

MAKHADO MUNICIPALITY



CONTRACT NO: 24 of 2025

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE TENDER DOCUMENT

CIDB GRADING: 6CE or higher

NAME OF TENDERER	:	
TENDER AMOUNT	:	

**PREPARED FOR:
MAKHADO LOCAL MUNICIPALITY**



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Louis Trichardt
0920

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**PREPARED BY:
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MAKHADO LOCAL MUNICIPALITY



CONTRACT NO: 24 of 2025

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

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MAKHADO LOCAL MUNICIPALITY



CONTRACT NO: 24 of 2025

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

T1.1 TENDER NOTICE AND INVITATION TO TENDER

MAKHADO LOCAL MUNICIPALITY							
TENDER NOTICE							
<p>All suitable service providers are hereby invited to bid for the above-mentioned project. Bidders are requested to bid as per specification attached to the bid documents that will be obtainable 10 April 2025 at non-refundable amount of R600.00 per document at the Procurement Office No. B043 Ground Floor, 83 Krogh Street, Civic Center, Makhado or can be downloaded from e-tender portal for free https://etenders.treasury.gov.za/content/advertised-tender or www.makhado.gov.za</p>							
BID NO:	DESCRIPTION	EVALUATION CRITERIA	COMPULSORY BRIEFING SESSION	SPECIAL REQUIREMENT	TECHNICAL ENQUIRIES	REFERENCE AND NOTICE NO.	CLOSING DATE AND TIME
24 of 2025	Upgrading of Road leading to Mavhoiy FET College	80/20 preference points with functionality	16 April 2025 at 11:00pm at Biaba (Nzhelele) at the intersection of Viva filling station	<ul style="list-style-type: none"> CIDB Grading 08CE or higher Attach three year audited financial statement (only those who are required by the law to submit) 	Acting Director technical services : Ms LA Thulare or Mr V mugeri at 0155193000	Ref: 8/3/2080 Notice no: 38/2025	09 May 2025 at 12:00pm
25 of 2025	Upgrading of Tshino access road	90/10 preference points with functionality	17 April 2025 at 12:00pm at Tshino next to Vuwani business and lifestyle centre	<ul style="list-style-type: none"> CIDB Grading 08CE or higher Attach three year audited financial statement (only those who are required by the law to submit) 	Acting Director technical services : Ms LA Thulare or Mr V mugeri at 0155193000	Ref: 8/3/2081 Notice no: 39/2025	09 May 2025 at 12:00pm
26 of 2025	Upgrading of Madombidzha (50/50), Ramantsha to Ravele road phase 1	90/10 preference points with functionality	18 April 2025 at 11:00pm at Madombidzha 50/50	<ul style="list-style-type: none"> CIDB Grading 08CE or higher Attach three year audited financial statement (only those who are required by the law to submit) 	Acting Director technical services : Ms LA Thulare or Mr Mr V mugeri at 0155193000	Ref: 8/3/2082 Notice no: 40/2025	09 May 2025 at 12:00pm
27 of 2025	Panel of civil contractors for Rehabilitation and resealing of road, emergency potholes patching within Makhado local municipality for the period of three years	80/20 preferential points		CIDB Grading 3CE or higher	Acting Director technical services : Ms LA Thulare or Mr MG Raleshuku at 0155193000	Ref: 8/3/2/ 2083 Notice no: 41/2025	09 May 2025 at 12:00pm
<p>The Municipality is not bound to accept the lowest or any bid and reserves the right to accept any part of a bid. Bids must remain valid for a period of ninety (90) days after closing date of submission thereof. Submitted tenders will be evaluated as per above mentioned table.</p> <p>Bids which are late, incomplete, unsigned, or submitted in pencil or by telegraph or facsimile or electronically by e-mail, or not having the following documents attached for evaluation or not complying with the tender specifications, will not be evaluated, and will be disqualified:</p> <ul style="list-style-type: none"> Valid Tax compliance status pin issued by SARS A copy of company registration documents (CR) Certified copy/copies of company owner(s) ID book(s), not older than three (03) months certification. Attach proof of payment for municipal rates not owing for more than (03) months or formal lease agreement for rental premises or letter from the traditional authority in cases of non-ratable areas. (Attach for both entity and directors of the company) Copy of central supplier database (CSD) report. <p>NB:</p> <ul style="list-style-type: none"> All Service Provider doing business with Makhado municipality are required to register on the CSD (Central Supplier Database). A copy of a certified copy will not be accepted. <p>All procurement enquiries should be directed to Ms. P Mudau or Mr M Ramabulana at Tel no. (015) 519 3044/3024</p> <p>Civic Centre 83 Krogh Street MAKHADO</p> <p style="text-align: right;">MR KM NEMANAME MUNICIPAL MANAGER</p>							

T1.1.1

Contractor

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Employer

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MAKHADO MUNICIPALITY



CONTRACT NO : 24 of 2025 UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

T1.2 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 (Feb 2008) as published in Government Gazette No: 30692, Board Notice 9 of 2008 of 1 February 2008. (See www.cidb.org.za).

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 or inconsistency between it and the Standard Conditions of Tender.

