor shall note that, notwithstanding the fact that various payment items indicate that haul, overhaul and all associated items will be paid for separately, this shall not apply to this section. Payment for haul, overhaul and associated items will be made as specified in Section 1600."

Item	Unit
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B58.03 Preparing the areas for grassing:

DS141 Topsoiling within the road reserve, where the following materials are used:

Replace subitem B58.03(c)(i) with the following:

"(i) Topsoil obtained from within the road reserve or borrow areas (including all haul) cubic metre (m ³)"	
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Replace the third paragraph of measurement with the following:

"The tendered rates shall include full compensation for excavating and loading the topsoil, any royalties or compensation that may be payable in the case of topsoil under subitem B58.03(c)(ii), transport including all haul, off-loading, placing and spreading it to the required thickness, levelling it off to a smooth surface, for removing any stones as specified and for roughening the surface to be topsoiled."

Delete the first sentence of the last paragraph of the measurement and payment items of B58.03(c) and B58.03(d).

DS142 Stockpiling the topsoil

Delete from the first paragraph, the last sentence: "Only material loaded ... approved area."

Add the following payment item:

"Item	Unit
B58.14 Landscaping of specified areas:	
(a) Beautification	provisional (Prov) sum
(b) Handling costs, profit and all other charges in respect of subitem B58.14(a) above	percentage (%)

The tendered sum shall include full compensation for landscaping of specific areas as indicated by the Employer's Agent. The landscaping will be done according to the specifications and in accordance with the Employer's Agents instructions and approval."

SECTION B5900: FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS

B5901 SCOPE

Add the following:

"Where reference is made in this section to 'the road and road reserve', this shall also be deemed a reference to 'the Site of the Works.'"

B5902 FINISHING THE ROAD AND ROAD RESERVE

"(a) New construction

Replace the sixth paragraph with the following:

"All materials resulting from the finishing operations shall be disposed of at approved spoil sites provided by the Contractor in accordance with the Environmental Management Plan."

B5904 MEASUREMENT AND PAYMENT

Add the following note directly after the clause heading:

"Note:

The Contractor shall note that, notwithstanding the fact that various payment items indicate that haul, overhaul and all associated items will be paid for separately, this shall not apply to this section."

Add

SECTION B6400: CONCRETE FOR STRUCTURES

B6401 SCOPE

Add the following paragraph:

"The Contractor shall take and submit samples of materials and/or mixtures to the Employer's Agent who must approve mix designs before construction work can commence."

B6402 MATERIALS

DS143 Cement

Replace the colon at the end of the first paragraph with a comma, and add the following:

"taking into account the adoption of the new SANS 50197-1:2000, Part 1: Composition, specifications and conformity criteria for common cements (refer to C&CI website www.cnci.org.za)"

Add the following new paragraphs:

"The type of cement to be used in any concrete element shall take into account the environmental conditions and durability requirements at the location of the Site of the Works, and shall be as approved by the Employer's Agent.

With the exception of the standard SANS approved cement blends supplied by the primary cement producers, the blending of CEM I and extenders shall not be permitted unless specifically approved by the Employer's Agent on the basis of an acceptable quality assurance procedure."

DS144 Water

Add the following:

"Water for concrete other than prestressed concrete, shall not contain chlorides, calculated as sodium chloride, in excess of three thousand parts per million (3 000 ppm) nor sulphates, calculated as sodium sulphate, in excess of two thousand parts per million (2 000 ppm).

Water for curing concrete shall not contain impurities in sufficient amount to cause discolouration of the concrete or produce etching of the surface.

No seawater or water containing salts shall be used.

No water shall be added on site to ready-mixed concrete prior to placing to improve workability. All concrete delivered to site shall be checked for workability using the slump cone test and slump measured outside the limit set from the design mix shall be rejected."

DS145 Admixtures

Add the following subclauses:

"(v) Admixtures, which have a retarding effect on the rate of hydration of the cement, may not be used when the concrete temperature is below 20 °C.

DS146 A retarding admixture shall be used if temperatures of concrete mixes using cements of strength class 42,5 or higher are between 20 °C and 30 °C or where the ambient temperatures are between 20 °C and 30 °C."

Add the following:

"Note: Only admixtures of the type that do not increase the water content of the mix will be considered by the Employer's Agent. In addition, no admixtures shall be added on site to ready-mixed concrete prior to placing to improve workability."

B6404 CONCRETE QUALITY

DS147 Strength concrete

Add the following after the fifth paragraph:

"The minimum cement content of structural concrete shall be 340 kg/m³."

DS148 Bleeding

Delete the existing paragraph and replace with the following:

"The concrete shall be proportioned with suitable materials that total bleeding does not exceed 0,3 mm/cm² as measured by ASTM C232-92."

B6408 CONSTRUCTION JOINTS

DS149 General

Add the following:

"No construction joints other than those indicated on the drawings will be permitted without the written approval of the Employer's Agent. In all cases the proposed method of forming the joint shall be discussed and agreed with the Employer's Agent."

B6409 CURING AND PROTECTION

Add the following to the end of subclause B6409(f):

"Where a curing compound is used, it shall consist of an approved water-based low-viscosity clear wax emulsion, applied in accordance with the manufacturer's instructions."

Add the following paragraphs to the end of the clause:

"Where curing by retention of formwork is used as the only method of curing the concrete, it must be left in place for the minimum period specified in Table 6206/1 but in no instance shall it be less than seven (7) days.

The materials used for formwork shall take into account properties such as thermal insulation and moisture absorption when assessing the suitability of the material, to the approval of the Employer's Agent.

If impermeable curing membranes are to be used as a curing method, they shall be installed at the same time as formwork is removed and no portion of a concrete surface may be left unprotected for a period in excess of 2 hours. If the surface is an unformed finish e.g. top of deck slab, then the surface must be protected immediately by appropriate methods approved by the Employer's Agent after it is finished, without damage to that surface, since it is vulnerable to plastic shrinkage cracking due to high rates of evaporation while the concrete is still in a plastic state. Plastic shrinkage and settlement shall not be permitted on any of the structural elements since it compromises the durability of the concrete. In order to prevent early settlement and shrinkage of the concrete, the concrete placed shall be vibrated after initial compaction while the concrete is still in a plastic state. Any remedial measures shall be as approved in writing by the Employer's Agent. On bridge decks, the top surface shall be cured using the method described in subclause 6409(d), i.e. constantly spraying the entire area of exposed surfaces with water.

For all concrete, curing shall be excluded from the make-up of rates for measurement under payment items B64.01 and B64.02 and will be paid for separately under payment item B64.07. Where the application of a curing compound is used, the type and nominal application rate thereof shall be as specified in the schedule of quantities or to the manufacturer's nominal specified rates."

B6410 ADVERSE WEATHER

Add the following new subclause:

"(d) Temperature and hydration of concrete

Site batched concrete: The temperature of concrete delivered to site shall be within the range 10 °C to 30 °C. Concrete which has a temperature outside of this range shall not be placed in the structure.

In the case of ready-mixed concrete the temperature limits at point of delivery shall be as specified in SANS 878 unless the Employer's Agent has specified other limits due to specific design requirements. If slump loss occurs at concrete temperatures of over 30 °C and more than 2 hours after mixing, the concrete shall be rejected. Also if after addition of allowed water the concrete begins to stiffen again such as to place in doubt that full compaction and finishing can be achieved, the concrete shall be rejected. Care must also be taken not to cast concrete onto hot steel shutters as this might induce cracking.

The rate of hydration of the cement in the concrete shall be such that the concrete can be placed and properly compacted within 2 hours after the addition of water to the mix ingredients. The initial set of the concrete shall not be unduly delayed due to inappropriateness of admixtures or cement type, which could promote bleeding."

B6413 PRECAST CONCRETE

Add the following final paragraphs:

"Precast concrete units shall comply with the requirements of the latest SANS 986 specification.