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

Clause Number	
F.1.1	The Employer is: MAKHADO LOCAL MUNICIPALITY Private Bag X2596 Louis Trichardt 0920
F.1.2	The Tender documents issued by the Employer comprise the following documents: THE TENDER Part T1 : Tendering Procedures T1.1 Tender Notice and invitation to tender T1.2 Tender Data Part T2: Returnable Documents T2.1 List of Returnable documents T2.2 Returnable schedules THE CONTRACT Part C1: Agreements and Contract Data C1.1 Form of offer and acceptance

T1.2.1

Contractor

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UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE
T1.2 Tender Data

	C1.2 Contract Data C1.3 Performance guarantee C1.4 Adjudicator's Contract Part C2: Pricing Data C2.1 Pricing Instructions C2.2 Bill of Quantities Part C3: Scope of Work C3 Scope of Work Part C4: Site Information C4 Site Information		
F1.3	Interpretation 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 tender conditions.		
F.1.4	The Employer's Agent is:		
	<table> <tr> <td> Morula Consulting Engineers cc Tel: 072 791 9934 Fax: 086 558 6446 </td><td> P.O Box 60 Dzanani 0955 </td></tr> </table>	Morula Consulting Engineers cc Tel: 072 791 9934 Fax: 086 558 6446	P.O Box 60 Dzanani 0955
Morula Consulting Engineers cc Tel: 072 791 9934 Fax: 086 558 6446	P.O Box 60 Dzanani 0955		
F.1.5.1	Reject or accept The Employer may 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 a cancellation and rejection, but will give written reasons for such action upon written request to do so.		
F.2.1	Eligibility Only those tenderers who satisfy the following criteria are eligible to submit tenders:		
F.2.1	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 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 or higher class construction work, are eligible to have their tenders evaluated. Joint Ventures are eligible to submit tenders provided that: <ol style="list-style-type: none"> every member of the joint venture is registered with the CIDB; the lead partner has a Contractor grading designation in the 5CE or higher class of construction work; and 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 a 6CE or higher class of construction work or a value determined in accordance with Regulation 25 (1B) of 25 (7A) of the Construction Industry Development Regulations. 		
F.2.2	Compensation of tendering Accept that the Employer will not compensate the tenderer for any costs incurred in the preparation and submission of a tender offer, including the costs of any testing necessary to demonstrate that aspects of the offer satisfy 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		

T1.2.2

Contractor

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UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE
T1.2 Tender Data

	Treat as confidential 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.	
F2.6	Acknowledge Addenda Acknowledge receipt of addenda to the tender documents, which the employer may issue, and if necessary apply for an extension of the closing time stated in the tender data, in order to take the addenda into account.	
F.2.7	The arrangements for a compulsory site meeting are:	
	16 April 2025 at Biaba (Nzhelele) at the intersection of Viva filling station	Time: 11:00am
F.2.10	Pricing the tender R 600.00	
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.	
F2.13.3	Tender offer communicated on paper shall be submitted as an original.	
F.2.13.5	The Employer's address for delivery of Tender offers and identification details to be shown on each Tender offer package are:	
	CONTRACT NO: 24 of 2025 UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE	
	Closing date and time: Closing date: 9 May 2025 Closing Time: 12:00pm	
	Location of Tender box: Makhado local municipality	
	Private Bag X2596 Louis Trichardt 0920	
F.2.13.9	Telephonic, telegraphic, telex, facsimile or e-mailed tender offers will not be accepted.	
F.2.14	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.	
F2.15	The closing time for submission of tender offers is as mentioned in F.2.13.5 above and as stated in the Tender Notice and Invitation to Tender.	
F.2.16	The Tender offer validity period is 90 Days.	
F.2.18	The tenderer shall, when requested by the Employer to do so, submit the names of all management and supervisory staff that will be employed to supervise the Labour Intensive portion of the works together with satisfactory evidence that such staff members satisfy the eligibility requirements.	
F2.20	The tenderer is required to submit a Performance Guarantee from an approved insurer within 14 days from appointment. A format is included in Part C1.3 of this document. The tenderer is to submit to the employer 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.	

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F.2.23	The tenderer is required to submit with his tender: (1) Tax compliance status issued by the South African Revenue Services; and (2) an original or certified copy of the Company / CC Registration. In case of Joint Venture – both companies / cc to submit registration documentation. (3) In case of Joint Venture – the Joint Venture Agreement.																												
F.3.4	The time and location for opening of the Tender offers are: Closing date: 9 May 2025 Closing Time: 12:00pm Location: Makhado local municipality																												
F3.11	<p>EVALUATION CRITERIA</p> <p>The bids will be evaluated in two stages. The first stage will check whether the bidders have submitted all documents as requested on the advert. Although functionality does not form part of the final tender points scoring for award purpose, tenderer will be assessed for responsiveness and functionality first and if the tender is not responsive or meet the minimum functionality score, the tenderer will be eliminated and not considered further for second stage of evaluation.</p> <p>The second stage of the evaluation will be based on Price (80) and preference points for B-BBEE status level of contribution (20).</p> <p>Detailed points scoring for functionality are as follows:</p> <p>COMPETENCE ACHIEVEMENT/FUNCTIONALITY</p> <p><u>TABLE A1: REPUTATION AND REFERENCES</u></p> <table border="1"><thead><tr><th>TARGETED GOALS Name reference with contact details (Previous 5 years, Projects involving Road and Stormwater)</th><th>Max Points to be Scored</th><th>Points Claimed by Tenderer</th><th>Allocated Points</th></tr></thead><tbody><tr><td>1 Project 1</td><td>8</td><td></td><td></td></tr><tr><td>2 Project 2</td><td>8</td><td></td><td></td></tr><tr><td>3 Project 3</td><td>8</td><td></td><td></td></tr><tr><td>4 Project 4</td><td>8</td><td></td><td></td></tr><tr><td>5 Project 5</td><td>8</td><td></td><td></td></tr><tr><td>Sub-Total: Reputation and References</td><td>40</td><td></td><td></td></tr></tbody></table> <p><i>The bidder should clearly demonstrate company experience on similar projects and past performance in Roads and Stormwater Construction.</i></p> <p>NB: Appointment letters indicating the project value, completion certificates of completed projects and reference letters with contactable references and client official stamp must be attached a per the above score card.</p> <ul style="list-style-type: none">• Roads and Stormwater Construction completed within the municipality environment, RAL and SANRAL.• Completed road-related projects within the past 5 years.	TARGETED GOALS Name reference with contact details (Previous 5 years, Projects involving Road and Stormwater)	Max Points to be Scored	Points Claimed by Tenderer	Allocated Points	1 Project 1	8			2 Project 2	8			3 Project 3	8			4 Project 4	8			5 Project 5	8			Sub-Total: Reputation and References	40		
TARGETED GOALS Name reference with contact details (Previous 5 years, Projects involving Road and Stormwater)	Max Points to be Scored	Points Claimed by Tenderer	Allocated Points																										
1 Project 1	8																												
2 Project 2	8																												
3 Project 3	8																												
4 Project 4	8																												
5 Project 5	8																												
Sub-Total: Reputation and References	40																												

T1.2.4

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Contractor

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Witness 1

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Witness 2

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Employer

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Witness 1

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Witness 2

• 8 points will be awarded for each project (minimum of 5 Projects required) as per requirements above to a maximum of 40 points.

- 6CE: 8 points
- 5CE: 7 points
- 4CE: 6 points
- 3CE: 2 point

NOTE:

- Projects that **DO NOT** meet the requirements as mentioned above **WILL NOT BE ACCEPTED**.
- Project where the contractor was a sub-contractor will **NOT** get any points.
- ONLY Completed Projects will score points.

TABLE A2: FINANCIAL REFERENCES

TARGETED GOALS	Tendered Goal	Points Claimed by Tenderer	Allocated Points
1 Tenderer submitted banking details proof attached	2		
2 Bank rating of "C" or better	5		
3 Registered financial Institution's full details as guarantor in the amount of 10% as specified for surety purpose shall be submitted	3		
Sub-Total: Financial References	10		

TABLE A3: EXPERIENCE AND QUALIFICATION OF KEY STAFF

Table A3.1 Experience

TARGETED GOALS	Points Allocation	Points Claimed by Tenderer	Allocated Points
1 Contract Manager: 10 years Experience in Roads Projects	>10 yrs=5 6-9 yrs=3 3-5 yrs=2 1-2yrs=1		
2 Site Agent: 08 years post registration Experience in Roads Projects	>8 yrs=5 5-7 yrs=3 3-4 yrs=2 1-2yrs=1		
3 Foreman: 5 years in Roads Projects	>5 yrs=3 4 yrs=1.5 3 yrs=1 1-2yrs=0.5		
4 Health and Safety Officer: 5 years post registration Experience as OHS in Civil Engineering Construction	>5 yrs=2 4 yrs=1 3 yrs=0.5 1-2yrs=0.25		
Sub-Total: Experience	15		

NOTE: Project organogram should be attached. Curriculum vitae with detailed experience

T1.2.5

Contractor

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and contact details should be attached to the tender document for verification by the consultants.

Table A3.2 Qualifications

	TARGETED GOALS	Tendered Goal	Points Claimed by Tenderer	Allocated Points
1	Contract Manager: Civil Engineering or construction management <ul style="list-style-type: none"> Must be ECSA registered (2 Points) 	ECSA Reg = 2 BSc / BTech = 3 PrCPM = 2		
	<ul style="list-style-type: none"> BSc/BTech: Civil Engineering Degree (3 Points) 	ND = 1 N6 = 0		
2	Site Agent: Civil Engineering or construction management or project management <ul style="list-style-type: none"> Minimum National Diploma: Civil Engineering Degree (2 Points) Must be SACPCMP / ECSA registered (2 Points) NQF Level 5 Labour Intensive Construction Certificate (1 Points) 	SACPCMP / ECSA Reg = 2 BSc/B-Tech = 2 NQF 5 LIC Cert = 1		
3	General Foreman <ul style="list-style-type: none"> Minimum NDip: Civil Engineering (3 Points) NQF 5 / N6 (1 Point) (Maximum points is 3)	ND = 3 NQF5 / N6 = 1		
4	Health and Safety Officer 5 years of experience as OHS in Road projects <ul style="list-style-type: none"> Minimum National Diploma (Safety management) and Registered with SACPCMP as CHSO (2 points) 	ND & SACPCMP = 2 Points ND=0		
	Sub-Total: Qualifications	15		

CV's and Certified Qualifications should be attached.