Prior to the manufacture of any units the manufacturer shall submit his quality plan to be approved by the Employer's Agent. The quality plan must incorporate all requirements and frequency for durability index testing, i.e. sorptivity, oxygen permeability, chloride conductivity (if required) and cover testing. As part of the quality plan submitted for approval, copies of calibration certificates of both gauges used for proof loads, and cover meters used at the factory, shall be supplied to the Employer's Agent. The originals of these certificates shall at all stages also be available for inspection at the factory premises. The manufacturer shall check each precast unit for cover compliance, and random checking of units shall not be permitted. The Employer's Agent's Representative may visit the factory at any stage to ascertain adherence to the quality plan, including test results from the durability index testing, as well as to check covers before delivery to site. Any substandard cover shall result in the applicable structural element or part thereof being rejected. Should the manufacturer not be adhering to their quality plan, the Employer's Agent may exercise the right to reject the use of products from the manufacturer concerned. The Employer shall also be informed in all such cases.

For durability requirements due to the reduced cover provided for precast culverts, all such durability testing shall be done in accordance with subclause B6404(h)."

B6414 QUALITY OF MATERIALS AND WORKMANSHIP

DS150 Criteria for compliance with the requirements

Add the following paragraphs after the first paragraph:

"The cores shall be taken from the trial panels cast using the design mixes made in the laboratory. Where the Site is remote from the laboratory, the trial panels may be cast at the laboratory in accordance with the requirements of subclause B8106(g).

In the event that for Class 'W' concrete strength requirements the actual achieved average cube strengths of an element are less than 85% of the target mean strength needed to meet durability requirements or less than 100% of the target mean strength to meet strength requirements, it may result in the durability parameters not

meeting the prescribed targets and the Employer's Agent will instruct the taking of cores from the test panel and structure for additional testing. The cost of these in situ tests shall be borne by the Contractor cost.

The approved quality control criteria for process control testing for durability concrete shall be coring and testing of test panels. The frequency of manufacture and coring of test panels shall be as ordered by the Employer's Agent and indicated in Table B8106/1 and Table B8106/2.

Tests numbers B8106(g)(i), B8106(g)(ii) and B8106(g)(iii) (when required), shall be conducted on cores extracted from the test panels when the concrete reaches the age of at least twenty-eight (28) days. To allow for variability in the material potential, the type of chloride conductivity values shall be limited to 90% of the values indicated in Table B6404/5. Test no. B8106(g)(iv) shall be conducted to confirm that the specified depth of concrete cover has been achieved. The frequency of these tests shall be as described under subclause B8106(g). The test results shall be accepted or rejected on the criteria set out in Table B6404/4 and Table B6404/5 based on the following categories:

DS151 Full acceptance

Concrete shall be accepted unconditionally and full payment shall be made.

DS152 Conditional acceptance

Concrete may be accepted, based on the cube strength and durability index results with a warning that construction methods be examined to improve the durability criteria. A reduced payment shall be applied to all the relevant payment items of the specific element under Section B6300 where the cover requirements are not achieved and Section B6400 where the oxygen permeability and strength requirements are not achieved for the non-conforming element or concrete pour as set out in Table B8212/1 and Table B8212/2. The decision to accept the substandard concrete at reduced payment shall rest solely with the Employer.

Should the test result(s) indicate conditional acceptance of the element tested, the Contractor shall have the option of carrying out additional tests (on four (4) extracted cores) on that element of the structure, at his own expense to confirm or disapprove the original test result(s). These cores shall be extracted within fifty-six (56) days from the date of the element being cast.

Should the additional test confirm the original test result, then the original test result shall serve to determine payment in accordance with Table B8212/1 and Table B8212/2.

Should the additional test show that the structure meets the targets, the penalty shall be halved.

DS153 Rejection

The concrete shall be removed and replaced with fresh concrete at the expense of the Contractor, as directed by the Employer's Agent."

DS154 Procedure in the event of non-compliance with the requirements

Replace subclause (i) with the following:

"The use of core testing for acceptance control shall be at the sole discretion of the Employer's Agent and shall generally only be permitted where it can be proved that either the cube making, curing or testing procedure has contributed to poor cube test results.

Before the cores are drilled, the members concerned shall be cured and allowed to age twenty-eight (28) days, where after the cores shall be drilled and tested within seven (7) days. The concrete age shall thus not exceed thirty-five (35) days at the time of testing. Cores shall be drilled in accordance with SANS 5865, and the Employer's Agent will evaluate these cores in accordance with SANS 10100 - Part 2."

Add the following new subclause:

"(iii) Structural concrete elements or concrete pours shall be represented by test cubes and extracted cores which shall be tested for strengths and the appropriate durability parameters. If the durability parameters are acceptable, the costs for such testing shall be borne by the Employer. However,

where non-compliance to the specified parameters has been identified, the assessed element shall be rejected and, at the Employer's Agent's sole discretion, any of the following measures may be considered at the Contractor's expense:

- DS155 Coating with an approved product specifically designed to improve the non-conforming parameter depending on the severity of the test results
- DS156 Acceptance at reduced payments
- DS157 Demolition and rebuilding

Where the Employer's Agent allows conditional acceptance, reduced payment shall be applied to all the relevant payment items under Section 6300 and Section 6400 for the non-conforming element or concrete pour according to the Table B8212/1."

Replace clause 6415 with the following:

"B6415 PARTIAL DEMOLITION AND EXTENSION OF EXISTING STRUCTURES

Where parts of existing structures have to be demolished (without extensions to these structures), these parts shall be cut to predetermined lines and levels. If the concrete is reinforced, the reinforcement shall be exposed and cut off at a depth giving the required cover, and the exposed face shall be restored as specified in clause 6408. The debris shall be removed and disposed of at approved dumping sites provided by the Contractor.

Where partial demolition is required for extension work to existing structures, the contact face shall be cut to predetermined lines and levels. Loose material shall be removed and disposed of at approved dumping sites provided by the Contractor. Projecting steel shall be cleaned and bent as directed by the Employer's Agent.

Where extension work is required without partial demolition, the contact surface shall be roughened and cleaned of all dirt and loose particles.

If required, dowels shall be installed in holes drilled into the existing structure in accordance with the details on the drawings, and shall be secured by means of an approved epoxy resin grout.

New concrete shall be bonded to existing concrete with a cement paste or slurry or an approved epoxy resin slurry.

All such work shall be carried out without damaging the rest of the structure."

SECTION B7300: CONCRETE BLOCK PAVING FOR ROADS

B7304 MEASUREMENT AND PAYMENT

Add the following before the items:

"No additional or extra over payment will be made for work in restricted or confined areas."

"Item	Unit
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B73.03 Provision of approved herbicide/fungicide and ant poison:

Remove and replace "... ant poison and herbicide and ..." with "... ant poison, herbicide and fungicide and ...".

Add the following payment items:

"Item	Unit
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B73.04 Concrete bollards:

(a) Standard 250 mm diameter bollardnumber (no)

(b) Standard 150 mm diameter bollardnumber (no)

The unit of measurement shall be the number of concrete bollards installed.

The tendered rate shall include full compensation for the furnishing of all materials and equipment, work in restricted areas and all transport and finishing necessary to install the concrete bollards as indicated on the drawings to the satisfaction of the Employer's Agent.

"Item	Unit
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B73.05 Removing and stacking existing all types and sizes of paving on restricted areas where NMT facilities are to be constructed, including transport where necessary	m ²
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The unit of measurement shall be the square metre of paving removed on restricted areas where instructed by the Employer's Representative or where specified on the drawings.

The tendered rate shall include full compensation for all work necessary for removing undesired paving, including transportation, disposing or storage.

SECTION 8100: TESTING MATERIALS AND WORKMANSHIP

B8102 TESTING METHODS

Insert the following as a new first paragraph:

"Where reference is made to TMH test methods in this specification or the standard specifications, it shall be replaced with the relevant current published SANS test method."

B8104 TAKING AND SUBMITTING SAMPLES

Add the following to the third paragraph:

"A minimum period of six (6) weeks, before commencement of any related work, is required for the submission of asphalt or concrete mix designs for approval by the Employer's Agent."

B8105 TESTING THE AGGREGATES

Add the following subclauses:

"(g) Ethylene glycol weathering test for durability of Type G1 and Type G2 graded crushed-stone base material"

The ethylene glycol durability index shall be determined as follows:

DS158 Apparatus

Suitable pans or basins
Ethylene glycol solution
Stirring rod

DS159 Method

Obtain three (3) or more representative samples from the source to be evaluated.

If not already crushed, crush the material in order to obtain sufficient minus 20 mm plus 14 mm sized aggregate in order to totally cover the bottom of the basin or pan with a single layer of stone. Add sufficient ethylene glycol to each basin ensuring that every aggregate particle is completely submerged.