TABLE A4: PLANT AND EQUIPMENT

	TARGETED GOALS	Tendered Goal	Points Claimed by Tenderer	Allocated Points
1.	Grader: No (1)	3		
2.	TLB: No (2)	2		
3.	Excavators: No (1)	5		
4.	Water Cart: No (2) (16 000 litre)	2		

T1.2.6

Contractor

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Witness 1

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5.	10 m ³ Tipper Trucks: No (5)	5		
6.	Vibratory Roller 12 ton:No (1)	1		
7.	Pad Foot Roller 8 ton: No (1)	1		
8.	LDV: No (2)	1		
Sub-Total: Plant and Equipment		20		

Note: Tenderers should attach certified proof of ownership certificate for the plant mentioned above if they own such plant. In case of hired plant, tenderers will be required to attach a letter of undertaking by the hiring firm indicating that they will provide the tenderer with such plant should the tenderer becomes a successful bidder. The hiring company should also provide proof of ownership for such plants (For hiring, tenderers will only receive 50% of the full points for Plant and Equipment).

TABLE A5: SUMMARY

DESCRIPTION	Maximum Points to be Allocated	Points Claimed by Tenderer	Allocated Points
REPUTATION AND REFERENCE OF THE COMPANY: TABLE A1	40		
FINANCIAL REFERENCES: TABLE A2	10		
EXPERIENCE OF KEY STAFF: TABLE A3.1	15		
QUALIFICATION OF KEY STAFF: TABLE A3.2	15		
PLANT AND EQUIPMENT: TABLE A4	20		
TOTAL	100		

Minimum functionality requirements of seventy percent (70%) or 70 points required for further evaluation.

The 80/20-point scoring system will be used on second stage of evaluation.

Second stage – Compliance to administrative requirements

Bidders will be evaluated on the following administrative compliance:

- **Power of attorney / authority for signatory**
- **Original and valid Tax Clearance**
- **Proof of registration / ownership of entity**
- **Proof of purchased bid document (receipt)**
- **Joint Venture Agreement**
- **Price amendment without signature in the bills of quantity**

T1.2.7

Contractor

Witness 1

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Employer

Witness 1

Witness 2

- **Completion of the bill of quantity**
- **Certificate of non-collusion**
- **Non completion of MBD documents**
- **Alterations to the bid document or submission of a copy of the original bid document**
- **Completion of the bid document using pencil**
- **Usage of tipex**
- **Non completion of form of offer**
- **Attachments of Company documents (Id of Shareholders / Directors, CK)**

Third stage – Evaluation in terms of the 80/20 Preference Point System:

Responsive tenders which have achieved the minimum qualification score for functionality will be evaluated further, using the 80/20 preference point system.

Step 1: Calculation of points for Price

The PPPFA prescribes that the lowest acceptable bid will score 80 points for price. Bidders that quoted higher prices will score lower points for price on a pro-rata basis. The formula to be used for calculating points scored for price is the following:

$$P_s = 90 \left(1 - \frac{P_t - P_{\min}}{P_{\min}} \right)$$

Where

P_s = Points scored for price of the bid or tender under consideration

P_t = Price (Rand value) of bid or tender under consideration

P_{min} = Price (Rand value) of the lowest acceptable bid or tender

Points scored must be rounded off to the nearest 2 decimal places

Step 2: Calculation of points for B-BBEE status level of contributor

Points shall be awarded to a bidder for attaining the B-BBEE status level of contribution in accordance with the table below:

B-BBEE Status Level of Contributor	Number of points (80/20 system)
1	10
2	9
3	8

T1.2.8

Contractor

Witness 1

Witness 2

Employer

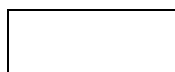
Witness 1

Witness 2

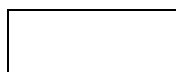
UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE
T1.2 Tender Data

	4	5
	5	4
	6	3
	7	2
	8	1
	Non-compliant contributor	0
<p>A bid shall not be disqualified from the bidding process if the bidder does not submit a certificate substantiating the B-BBEE status level of contribution nor is a non-compliant contributor. Such a bidder will score zero (0) out of a maximum of 10 points for B-BBEE.</p> <p>The points scored for price shall be added to the points scored for B-BBEE status level of contribution to obtain the bidder's total points scored out of 100.</p> <p>Award of contract to bids not scoring the highest number of points</p> <p>(a) A contract must be awarded to the bidder who scored the highest total number of points in terms of the 80/20 preference point system.</p> <p>(b) In exceptional circumstances a contract may, on reasonable and justifiable grounds, be awarded to a bidder that did not score the highest number of points. The reasons for such a decision must be approved and recorded for audit purposes and must be defensible in a court of law.</p> <p>Evaluation of bids that scored equal points</p> <p>(a) In the event that two or more bids have scored equal total points, the successful bid must be the one that scored the highest points for B-BBEE.</p> <p>(b) If two or more bids have equal points, including equal preference points for B-BBEE, the successful bid must be the one scoring the highest score for functionality.</p> <p>(c) In the event that two or more bids are equal in all respects, the award must be decided by the drawing of lots.</p>		
F.3.11.2	<p>The procedure for the evaluation of responsive tenders is Method 2.</p> <p>The financial offer will be scoring using Formula 2 (option 1) in Table F1 where the value of W1 is:</p> <p>1) 80 where the financial value inclusive of VAT of one or more responsive tender offers have a value that equals of is less than R 500 000.</p> <p>Up to 100 minus W1 tender evaluation points will be awarded to tenderers who complete the preference schedule and who are found to be eligible for the preference claimed.</p>	
F.3.18	<p>The number of paper copies of the signed contract to be provided by the Employer is one.</p>	
	<p>The additional conditions of Tender are:</p> <p>1. MAKHADO LCOAL MUNICIPALITY may also request that the Tenderer provide written evidence that his financial, labour and resources are adequate for carrying out the project.</p> <p>2. MAKHADO LOCAL MUNICIPALITY reserves the right to appoint a firm of chartered accountants and auditors and / or execute any other financial investigations on the financial resources of any Tenderer.</p>	