After soaking for 24 hours, gently stir the aggregate, allow to settle and observe and record the response of the aggregate to the ethylene glycol according to the criteria listed in subclause B8105(g)(iii) below. Continue the above cycle at intervals of 24 hours for a further four (4) days, in each case recording the observed response. After five (5) days allow the samples to remain submerged in the solution and observe and record the disintegration response after a total period of fifteen (15) days, thirty (30) days and sixty (60) days has elapsed.

DS160 Classification of response

After each cycle, classify and record the response of the aggregate as follows:

Disintegration class

Class 1: No obvious effects, or only very minor spalling of sand-sized particles or very small flakes
Class 2: Splitting of rock, accompanied by any other disintegrative effects
Class 3: Fracturing (spheroidal and/or internal) without extensive spalling or distortion
Class 4: Fracturing (spheroidal and/or internal) with extensive spalling or distortion
Class 5: Complete disintegration

Time class

The time factor in the above disintegrative process is classified according to the time taken for the most serious effect of the expansive stresses to occur, i.e.

- Class 4: 0 - 5 days
- Class 3: 6 - 15 days
- Class 2: 16 - 30 days
- Class 1: 31 - 60 days
- Class 0: Over 60 days

DS161 Determination of glycol durability index

The ethylene durability index is determined by adding the class number as assigned for the specific disintegrative response observed to the class number as assigned for the period for this response to occur. A durability index ranging from 1 (no response) to 9 (rapid and complete disintegration) is thus determined.

DS162 Ethylene glycol weathering test for durability of aggregates used in seals and asphalt

DS163 Select 100 number single-sized chippings from a representative sample retained on the 14 mm sieve but passing the 20 mm sieve. The selected aggregate chippings shall be oven dried for 12 hours and the mass of the chippings shall then be determined to the nearest 0,001 kilogram. The chippings shall then be immersed in ethylene glycol contained in a glass container for twenty-eight (28) days. After twenty-eight (28) days the chippings shall be removed from the ethylene glycol and oven dried for 12 hours. All friable and loose pieces shall then forcibly be removed by fingers from the chippings. The mass of the chippings shall then be determined and the percentage weathering loss shall be calculated from the results.

DS164 Acceptance criteria

Only aggregates that show a breakdown after twenty-six (26) days in ethylene glycol of less than 2% shall be used in seals or in asphalt.

DS165 Ethylene glycol weathering test for durability of aggregates used in concrete

DS166 A 2,0 kg sample of single-sized (20 mm) stone is washed, air dried and then soaked in ethylene glycol for six (6) days.

DS167 On the sixth (6) day the sample is removed from the ethylene glycol, washed thoroughly with tap water and oven dried overnight.

DS168 A conventional dry sieve analysis is carried out on day seven. The sample is re-submerged in ethylene glycol and the above 7-day cycle is repeated.

DS169 On day fourteen, following the dry sieve analysis, the sample is again submerged in ethylene glycol and allowed to stand for a further thirteen (13) days.

DS170 After thirteen (13) days the sample is removed from the ethylene glycol, washed and oven dried overnight.

DS171 On day twenty-eight (28) the final sieve analysis is carried out.

Photographs of the rock samples are to be taken after each of the above cycles.

Acceptance criteria

Only aggregate that shows a breakdown of the initial sizes of less than 20% by weight after the twenty-eight (28) days testing in ethylene glycol shall be used as coarse aggregate in concrete."

B8108 DETERMINING THE TOTAL APPROXIMATE DRY BULK RELATIVE DENSITY AND THE APPARENT DENSITY

Add the following at the end of this clause:

"For materials where the total water absorption, when determined according to TMH1 Methods B14 and B15, is in excess of 1,5%, the apparent density shall be calculated in accordance with the following formula:

$$\frac{(b - a)}{(d - a) + \{ (w - 1,0) \times (b - a) \} - (b - c)}$$

This formula shall be used as an alternative to note (5) regarding the soaking period, when so instructed by the Employer's Agent."

B8109 TESTING TAR, BITUMEN AND ASPHALT

DS172 Tests described in the standard specifications for tars, bitumens and bituminous emulsions

Add the following:

"The Contractor shall submit all relevant test results of the tests stated above to the Employer's Agent for approval, prior to any bituminous surfacing being applied to any section of road.

The Contractor shall supply a delivery sheet as well as a bitumen sample (this sample of one (1) litre minimum must be contained in a galvanized tin and properly cross-referenced) for every single batch of tar or bituminous product that is delivered to the Site, and shall issue the same to the Employer's Agent.

The delivery sheet must state the product delivered to site, the name and address of the manufacturer, as well as the compliance of the product to all relevant SANS specifications.

Only after the Employer's Agent has received the relevant information and approved it, may the Contractor commence with the bituminous surfacing."

Add the following subclauses after subclause B8109(d):

"(e) Conventional dynamic creep test

The conventional dynamic creep test shall be carried out as outlined in Sabita Manual 13, and under the following conditions:

- Temperature : 40 C and 60 C
- Axial load magnitude : 100 kPa
- Loading type : 0,5 Hz square waveshape
- Duration of test : 3 600 cycles

It is a prerequisite in this project that a suitable grease followed by graphite powder be applied to the ends of each specimen. The grease shall be applied sparingly, just enough for the sprinkled graphite to stick. The objective of this exercise is to provide a frictionless interface between the platens and the specimen.

In addition to the dynamic creep modulus, the dynamic creep slope between the primary point and the end point shall be determined. The primary point is defined as the point where the change in the accumulated permanent deformation is less than 1% and the end point is defined as 3 600 cycles.

DS173 Modified dynamic creep test

This test is similar to the conventional test, except that it has to be done on a 150 mm specimen with 75 mm loading plates. The test is expected to give better accuracy, as well as better repeatability and reproducibility.

DS174 Determination of the elastic properties of binders using the standard ductilometer

Ductilometer briquettes are to be prepared in the standard manner for ductility measurements. The bath temperature is maintained at 10 °C and the samples immersed for 90 minutes prior to the test.

The briquettes are elongated at the standard rate of 50 mm/min until they have been stretched 200 mm. They are held in this position for 5 minutes after which the threads are cut approximately in half by scissors.

The briquettes are left undisturbed for one hour after which the half-sample specimens are retracted until the two (2) broken ends touch. The elongation at this point (X mm) is noted and the percentage recovery determined from:

$$\% \text{ recovery} = \frac{200 - X}{200} \times 100$$

B8110 TESTS RELATING TO CHEMICAL STABILIZATION

Add the following subclause:

“(d) The wet-dry durability test for cement and/or lime-treated materials using the hand-brush method (SANRAL method)

DS175 Scope

This method covers the procedure for determining the soil-cement losses obtained by repeated wetting, drying and hand brushing of hardened soil-cement specimens (see 5.4).

DS176 Apparatus

DS177 A moisture curing room capable of maintaining a relative humidity of 95% to 100% and a temperature of 22 °C to 25 °C, or suitable plastic bags capable of holding specimens and carriers in an air-tight condition in a water bath as described in subclause B8110(d)(ii)(2) below.

DS178 A suitable water bath with thermostatic control capable of maintaining a temperature of 22 °C to 25 °C.

DS179 A balance to weigh up to 10 kg, accurate to 0,5 g.

DS180 A drying oven capable of maintaining temperatures of 71 ± 3 °C and 110 ± 5 °C.

DS181 A wire scratch brush made of 50 mm by 1,6 mm flat 26 gauge wire bristles assembled in 50 groups of 10 bristles and mounted to form five (5) longitudinal rows and ten (10) transverse rows on a 200 mm by 65 mm wooden block.

DS182 Method

DS183 Preparation of specimens

Prepare specimens in accordance with the procedure described in the Appendix to Method A19 in the TMH1 with the following exceptions:

Use the material passing the 37,5 mm sieve and discard the material remaining on the sieve.

Use the apparatus and compaction method as described in TMH1 Method A7 (100% of modified AASHTO density at predetermined OMC).

DS184 Curing of specimens

Rapid cure the specimens (see subclause B8110(d)(v)(6)). Alternatively, and where instructed by the Employer's Agent, the specimens may be cured for seven (7) days at a relative humidity of 95% to 100% and a temperature of 22 °C to 25 °C in a suitable curing room or in plastic bags and a suitable water bath.

DS185 Wetting, drying and brushing

After curing, remove the specimens from the curing room or plastic bags, allow to cool and submerge them in water at room temperature for a period of 5 hours. Remove the specimens from the water and place them in an oven at 71 °C for 42 hours.

Remove the specimens from the oven. Give each specimen two (2) firm strokes over the full surface area with the wire scratch brush. The brush must be held parallel to the long axis of the specimen or parallel to the ends as required to cover all areas of the specimen. Apply these strokes to the full height and width of each specimen with a firm stroke corresponding to approximately 13,5 kN force (see subclause B8110(d)(v)(5)).

DS186 Determination of soil-cement losses

After twelve (12) cycles, dry the specimens to a constant mass at 100 °C and determine the oven-dry mass of the specimens. The data collected will permit the calculation of the soil-cement losses of the specimens after the prescribed 12-cycle test.

DS187 Calculations

DS188 Calculate the soil-cement loss of the specimens as a percentage of the original oven-dry mass of the specimens as follows:

$$L = \frac{W - N}{W} \times 100$$

where

L = soil-cement loss (%)

W = original calculated oven-dry mass (g) (calculated according to paragraph 3.5 in the Appendix to Method A19 in the TMH1).

N = final oven-dry mass (g)

DS189 The percentage loss shall be calculated and reported to the nearest 0,1%. The results are normally required for stabilization design purposes and should be reported graphically against relevant cement contents.

DS190 Notes

- DS191 Mass determinations of the specimens before and after brushing are usually made at the end of each cycle during research or special investigations.
- DS192 Care is required when assessing results obtained on very coarse-graded materials as 'plucking' out of the aggregate pieces during the brushing process could result in very high losses of material, which may however not be truly indicative of its potential erosion resistance.
- DS193 If it is not possible to run the cycle continuously because of Sundays or holidays, or for any other reason, the specimens should be held in the oven during the layover period.
- DS194 The test was originally developed to determine wet-dry durability of cement-treated material. It can, however, be used with equal success on material tested with other chemical stabilizers, for example lime, or mixes of lime and milled blast furnace slag, or cement and milled blast furnace slag.
- DS195 The pressure of the brushing stroke is determined as follows:

Clamp a specimen in a vertical position on the edge of a platform scale and zero the scale. Apply vertical brushing strokes to the specimen and note the force necessary to register approximately 1,36 kg.

DS196 Rapid curing:

Seal each specimen in a suitable airtight container or plastic bag. Carefully place the briquettes on suitable holders or in pans and place in the oven at the relevant temperature and for the period given below:

STABILIZING AGENT	TEMPERATURE (°C)	TIME (HOURS)
Cement	70 - 75	24 ± 0,5
PBFC	70 - 75	24 ± 0,5
Lime	60 ± 2	45 ± 1
Lime/FA	60 ± 2	45 ± 1
Lime/MBFS	60 ± 2	45 ± 1

"

B8114 GEOTEXTILE AND GEOTEXTILE – SOIL COMPACTIBILITY TESTS

Add the following new subclause:

DS197 Other Tests:

DS198 Thickness (mm):

The thickness of the material shall be specified by the Contractor (or supplier).

Thickness and compressibility tests shall be carried out in accordance with SANS 10221: The testing of geotextiles, to check that the material supplied conforms to the thickness specified by the Contractor.

DS199 Mass per unit area (g/m²):

Testing shall be carried out in accordance with SANS 10221.

DS200 Tensile strength (kN/m):

DS201 Penetration load (kN):

DS202 Puncture resistance (mm):

Testing shall be done in accordance with the test procedures laid down by the CSIR, Pretoria.

DS203 Permeability (litre/s/m²):

Testing shall be carried out in accordance with SANS 10221."

Add the following clauses:

"B8118 TESTS ON RETRO-REFLECTIVE MATERIAL FOR USE ON ROAD SIGNS

On-site testing of the retro-reflective properties of road signs shall be done with a field retro-reflectometer measuring at an entrance angle of 5,0° and an observation angle of 0,33°. The coefficient of retro-reflection so determined shall not be less than the relevant values given in Table B8118/1 below. The coefficients of retro-reflection are expressed in candelas per lux per square metre (cd/(lux/m²)).

TABLE B8118/1: COEFFICIENTS OF RETRO-REFLECTION

1	2	3	4	5	6	7	8	9	10	11
CLASS	OBSERVATION ANGLE (DEGREES)	ENTRANCE ANGLE (DEGREES)	COEFFICIENT OF RETRO-REFLECTION FOR DIFFERENT COLOURS OF MATERIAL WHEN MEASURED WITH STANDARD ILLUMINANT A* (cd/(lux/m ²)) MINIMUM							
			Red	Orange	Yellow	Green	Blue	Purple	White	Brown
I	0,33	5	10	20	35	7	3	2	50	3
II	0,33	5	20	40	70	14	6	4	100	6
III	0,33	5	30	60	105	21	9	6	150	9

*See CIE Publication 15 (E-1.3.1)

B8117 MEASUREMENT AND PAYMENT

Amend payment item 81.02 as follows:

Acceptance control testing as required by the Employer's

B81.04 Representative:

(a) Cost of testing (Prov) sum

(b) Handling costs and profit in respect of subitem B81.02(a) above percentage (%)

The provisional sum provided to cover the cost of special tests as requested by the Employer's Agent in terms of clause 8115 shall be expended in accordance with the provisions of the Conditions of Contract. Payment will not be made for any special test should the test indicate that the specifications have not been complied with.

The percentage tendered is a percentage of the amount actually spent under subitem B81.02(a) which shall include full compensation for the handling costs of the Contractor and the profit in connection with the tests requested by the Employer's Agent.

The Contractor shall appoint an accredited and reputable company to perform the applicable tests with a field retro-reflectometer. This company is subject to the Employer's Agent's approval and his approval must be obtained before any test results will be accepted.

Tests on the painted gantries shall also be performed by qualified personnel. These tests shall, inter alia, include checks on film thickness, workmanship and quality control."

C3.5 MANAGEMENT

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C3.5.1 HEALTH AND SAFETY SPECIFICATIONS

This part of C3.5 Management contains specifications for Health and Safety matters not covered by C3.4 Construction Specifications.

The number of each clause and each payment item in this specification is prefixed with a G to differentiate these clauses and items.

SECTION G1000 : HEALTH AND SAFETY REQUIREMENTS

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G1001 SCOPE

This health and safety specification establishes the overarching framework within which a contractor is required to satisfy general requirements for occupation health and safety in an engineering and construction works contract.

- Note:** 1) This specification establishes general requirements to enable the employer and the contractor to satisfy the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) and the Construction Regulations, 2003.
- 2) The Construction Regulations, 2003, require an employer to stop any contractor from executing construction work which is not in accordance with the contractor's health and safety plan for the site or which poses a threat to the health and safety of persons.

G1002 DEFINITIONS

Act: the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993)

competent person: any person having the knowledge, training and experience specific to the work or task being performed

ergonomics: the application of scientific information concerning humans to the design of objects, systems and the environment for human use in order to

optimize human well-being and overall system performance hazard: a source of or exposure to danger incident: an event or occurrence occurring at work or arising out of or in connection with the activities of persons at work, or in connection with the use of plant or machinery, in which, or in consequence of which-

- a) any person dies, becomes unconscious, suffers the loss of a limb or part of a limb or is otherwise injured or becomes ill to such a degree that he is likely either to die or to suffer a permanent physical defect or likely to be unable for a period of at least 14 days either to work or to continue with the activity for which he was employed or is usually employed;
- b) a major incident occurred; or
- c) the health or safety of any person was endangered and where-
 - i) a dangerous substance was spilled;
 - ii) the uncontrolled release of any substance under pressure took place;
 - iii) machinery or any part thereof fractured or failed resulting in flying, falling or uncontrolled moving objects; or machinery ran out of control

health and safety plan: a documented plan which addresses hazards identified and includes safe work procedures to mitigate, reduce or control the hazards identified.

health and safety specification: a documented specification of all health and safety requirements pertaining to the associated works on a construction site, so as to ensure the health and safety of persons

inspector: a person designated as such under section 28 of the Act

major incident: an occurrence of catastrophic proportions, resulting from the use of plant or machinery, or from activities at a workplace

reasonably practicable: practicable having regard to:

- a) the severity and scope of the hazard or risk concerned;
- b) the state of knowledge reasonably available concerning that hazard or risk and of any means of removing or mitigating that hazard or risk;
- c) the availability and suitability of means to remove or mitigate that hazard or risk; and

- d) the cost of removing or mitigating that hazard or risk in relation to the benefits deriving therefrom;

risk: the probability that injury or damage will occur

safe: free from any hazard

scaffold: any temporary elevated platform and supporting structure used for providing access to and supporting workmen or materials or both

specification data: data, provisions and variations that make this specification applicable to a particular contract

structure

- a) any building, steel or reinforced concrete structure (not being a building), railway line or siding, bridge, waterworks, reservoir, pipe or pipeline, cable, sewer, sewage works, fixed vessels, road, drainage works, earthworks, dam, wall, mast, tower, tower crane, batching plants, pylon, surface and underground tanks, earth retaining structure or any structure designed to preserve or alter any natural feature, and any other similar structure;
- b) any formwork, false work, scaffold or other structure designed or used to provide support or means of access during construction work; or
- c) any fixed plant in respect of work which includes the installation, commissioning, decommissioning or dismantling and where any such work involves a risk of a person falling two metres or more

substance: any solid, liquid, vapour, gas or aerosol, or combination thereof

suitable: capable of fulfilling or having fulfilled the intended function or fit for its intended purpose

G1003 INTERPRETATION

- G3.1 The Act and its associated regulations shall have precedence in the interpretation of any ambiguity or inconsistency between it and this specification.
- G3.2 Compliance with the requirements of this specification does not necessarily result in compliance with the provisions of the Act.

G1004 REQUIREMENTS**G4.1 General requirement**

G4.1.1 The contractor shall execute the works in a manner that complies with all the requirements of the Act and all its associated regulations, and in so doing, minimize the risk of incidents occurring.

G4.1.2 The contractor shall with respect to the site and the engineering and construction works that are contemplated:

- a) identify the hazards and evaluate the risks associated with such work constituting a hazard to the health and safety of such employees and the steps that need to be taken to comply with the Act; and
- b) as far as is reasonably practicable, prevent the exposure of such employees to the hazards concerned or, where prevention is not reasonably practicable, minimize such exposure.

G4.1.3 The contractor shall as far as is reasonably practicable, cause every employee to be made conversant with the hazards to his health and safety attached to any work which he has to perform, any article or substance which he has to produce, process, use, handle, store or transport and any plant or machinery which he is required or permitted to use, as well as with the precautionary measures which should be taken and observed with the respect to those hazards.

G4.1.4 The contractor shall ensure that all employees under his or her control are:

- a) informed, instructed and trained by a competent person regarding any hazard and the related work procedures before any work commences, and thereafter at such times as may be determined in the risk assessment; and
- b) issued with proof of health and safety induction training issued by a competent person and carry proof of such induction when working on site.

G4.1.5 The contractor shall not allow or permit any employee to enter any site, unless such person has undergone health and safety

induction training pertaining to the hazards prevalent on the site at the time of entry.

G4.1.6 The contractor shall ensure that each visitor to a construction site, save where such visitor only visits the site office and is not in direct contact with the construction work activities:

a) undergoes health and safety instruction pertaining to the hazards prevalent on the site; and

b) is provided with the necessary personal protective equipment.

G4.1.7 The contractor shall provide suitable on-site signage to alert workers and visitors to health and safety requirements.

G4.1.8 The contractor shall not permit any person who is or who appears to be under the influence of intoxicating liquor or drugs, to enter or remain at a workplace.

G4.2 Health and safety representatives

G4.2.1 The contractor shall appoint in writing one health and safety representative for every 50 employees of the contractor working on the site, whenever there are more than 20 employees on the site; to:

- a) review the effectiveness of health and safety measures;
- b) identify potential hazards and potential major incidents;
- c) in collaboration with his employer, examine the causes of incidents;
- d) investigate complaints by any employee of the contractor relating to that employee's health or safety on the site;
- e) make representations to the contractor on matters arising from a), b), c) or d) or on general matters affecting the health or safety of the employees at the workplace;
- g) inspect the site with a view to the health and safety of employees, at regular intervals;
- h) participate in consultations with inspectors at the workplace and accompany inspectors on inspections of the workplace; and
- i) participate in any internal health or safety audit.

G4.2.2 The contractor shall inform the relevant safety representative:

- a) beforehand of inspections, investigations or formal inquiries of which he has been notified by an inspector; and
- b) as soon as reasonably practicable of the occurrence of an incident on the site.

G4.2.3 The contractor shall convene health and safety meetings whenever more than two health and safety representatives have been appointed for the site. These meetings shall be attended by all health and safety representatives and shall be convened at least once every month to:

- a) make recommendations to the employer regarding any matter affecting the health or safety of persons on the site; and

- b) discuss any incident on the site in which or in consequence of which any person was injured, became ill or died.

G4.2.4 The contractor shall consult with the health and safety committee on the development, monitoring and review of the risk assessment.

G4.3 Appointment of construction supervisor and safety officers

4.3.1 The contractor shall appoint a full-time competent employee designated in writing as the construction supervisor for the site, with the duty of supervising the performance of the work falling within the scope of the contract and may appoint one or more competent employees to assist the appointed construction supervisor.

1.3.2 A contractor may having considered the size of the project, the degree of dangers likely to be encountered or the accumulation of hazards or risks on the site, appoint a full-time or part-time construction safety officer in writing, who has in the contractor's opinion the necessary competencies and resources, to assist the contractor in the control of all safety related aspects on the site.

1.3.3 The contractor shall ensure that the construction supervisor is in possession of the most recently updated version of the fall protection plan.

G4.3.4 The contractor shall ensure that the following activities, as relevant, are carried out under the supervision of a competent person and that such persons are appointed in writing:

- a) all formwork and support work operations;
- b) excavation work;
- c) demolition work;
- d) scaffolding work operations;
- e) suspended platform work operations;
- f) operation of batch plants; and

- g) the stacking and storage of articles on the site.

G4.4 Risk assessment

G4.4.1 The contractor performing work falling within the contract shall, before the commencement of any such work and during construction work, cause a risk assessment to be performed by a competent person appointed in writing. Such an assessment shall as a minimum:

- to;
- a) identify the risks and hazards to which persons may be exposed
 - b) analyse and evaluate the identified risks and hazards;
 - c) document a plan of safe work procedures to mitigate, reduce or control the risks and hazards that have been identified;
 - d) provide a monitoring plan; and
 - e) provide a review plan.

Note: A risk assessment is an important step in protecting workers as well as complying with the law. It helps you focus on the risks that really matter in a particular workplace – the ones with the potential to cause real harm. Workers and others have a right to be protected from harm caused by a failure to take reasonable control measures. The following four steps are recommended:

Identify the hazards by looking at what could reasonably be expected to cause harm, ask employees or their representatives what they think, obtain advice from trade associations or publications on health and safety, check manufacturer's instructions or data sheets for chemicals and equipment as they can be very helpful in spelling out the hazards and putting them in their true perspective, review accident and ill-health records, think about long-term hazards to health (e.g. high levels of noise or exposure to harmful substances) as well as safety hazards etc.

Identify who may be harmed and how by identifying how groups of people might be harmed i.e. what type of injury or ill health might occur.

Evaluate the risks and decide on precautions by doing everything 'reasonably practicable' to protect people from harm i.e. by looking at how things are done, what controls are in place and how the work is organised and comparing this against good practice to see if more can be done to bring practices up to standard. Consider if the hazard can be got rid of all together, and if not how can the risks be controlled so that harm is unlikely, e.g. try a less risky option (e.g. switch to using a less hazardous chemical); prevent access to the hazard (e.g. by guarding); organise work to reduce exposure to the hazard (e.g. put barriers between pedestrians and traffic); issue personal protective equipment (e.g. clothing, footwear, goggles etc); and provide welfare facilities (e.g. first aid and washing facilities for removal of contamination).

Record the findings by writing down the findings of the risk assessment.

G4.4.2 The contractor shall ensure that as far as is reasonably practicable, ergonomic related hazards are analysed, evaluated and addressed in the risk assessment.

G4.4.3 The contractor shall require a competent person to prepare a fall protection plan in compliance with the requirements of the Construction Regulations.