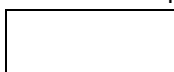
T1.2.9



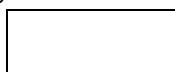
Contractor



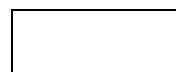
Witness 1



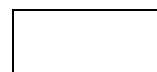
Witness 2



Employer



Witness 1



Witness 2

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE
T1.2 Tender Data

	<p>The Tenderer shall provide all reasonable assistance in such investigations.</p> <p>3 MAKHADO LOCAL MUNICIPALITY reserves the right to appoint a different Contractor for each project. The Tenderer shall be required to complete the form of offer (C1.1) and the Bill of Quantities (C2.2) for each project.</p>
	<p>The tenderer is to note that the following Additional Relevant Documents attached into Part 5 of this document will form part of this contract:</p> <p>1 Ministerial Determination No.3: Extended Public Works Programmes.</p>

T1.2.1
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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

MAKHADO LOCAL MUNICIPALITY



CONTRACT NO: 24 of 2025

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

T2.1 LIST OF RETURNABLE DOCUMENTS

The Tenderer must complete the following returnable Schedules:

Returnable Schedules required for Tender evaluation purposes

Form A	Compulsory Enterprise Questionnaire
Form B	Record of Addenda to Tender Documents
Form C	Authority for Signatory
Form D	Preference Schedule
Form E	Schedule of Previous Experience
Form F	Schedule of Current Projects
Form G	Declaration of good standing regarding tax & Original Tax Clearance Certificate
Form H	Certificate of Attendance at Site Meeting
Form I	Proposed Key Personnel
Form J	Schedule of Plant and Equipment
Form K	Schedule of Proposed Sub-Contractors
Form L	Financial References

Returnable Documents that will be incorporated into the contract

C1.1	Offer Portion of Form of Offer and Acceptance
C1.2	Contract Data (Part 2)
C1.3	Form of Guarantee
C2.2	Bill of Quantities

T2.1.1

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

MAKHADO LOCAL MUNICIPALITY



CONTRACT NO: 24 of 2025

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

T2.2 RETURABLE DOCUMENTS

RETURABLE DOCUMENTS REQUIRED FOR TENDER EVALUATION PURPOSES

FORM A COMPULSORY ENTERPRISE QUESTIONNAIRE

In the case of a Joint Venture – This questionnaire is to be completed and submitted in respect of each partner.

1. **Name of Enterprise:**
2. **VAT Registration number, if any:**
3. **CIDB Registration number:**
4. **Particulars of sole proprietors and partners in partnership:**

Name	Identity Number	Personal Income Tax Number

* Complete only if sole proprietor or partnership and attach separate page if more than 4 partners.

5. **Particulars of companies and close corporations:**

Company Registration Number:

Close Corporation Number:

Tax reference Number:

6. **Record in the service of the state:**

T2.2.1

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

T2.2 Returnable Documents

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

- ☐ a member of any municipal council
- ☐ 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
- ☐ an official of any municipality or municipal entity
- ☐ 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 an accounting authority of any national or provincial public entity
- ☐ an employee of Parliament or a provincial legislature

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

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

Name of Tenderer: Date:

Signature : Position:

Full name of signatory:

T2.2.2

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

ATTACH THE FOLLOWING DOCUMENTS HERETO

1. For Closed Corporations

CK1 or CK2 as applicable (Founding Statement)

2. For Companies

Shareholders register

3. For Joint Venture Agreements

Copy of the Joint Venture Agreement between all the parties, as well as the documents in (1) or (2) of each Joint Venture member.

T2.2.3

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE
T2.2 Returnable Documents

FORM B RECORD OF ADDENDA TO TENDER DOCUMENTS

We confirm that the following communication received from the Employer before the submission of this tender offer, amending the tender documents, have been taken into account in this tender offer:

	Date	Title of Details

Name of Tenderer:

Date:

Signature :

Position:

Full name of signatory:

FORM C AUTHORITY OF SIGNATORY

Details of person responsible for tender process:

Name :

Contact number :

Office address :

Signatories for close corporations and companies shall confirm their authority by attaching to this form a **duly signed and dated original or certified copy on the Company Letterhead** of the relevant resolution of their members or their board of directors, as the case may be.

PRO-FORMA FOR COMPANIES AND CLOSE CORPORATIONS:

"By resolution of the board of directors passed on (date)

Mr

has been duly authorized to sign all documents in connection with the Tender for Contract Numberand any Contract which may arise there from on behalf of

(BLOCK CAPITALS)

SIGNED ON BEHALF OF THE COMPANY

IN HIS CAPACITY AS

DATE :

FULL NAMES OF SIGNATORY

AS WITNESSES: 1.

2.

T2.2.5

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

PRO-FORMA FOR JOINT VENTURES:

Certificate of Authority for Joint Ventures

We, the undersigned, are submitting this tender offer in Joint Venture and hereby authorise Mr/Ms, authorised signatory of the company, acting in the capacity of lead partner, to sign all documents in connection with the tender offer an any contract resulting from it on our behalf.

NAME OF FIRM	ADDRESS	DULY AUTHORISED SIGNATORY
Lead Partner: CIDB Reg No:		Signature: Name: Designation:
 CIDB Reg No:		Signature: Name: Designation:
 CIDB Reg No:		Signature: Name: Designation:
 CIDB Reg No:		Signature: Name: Designation:
 CIDB Reg No:		Signature: Name: Designation:

T2.2.6

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**ATTACH HERETO THE DULY SIGNED AND DATED
ORIGINAL OR CERTIFIED COPY OF AUTHORITY OF
SIGNATORY ON COMPANY LETTERHEAD**

T2.2.7

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

FORM D PREFERENCE SCHEDULE

Acceptable Tenders will be evaluated using a system that awards points on the basis of Tender price and the meeting of specific goals. **Failure on the part of a Tenderer to sign this form will be interpreted to mean that point preference is not being claimed.**

The acceptable Tenderer obtaining the highest number of points will be awarded the contract. For Tenders with a Tender amount equal to or below R 500 000 a maximum of 80 points is allocated for price and a maximum of 20 points for meeting specific goals, which may include HDI equity, SMME status, job creation and local (South African) content. For Tenders with a Tender amount above R 500 000 a maximum of 90 points is allocated for price and a maximum of 10 points for meeting specific goals.

The points for the meeting of specific goals may only be awarded to an enterprise which is a legal entity, registered as an income tax payer with the South African Revenue Services, and which is an independent and operating enterprise which performs commercially useful functions as set out below. Points can be denied where an enterprise subcontract more than 25% of the value of the contract (excluding SMME's and emerging contractors and materials) at the time of award, exclusive of all VAT, allowances for contingencies, escalation and provisional sums, to other entities.

DEFINITIONS

"Acceptable Tender" means any Tender which, in all respects, complies with the conditions of Tender and specifications as set out in the Tender document, including conditions as specified in the Preferential Procurement Policy Framework Act (Act 5 of 2000) and related legislation.

"Council" refers to the **MAKHADO LOCAL MUNICIPALITY**.

"Equity ownership" refers to the percentage ownership and control, exercised by individuals within an enterprise.

"HDI equity ownership" refers to the percentage of an enterprise, which is owned by individuals, or in the case of a company, the percentage shares that are owned by individuals meeting the requirements of the definition of a HDI.

"Historically disadvantaged individuals (HDIs)" means all South African citizens –

- (i) Who had no franchise in national elections prior to the introduction of the 1983 and 1993 constitutions (Referred to as Previously Disadvantaged Individuals (PDIs) in this document?)
- (ii) Women
- (iii) Disabled persons.

"SMME's" (small, medium and micro enterprises) refers to separate and distinct business entities, including co-operative enterprises and NGOs, managed by one owner or more, as defined in the National Small Business (Act 102 of 1996).

T2.2.8

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Contractor

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Witness 1

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Witness 2

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Employer

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Witness 1

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Witness 2

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

T2.2 Returnable Documents

Tenders are adjudicated in terms of BM Supply Chain Management Policy, and the following framework is provided as a guideline in this regard.

1. Technical adjudication and General Criteria

- Tenders will be adjudicated in terms of inter alia:
- Compliance with Tender conditions
- Technical specifications

If the Tender does not comply with the Tender conditions, the Tender may be rejected. If technical specifications are not met, the Tender may also be rejected.

With regard to the above, certain actions or errors are unacceptable, and warrants **REJECTION OF THE TENDER**, for example:

- Certified or scanned copies of Tax Clearance Certificates. (**Only valid original tax clearance certificates** must be attached to the Tender document).
- Pages to be completed, removed from the Tender document, and have therefore not been submitted.
- Failure to complete the schedule of quantities as required – only lump sums provided.
- Scratching out without initialing next to the amended rates or information.
- Writing over / painting out rates / the use of tippex or any erasable ink, eg. pencil.
- Failure to attend compulsory site inspections
- The Tender has not been properly signed by a party having the authority to do so, according to the **Form 2.2.2 – “Authority for Signatory”**
- No authority for signatory submitted.
- Particulars required in respect of the Tender have not been provided – non-compliance of Tender requirements and/or specifications.
- The Tenderer’s attempts to influence, or has in fact influenced the evaluation and/or awarding of the contract.
- The Tender has been submitted after the relevant closing date and time
- Each page of the Contract portion of this Tender document (Part C1 – C4) must be initialed by the authorised person in order for the document to constitute a proper Contract between the Employer (GGM) and the undersigned.
- If any municipal rates and taxes or municipal service charges owed by that Tendered or any of its directors to the municipality, or to any other municipality or municipal entity, are in arrears for more than three months.
- If any tendered who during the last five years has failed to perform satisfactorily on a previous contract with the municipality or any other organ of state after written notice was given to that tenderer that performance was unsatisfactory.

T2.2.9

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

2. Size of enterprise and current workload

Evaluation of the Tenderer's position in terms of:

- Previous and expected current annual turnover
- Current contractual obligations
- Capacity to execute the contract

3. Staffing profile

Evaluation of the Tenderer's position in terms of:

- Staff available for this contract being Tendered for
- Qualifications and experience of key staff to be utilised on this contract

4. Previous experience

Evaluation of the Tenderer's position in terms of his previous experience. Emphasis will be placed on the following:

- Experience in the relevant technical field
- Experience of contracts of similar size
- Some or all of the references will be contacted to obtain their input.