G4.4.4 Notwithstanding the provisions of the fall protection plan, the contractor shall ensure that:

- a) all unprotected openings in floors, edges, slabs, hatchways and stairways are adequately guarded, fenced or barricaded or that similar means are used to safeguard any person from falling through such openings;
- b) no person works in an elevated position, unless such work is performed safely as if working from a scaffold or ladder;
- c) notices are conspicuously placed at all openings where the possibility exists that a person might fall through such openings;
- d) fall prevention and fall arrest equipment is:

- i) suitable and of sufficient strength for the purpose or purposes for which it is being used having regard to the work being carried out and the load, including any person, it is intended to bear; and
- ii) securely attached to a structure or plant and the means of attachment thereto is suitable and of sufficient strength and stability for the purpose of safely supporting the equipment and any person who is liable to fall;
fall arrest equipment is only used where it is not reasonably practicable to use fall prevention equipment; and
- f) suitable and sufficient steps are taken to ensure, as far as is reasonably practicable, that in the event of a fall by any person, the fall arrest equipment or the surrounding environment does not cause injury to the person.

G4.4.5 Where roof work is being performed on a construction site, the contractor shall ensure that it is indicated in the fall protection plan that:

the roof work has been properly planned;

the roof erectors are competent to carry out the work;

no employees are permitted to work on roofs during inclement weather conditions or if weather conditions are a hazard to the health and safety of the employees;

prominent warning notices are to be placed where all covers to openings are not of sufficient strength to withstand any imposed loads and where fragile material exists;

the areas mentioned in paragraph (d) are to be barricaded off to prevent persons from entering; suitable and sufficient platforms, coverings or other similar means of support have been provided to be used in such a way that the weight of any person passing across or working on or from fragile material is supported; and there is suitable and sufficient guard-rails or barriers and toe-boards or other similar means of protection to prevent, so far as is reasonably practicable, the fall of any person, material or equipment.

G4.4.6 The contractor shall ensure that:

- a) all reasonably practicable steps are taken to prevent the uncontrolled collapse of any new or existing structure or any

- part thereof, which may become unstable or is in a temporary state of weakness or instability due to the carrying out of construction work;
- b) no structure or part of a structure is loaded in a manner which would render it unsafe; and
 - c) specification data prepared by the designer of the structure is taken into account in the risk assessment;

Note: The specification data provided by the designer should outline known or anticipated dangers or hazards relating to the works and make available all information required for the safe execution of the work. It should provide as relevant, geotechnical information (or make reference to reports provided in the site information), the loading the structure is designed to withstand, the methods and sequence of construction.

G4.5 Health and safety plans

G4.5.1 The contractor shall prior to commencing the works to which this specification applies, submit to the employer for approval a suitable and sufficiently documented health and safety plan, based on this specification and the risk assessment that is conducted.

G4.5.2 The health and safety plan shall as a minimum provide:

- a) the information contained in Table 1 in respect of each of the hazards associated with work falling within the scope of the contract (see Figure 1); and

Table 1: Example of the format of a health and safety plan

What are the hazards?	Who might be harmed and how?	What are the safe work procedures for the site?	What further action is necessary (monitoring and review)?	Action by whom	Action by when

b) an outline of the manner in which the contractor intends complying with the requirements of this specification.

G4.5.3 The contractor shall discuss the submitted health and safety plan with the employer's representative, modify such plan in the light of the discussions and resubmit the modified plan for approval.

G4.5.4 The contractor shall apply the approved health and safety plan from the date of commencement of and for the duration of the works to which this specification applies.

G4.5.5 The contractor shall conduct periodic audits for compliance with the approved health and safety plan at intervals agreed upon with the employer, but at least once every month.

G4.5.6 The contractor shall update the health and safety plan whenever changes to the works are brought about.

G4.6 Subcontractors

G4.6.1 The contractor may only subcontract work in terms of a written subcontract and shall only appoint a subcontractor should he be reasonably satisfied that such a subcontractor has the necessary competencies and resources to perform the work falling within the scope of the contract safely. Such a subcontract shall require that the subcontractor shall:

a) co-operate with the contractor as far as is necessary to enable both the contractor and sub-contractor to comply with the provisions of the Act; and

b) as far as is reasonably practicable, promptly provide the contractor with any information which might affect the health and safety of any person at work carrying out work or any person who might be affected by the work of such a person at work or which might justify a review of the health and safety plan.

G4.6.2 The contractor shall provide any sub-contractor who is submitting a tender or appointed to perform a sub-contract falling within the scope of the contract, with the relevant sections of this specification and associated specification data which might be pertinent to the sub-contract.

G4.6.3 The contractor shall take reasonable steps as are necessary to ensure:

- a) co-operation between all sub-contractors to enable each of those sub-contractors to comply with the requirements of the Act and associated regulations; and
- b) that each sub-contractor's health and safety plan is implemented.

G4.6.4 The contractor shall conduct periodic audits for compliance with the approved health and safety plan of each and every sub-contractor working on the site at intervals agreed upon with such contractors, but at least once per month.

G4.6.5 The contractor shall stop any contractor from executing construction work which is not in accordance with the contractor's or subcontractor's health and safety plan for the site or which poses a threat to the health and safety of persons.

G4.6.6 The contractor shall ensure that where changes to the works occur, sufficient health and safety information and appropriate resources are made available to the subcontractor to execute the work safely.

G4.6.7 The contractor shall ensure that:

- a) every subcontractor is registered and in good standing with the compensation fund or with a licensed compensation insurer prior to work commencing on site;
- b) potential subcontractors submitting tenders have made provision for the cost of health and safety measures during the construction process; and
- c) every subcontractor has in place a documented health and safety plan prior to commencing any work on site which falls within the scope of the contract.

G4.6.8 The contractor shall receive, discuss and approve health and safety plans submitted by subcontractors.

G4.6.9 The contractor shall ensure that all subcontractors are informed regarding any hazard as stipulated in the risk assessment before any work commences, and thereafter at such times as may be determined in the risk assessment.

G4.6.10 The contractor shall reasonably satisfy himself that all employees of subcontractors are informed, instructed and trained by a competent person regarding any hazard and the related work procedures before any work commences, and thereafter at such times as may be determined in the risk assessment.

The contractor shall satisfy himself and ensure that all subcontractor employees deployed in the site are:

- a) informed, instructed and trained by a competent person regarding any hazard and the related work procedures before any work commences, and thereafter at such times as may be determined in the risk assessment; and
- b) issued with proof of health and safety induction training issued by a competent person and carry proof such induction when working on site.

G4.7 Reporting of incidents

The contractor shall notify the employer's representative of any incident as soon as possible after it has occurred and report such incidence to an inspector.

G4.8 Administration

G4.8.1 Notification of intention to commence construction work

The contractor shall notify the Provincial Director of Labour in writing using a form similar to that contained in Annexure A of the Construction Regulations issued in terms of the Act before construction work commences and retain a copy of such notification in the health and safety file where such work:

involves the demolition of a structure exceeding a height of 3m;

involves the use of explosives to perform construction work;

involves the dismantling of fixed plant at a height greater than 3m;

exceeds 30 days or will involve more than 300 person days of construction work; and includes:

- i) excavation work deeper than 1m; or
- ii) working at a height greater than 3 m above ground or a landing.

G4.8.2 Health and safety file

G4.8.2.1 The contractor shall maintain on site a health and safety file on site which contains copies of the following, as relevant:

- a) the notification made to the Provincial Director of Labour in terms of 4.4.1;
- b) the letters of appointment of health and safety representatives;
- c) the minutes of all health and safety meetings;
- d) a comprehensive and updated list of all the subcontractors (nominated, selected or domestic) employed on site by the contractor, indicating the type of work being performed by such sub-contractors;
- e) a copy of each and every subcontract agreement;.
- f) the contractor's health and safety plan;
- g) the health and safety plans of all the contractor's subcontractors who are required to provide such plans;
- h) the recommendations made to the contractor by the health and safety committee referred to in 4.2.3
- i) any report made to an inspector by the health and safety committee referred to in 4.2.3; and
- j) the findings of all audit reports made regarding the implementation of the contractor's or a subcontractor's health and safety plan;
- k) proof that the contractor and every subcontractor is registered and in good standing with the compensation fund or with a licensed compensation insurer;

- l) the inputs of the safety officer, if any, into the health and safety plan;
- m) a copy of risk assessments made by competent persons;
- n) details of induction training conducted whenever it is conducted;
- o) proof of all subcontractor's induction training whenever it is conducted;
- p) letters of appointments for competent persons to supervise prescribed activities;
- q) proof of the following where suspended platforms are used:
 - i) a certificate of system design issued by a professional engineer, professional certificated engineer or a professional engineering technologist;
 - ii) proof of competency of erectors;
 - iii) proof of compliance of operational design calculations with requirements of the system design certificate;
 - iv) proof of performance test results;
 - v) sketches indicating the completed system with the operational loading capacity of the platform;
 - vi) procedures for and records of inspections having been carried out;
 - vii) procedures for and records of maintenance work having been carried out;
 - viii) proof that the prescribed documentation has been forwarded to the provincial director;
- r) records of the register of inspections made by a competent person immediately before and during the

placement of concrete or any other load on formwork;
and

- s) the names of the first aiders on site and copies of the first aid certificates of competency.

G4.8.2.2 The health and safety file shall be made available for inspection by any inspector, subcontractor, employer's representative, employer's agent, health and safety representative or employee of the contractor upon the request of such persons.

G4.8.2.3 The contractor shall hand over the health and safety file to the employer upon completion of the contract together with a record of all drawings, designs, materials used and other similar information concerning the completed structure.

G4.9 First aid, emergency equipment and procedures

The contractor shall where more than five employees are employed at a workplace, provide a first aid box or boxes at or near the workplace which shall be available and accessible for the treatment of injured persons at that workplace. Such first aid boxes shall contain suitable first aid equipment.

The contractor shall ensure that where there are more than 10 employees employed on the site that for every group of up to 50 employees at that workplace, at least one person is readily available during normal working hours, who is in possession of a valid certificate of competency in first aid.

G1005 MEASUREMENT AND PAYMENT

Item

Unit

G10.1 Contractor's initial obligations in respect of the Occupational Health and Safety and Construction Regulations Lump Sum

Payment of the lump sum tendered shall include full compensation for all costs resulting from the Contractor's initial obligations complying with Occupational Health and Safety Act and its Construction Regulations and requirements in terms of health and safety requirements in respect of the contract as specified.

The full amount will be paid in one instalment only once:-

- (a) The contractor has notified the Provincial Director of the Department of Labour in writing of the project.
- (b) The contractor has made the required initial appointments of employees and sub-contractors.
- (c) The client has approved the contractor's Health and Safety Plan.
- (d) The contractor has set up his Health and Safety File.

Item

Unit

**G10.2 Contractor's time related obligations in respect of the Occupational
Month
Health and Safety Act and Construction Regulations**

The tendered monthly amount shall represent full compensation for that part of the Contractor's general obligations in terms of the Occupational Health and Safety Act and the Construction Regulations which are mainly a function of time. This includes inter alia payment of all costs for the appointment of all staff contemplated in the construction regulations and the transport of employees on site. Payment will be monthly only after payment for Item G10.1 has been made.

The lump sum tendered will be payable monthly instalments in relation to the month under consideration and the total time of the completion of the Works.

C3.5.2 ENVIRONMENTAL SPECIFICATIONS

This part of C3.5 Management contains specifications for Environmental matters not covered by C3.4 Construction Specifications.

The number of each clause and each payment item in this specification is prefixed with an H to differentiate these clauses and items.

SECTION H1000 : ENVIRONMENTAL MANAGEMENT

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H1001 SCOPE

The Contractor is required to comply with the requirements of the detailed EMP (to be provided upon award of contract) throughout construction.

The following are standardised additional specifications applicable. They are intended to assist the appointed Contractors to fulfill the environmental requirements of the project. The objective of the EMP is to ensure that the potential impacts upon the environment are minimised, and that upon completion of each section of work the area is left in a clean and sustainable condition.

Overall the environmental impacts of the project are considered to be low as long as the listed procedures are followed. These are given in the EMP.

The Contractor is advised that there are cost implications to the EMP and these must be factored into the tendered price.

H1002 ENVIRONMENTAL MANAGEMENT PLAN

H2.1 Objectives

The prime objective of the EMP is to minimise or avoid significant environmental impacts by using a pro-active approach and planning procedures.

The second objective is to have a plan in place to rehabilitate areas that have been impacted upon and, thirdly,

To have a plan in place for emergency situations that arise and are detrimental to the environment e.g. fuel or bitumen spills.

The Contractor will be responsible for the day-to-day implementation of the EMP, by himself and all other sub-contractors. During the course of construction regular compliance audits will be undertaken. This environmental auditing will be conducted by qualified environmental practitioners.

H2.2 Environmental Control

The Contractor will oversee the environmental aspects of the construction phase of the project in consultation with the Engineer.

The Contractor will report back to the bi-weekly site meetings with regards to compliance to the environmental specifications.

H2.3 Environmental Awareness Programme

The Engineer will implement an Environmental Awareness Programme for the Contractor, his staff, sub-contractors and all people working on the project. The initial session will be immediately prior to construction commencing.

H2.4 Method Statements

The Contractor shall submit written method statements for activities that are identified by the Engineer, as being potentially harmful to the environment, or for work that is to be undertaken in areas identified as being environmentally sensitive.

Such activities include dewatering of excavations, pumping, working with cement, erection of construction camps and fuel stores, etc.

The Method Statement shall cover applicable details with regard to:

- construction procedures,
- materials and equipment to be used,
- getting the equipment to and from site,
- how the equipment/ material will be moved while on site,
- how and where material will be stored,
- the containment (or action to be taken if containment is not possible) of leaks or spills of any liquid or material that may occur,
- timing and location of activities,
- compliance/ non-compliance with the Specifications, and
- any other information deemed necessary by the Engineer.

Method statements shall be submitted at least 7 days prior to commencing work on the activity to give the Engineer time to study the method statement and consult with contractor and specialists and to obtain written approval of the method statements. The Contractor shall not commence on that activity until such time as the method statement has been agreed to in writing by the Engineer. This will be done within this 10 day period.

Any changes required to the method statements once construction has commenced must be agreed upon in writing with the Engineer before being instituted.

H2.5 Working Areas

Regardless of the extent of the work, the following applies to all of these areas:

- All materials must be stockpiled or stored in a designated area (at each site) avoiding sensitive areas.
- No materials must be left on site once work is completed neither may they be dumped at any other place on site.
- Litter bins and containers for waste materials must be provided by the Contractor at each site. Bins should be weatherproof and scavenger proof.
- All waste must be placed in the bins and containers. No waste may be left lying on the site.
- Visible anti-litter signs must be displayed around the waste collection points and all employees must be encouraged to observe site rules pertaining to solid waste management practices. A concerted effort should be made to collect and dispose of materials suitable for recycling, separately from the other solid waste.
- No burning or burial of waste is permitted.
- Any soils contaminated by the contractor must be removed or rehabilitated. If a significant amount of soil has to be removed fresh soil must be imported and the site rehabilitated by grading and planting vegetation.
- All waste must be removed to an authorised landfill site, or taken to a facility for recycling.
Any excess road building materials must either be:
 - taken to a site for stockpiling and future re-use,
 - (ii) used for localised rehabilitation, or
 - (iii) removed from site by the contractor for disposal.

- The contractor shall provide waste bins for solid waste collection and storage. Such bins should be placed at designated areas within the site. The refuse collected from the site must be removed for landfill disposal at least once a week.
- Vehicles may not park in the road reserve except with the prior permission of the Engineer.
- Every care should be taken to avoid damaging vegetation or land when vehicles are in use.
- Fuel tanks, pumps, and all equipment using oil, diesel, etc. must have drip trays. The drip trays must have sufficient capacity to contain liquids that will spill in the case of failure of the tanks, etc. The waste liquids taken from the trays must be disposed of at a landfill which permits disposing of liquid wastes.
- Only emergency repairs to vehicles and equipment may take place on site. Where emergency repairs take place it is the responsibility of the contractor to ensure that all waste (e.g. spare parts and oils) are removed from site as soon as possible. All other repairs must take place at a yard off-site, where facilities are suitable and waste facilities are appropriate.
- Whenever practical a tarpaulin should be laid down, prior to emergency repairs taking place, to protect the environment from contamination.
- No natural vegetation may be gathered, removed or destroyed in the course of the project, except where agreed to by the landowner.
- No hunting is permitted.
- Fires are prohibited.
- Erosion control measures must be implemented if the need arises.
- Pollution of water courses by any means must be avoided.
- No defacement of any natural or other features will be allowed; this includes markings for road works, unless markings are restricted to the road surface.
- Dust suppression measures should be implemented if and when required.
- Chemical toilets must be provided at all sites and must be within walking distance of the workers. They must be serviced on a regular basis in order to

be kept clean and hygienic. The toilets must be placed in a sheltered place and should be locked after working hours if they are outside a camp area. Alternative arrangements to use existing toilets with owners' written consent may be allowed when submitted in writing.