5. Financial ability to execute the contract:

Evaluation of the Tenderer's financial ability to execute the contract. Emphasis will be placed on the following:

- Professional indemnity
- Contact the Tender's bank manager to assess the Tenderer's financial ability to execute the contract and the Tendered hereby grants his consent for this purpose.

6. Good standing with SA Revenue Services

- Determine whether an original valid tax clearance certificate has been submitted.
- The Tendered must affix an original valid Tax Clearance Certificate to the second page of the Tender document.

If the Tender does **not** meet the requirements contained in the MLM Procurement Policy, and the mentioned framework, it will be rejected by the Council, and may not subsequently be made acceptable by correction or withdrawal of the non-conforming deviation or reservation.

T2.2.10

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

T2.2 Returnable Documents

7. Penalties

The MAKHADO LOCAL MUNICIPALITY will if upon investigation it is found that a preference in terms of the Act and these regulations has been obtained on a fraudulent basis, or any specified goals are not attained in the performance of the contract, on discretion of the Departmental Head, one or more of the following penalties will be imposed:

- Cancel the contract and recover all losses or damages incurred or sustained from the tenderer.
- Impose a financial penalty of twice the theoretical financial preference associated with the claim, which was made in the Tender.
- Restrict the contractor, its shareholders and directors from obtaining any business from the all Government Institution and would be registered under the National Treasurer Data base of Restricted Suppliers for a period of 5 years or more.

8. HDI Status

- Preference points stipulated in respect of a tender include preference points for equity ownership by HDIs.
- The equity ownership must be equated to the percentage of an enterprise or business owned by individuals or, in respect of a company, the percentage of a company's shares that are owned by individuals, who are actively involved in the management of the enterprise or business and exercise control over the enterprise, commensurate with their degree of ownership at the closing date of the tender.
- In the event that the percentage of ownership changes after the closing date of the tender, the tenderer must notify the Council accordingly and such tenderer will not be eligible for any preference points. Preference points may not be claimed in respect of individuals who are not actively involved in the management of an enterprise or business and who do not exercise control over an enterprise or business commensurate with their degree of ownership.

Claims made for equity ownership by an HDI must be considered according to the following criteria:

- Equity within private companies must be based on the percentage of equity ownership;
- A Consortium or Joint Venture may, based on the percentage of the contract value managed or executed by their HDI members, be entitled to equity ownership in respect of an HDI.
- The number of points scored for a Consortium or Joint Venture must be added to the number of points scored for achieving specified goals.
- A person awarded a contract as a result of preference for contracting with, or providing equity ownership to, an HDI, may not subcontract more than 25% of the value of the contract to a person who is not an HDI or does not qualify for such preference.

T2.2.11

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

T2.2 Returnable Documents

The following is applicable to calculate points for price in respect of tenders with a value between R200,000-01 (VAT incl) and R 500,000-00 (VAT incl)	
80	Potential points for price & functionality
10	Potential points for 50% or more equity owned by Historically Disadvantaged Individuals
5	Potential points for equity owned by women

I/we apply on behalf of my/our firm for a preference based on:

NON-JOINT VENTURES

	HDI		Locality	
	No franchise in national elections (black persons)	Women		
	African, Coloured, Indian			
Equity ownership percentage				
For office use only: Number of preference points awarded by employer				
	Total:			

JOINT VENTURES

Name	Position occupied in Enterprise	Identity number	Citizenship	HDI Status (Y/N)	Date of Ownership	% Owned by HDI's	% Owned by Women
TOTAL						a	b

NOTE

T2.2.12

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

T2.2 Returnable Documents

Where owners are themselves, a company or partnership, identity the ownership of the holding firm.

In the case of joint ventures equity ownership for each of the JV members are determined as above, and the combined HDI ownership is then calculated as follows: -

Joint venture members	a % Contribution to the JV	b % HDI ownership	c=a * b/100 % HDI contribution
Total HDI contribution			

	HDI		Locality
	No franchise in national elections (black persons)	Women	
	African, Coloured, Indian		
The percentage of the contract value managed or executed by their HDI members			
For office use only: Number of preference points awarded by employer			
	Total:		

5. Tender preferences claimed:

I / we apply on behalf of my / our firm for the following preference(s) and by claiming a preference confirm that all claims for equity ownership are in respect of individuals who are actively involved in the management of the enterprise or business:

T2.2.13

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Category of preference	Percentage of maximum tender evaluation points provided for in the Preferential Procurement Policy Framework Act (Act 5 of 2000)	Preference claimed for Category of Preference (Y=yes)
HDI (African, Coloured, Indian) equity ownership		
HDI (women) equity ownership		
Locality		

6. Declaration with respect to preferences claimed in respect of HDI, women and locality:

6.1 List all shareholders by name, identity number, citizenship, status, ownership, as relevant

[illegible]

6.1.2 How long has the entity been in existence?

6.1.3 Describe principal business activities:

.....