- All waste from toilets must be disposed of at a permitted landfill or waste treatment works.

H2.6 On-site Workers Camp

H2.6.1 Site Camp

The campsite selection should be carried out in consultation with the landowner or relevant authority.

The site must be selected with due regard to the environment. Due care should be taken to avoid areas where sensitive vegetation and habitats occur.

When the site selection process has been completed, the contractor will define the boundaries of the site and erect a fence with a controlled access around it if practical.

All activities associated with the camp must be restricted to the demarcated area.

It is the responsibility of the contractor to ensure the safety of all personnel within the boundaries of the site. The contractor should have an on-site contingency plan detailing measures to be observed in the case of a health, safety or environmental emergency.

The contractor should ensure that all employees, employed by him and/or employed by subcontractors, have a clear understanding of safety regulations and procedures.

H2.6.2 Water, wastewater, and stormwater

Site occupants must have access to safe drinking water.

If water is stored on site a clear distinction should be made between drinking water and multi-purpose water storage facilities.

All water used on site must be taken from a legal source and comply with recognised standards for potable and other uses.

Wastewater that is contaminated with soaps, detergents and other undesirable materials, such as grease and oils, should be collected in conservancy tanks and disposed of safely in a wastewater treatment facility.

It is illegal to discharge water into a public stream if the quality does not conform with required health standards.

In all camps stormwater must be managed to prevent erosion.

Run-off will be diverted to control ponds so that silt may settle and any pollutants are trapped.

Subsequently, any pollutants must be treated, or removed and disposed of at a permitted landfill site or recycling facility.

All materials should be protected from the rain to prevent them being washed into stormwater channels.

H2.6.3 Ablution Facilities

The contractor shall provide proper and adequate sanitary facilities for all site employees.

These facilities shall be maintained in good and working condition at all times. Odours emanating from these facilities should be controlled within acceptable levels.

H2.6.4 Fires and Cooking Facilities

Fires will not be allowed.

The contractor must supply cooking facilities that are suitable for the environment and are not liable to cause the outbreak of fires. Fire fighting equipment must be supplied by the Contractor at suitable locations.

H2.7 Plant and Equipment Storage Facility

H2.7.1 Plant

At the end of the shift all plant should be driven or transported back to the campsite for proper and safe overnight storage.

The contractor should ensure that equipment left elsewhere is stored in a manner that will not impact negatively upon the environment.

The plant should be regularly inspected for fuel and oil leaks that may be harmful to the environment, and/or aquatic life if washed into a stream or river.

H2.7.2 Hazardous Materials

Hazardous materials should be stored under lock and key in designated areas with properly displayed and visible warning signs.

All storage of hazardous materials must comply with legislation and regulations.

H1003REHABILITATION

Upon completion of each section of work the site must be cleared of all equipment, waste and any rehabilitation work must be undertaken. This may include local grading of soils and re-vegetation where sites have been disturbed.

Immediately after the demolition of the campsite, the contractor shall restore the site to its original state, paying particular attention to its appearance relative to the general landscape.

It is imperative that any potential erosion problems are addressed. This may require subsequent site visits to monitor the efficacy of erosion control measures.

H1004EMERGENCY PLANS

The onus is on the contractor to assess the potential risks to the environment as a result of the project. For example, accidental spillage of materials may pollute the soil or any water body.

The contractor must draw up a suitable emergency plan to contain such pollution. The emergency plans and procedures must be taught to all the workers on site, so that everyone is prepared to cope with an emergency.

Appropriate equipment must be available to carry out the emergency plans.

H1005ENVIRONMENTAL AUDITING AND PENALTIES

On a regular basis, a qualified auditor will carry out a site audit to ascertain and verify the contractor's level of compliance with the requirements of the EMP

Transgression will be treated as a contravention of the contractual agreement.

Deviation from these prescribed requirements will be met with penalties that are intended to enforce compliance.

It is a requirement that the contractor keep concise records of mitigatory measures undertaken at each site to minimise environmental impacts.

Any emergency situations that impact upon the environment should be recorded by the contractor together with the action that was taken to rehabilitate and remediate the site.

A copy of all completed environmental audits will be given to the contractor and the employer by the auditor. Any public complaints regarding the environment must be recorded and discussed with the Engineer to determine an appropriate course of action.

The contractor will be responsible for all costs incurred in the rehabilitation of sites.

The contractor will be responsible for all costs incurred where emergency procedures are implemented to deal with accidents that impact upon the environment.

The contractor will be responsible for ensuring that all procedures required to rehabilitate all sites are implemented.

If third parties are called to the site to perform clean up and rehabilitation procedures, the contractor will be responsible for all costs.

Penalties will be imposed for contravention of the EMP, as specified in the EMP:

MEASUREMENT AND PAYMENT

No separate payment items have been scheduled for compliance with the EMP, and all the relevant cost of the Contractor are deemed to be covered in other relevant items in the schedule of quantities.

PART C4

SITE INFORMATION

C4 Site Information

C4.1 Scope of Site Information

Geotechnical investigation was carried out as per the attached report, which soil samples of the in-situ soils were retrieved and delivered to SANAS accredited civil engineering laboratory for material testing to determine materials classification and properties. The following tests were undertaken:

- Trial holes
- Grading Analysis
- Atterberg Limits
- Maximum Dry Density (MDD)
- California Bearing Ration (CBR)
- DCP's

The tests are conducted to determine materials suitability for usage as road layers or flexible pavement layers.

Allowance was made in the schedule of quantities for expected hard rock excavation. For the purposes of the Contract it will be deemed that, prior to submitting his Tender, the Contractor acquainted himself fully with the information and prevailing site conditions. The contractor shall have no claim against the Employer in respect of geotechnical or subsurface conditions encountered during the course of the Contract.

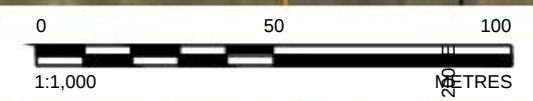
PART C5 ANNEXURES

TENDER DRAWINGS

The work shall be carried out in accordance with the following drawings which form part of these contract documents:



ISSUED FOR
TENDER



A	2024-05-20	ISSUED FOR PRELIMINARY				MPM	MPM	MM	MM
REV.	YYYY-MM-DD	DESCRIPTION				DESIGNED	PREPARED	REVIEWED	APPROVED

CLIENT
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PROJECT

PAVING OF STREET 01 & 02 AT DENNEYSVILLE

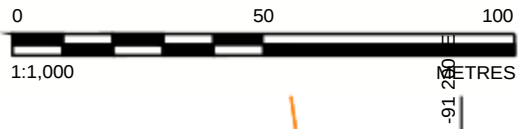
TITLE

**GENERAL ARRANGEMENT OF STREET 01 & 02 AT
DENNEYSVILLE**

PROJECT NO.	SUBSET	REV.	1 of 1	DRAWING
	100	A		D100



ISSUED FOR
TENDER



				CLIENT METSIMAHOLO LOCAL MUNICIPALITY								PROJECT PAVING OF STREET 01 & 02 AT DENNEYSVILLE			
				CONSULTANT 				546 16th ROAD CONSTANTIA PARK MIDRAND, 1685 SOUTH AFRICA [+27] (12) 645 1143 www.luvhengoconsulting.co.za				TITLE GENERAL ARRANGEMENT OF STREET 01 & 02 AT DENNEYSVILLE			
A	2024-05-20	ISSUED FOR PRELIMINARY		MPM	MPM	MM	MM								
REV.	YYYY-MM-DD	DESCRIPTION		DESIGNED	PREPARED	REVIEWED	APPROVED					PROJECT NO. SUBSET REV. 1 of 1 DRAWING 100 A D101			