Contractor Witness 1 Witness 2 Employer Witness 1 Witness 2

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

T2.2 Returnable Documents

6.2 Declaration in respect of claim for preference in respect of disabled person

Complete the following with respect to claims for equity ownership relating to disabled persons:

Name	Describe what the permanent impairment is.	Outline how the permanent impairment impacts on ability to perform an activity in the manner or within the ranges considered normal for a human being?

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the tenderer confirms that he / she understands the conditions under which such preferences are granted and confirms that the tenderer satisfies the conditions pertaining to the granting of tender preferences.

Signature:

Name:

Duly authorised to sign on behalf of:

Telephone:

Fax:

Date:

T2.2.15

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE
T2.2 Returnable Documents

FORM E SCHEDULE OF PREVIOUS EXPERIENCE

Provide the following information on relevant previous experience (indicate specifically projects of similar or larger size and/or which is similar with regard to type of work. **This information is material to the award of the Contract.**

Description	Value (R) VAT excluded	Year(s) work executed	Reference		
			Name	Organisation	Tel no

Name of Tenderer:

Date:

Signature:

Full name of signatory:

T2.2.16

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

FORM F SCHEDULE OF CURRENT PROJECTS

Provide the following information on current projects. **This information is material to the award of the Contract.**

[illegible]

Name of Tenderer:

Date:

Signature:

Full name of signatory:

T2.2.17

Contractor

Witness 1

Page 10 of 10

Witness 2

Employer

11/11/2019

Witness 1

Witness 2

FORM G DECLARATION OF GOOD STANDING REGARDING TAX

SOUTH AFRICAN REVENUE SERVICES

Tender No:

Closing Date:

**DECLARATION OF GOOD STANDING REGARDING TAX
PARTICULARS**

1. Name of Taxpayer/Tenderer:

2. Trade Name:

3. Identification Number: (If applicable)

4. Company / Close Corporation registration number:

5. Income Tax reference number:

6. VAT registration number: (If applicable)

7. PAYE employer's registration number: (If applicable)

8. Monetary value of Bid:

DECLARATION

I, the undersigned, the above taxpayer/Bidder, hereby declare that my Income Tax, Pay-As-You-Earn (PAYE) and Value-Added-Tax (VAT) obligations of the above-mentioned taxpayer, which include the rendition of returns and payment of the relevant taxes:

(i) Have been satisfied in terms of the relevant Acts; or

(ii) That suitable arrangements have been made with the Receiver of Revenue..... to satisfy them. *

.....
SIGNATURE

.....
CAPACITY

.....
DATE

PLEASE NOTE: * The declaration (ii) cannot be made unless formal arrangements have been made with the Receiver of Revenue with regard to any outstanding revenue/outstanding tax returns.

T2.2.18

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

ATTACH ORIGINAL TAX CLEARANCE CERTIFICATE

THE CERTIFICATE MUST NOT BE OLDER THAN 12 MONTHS

T2.2.19

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE
T2.2 Returnable Documents

FORM I PROPOSED KEY PERSONNEL

Please list the personnel that you intend to appoint on this contract.			
DESCRIPTION	<u>Name</u> of Full time member	Staff to be appointed on this contract	
		No of Full Time employment	No of Part Time employment
Contract Manager			
Site Agent			
Clerk			
Foreman			
Material Technician			
Surveyor			
Operators			
Supervisor			
Labourers			
Other			
2.			
3.			
4.			
5.			

Name of Tenderer:

Date:

Signature:

Full name of signatory:

T2.2.20

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE
T2.2 Returnable Documents

FORM J SCHEDULE OF PLANT AND EQUIPMENT

1. TRENCH EXCAVATION	NUMBER OF UNITS OWNED BY CONTRACTOR	NUMBER OF UNITS ALLOCATED TO THIS CONTRACT	
		OWNED	HIRED
2. EARTH MOVING EQUIPMENT			
3. CONSTRUCTION EQUIPMENT			
4. TRANSPORT			

Name of Tenderer:

Date:

Signature:

Full name of signatory:

T2.2.21

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE
T2.2 Returnable Documents

FORM K SCHEDULE OF PROPOSED SUB-CONTRACTORS

NAME OF SUB-CONTRACTOR	FULL DESCRIPTION OF WORK TO BE PERFORMED BY SUB-CONTRACTOR

Name of Tenderer:

Date:

Signature:

Full name of signatory:

T2.2.22

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

FORM L FINANCIAL REFERENCES

FINANCIAL STATEMENTS

I/We agree, if required, to furnish an audited copy of the latest set of financial statements together with my/our Directors' and Auditors' report for consideration by the Client.

DETAILS OF TENDERERS BANKING INFORMATION

I/We hereby authorise the Client/Engineer to approach all or any of the following banks for the purposes of obtaining a financial reference:

BANK NAME:									
ACCOUNT NAME: (e.g. ABC Civil Construction cc)									
ACCOUNT TYPE: (e.g. Savings, Cheque etc)									
ACCOUNT NO:									
ADDRESS OF BANK:									
CONTACT PERSON:									
TEL. NO. OF BANK / CONTACT:									
How long has this account been in existence:	<table><tr><td>0-6 months</td><td></td></tr><tr><td>7-12 months</td><td></td></tr><tr><td>13-24 months</td><td></td></tr><tr><td>More than 24 months</td><td></td></tr></table> (Tick which is appropriate)	0-6 months		7-12 months		13-24 months		More than 24 months	
0-6 months									
7-12 months									
13-24 months									
More than 24 months									

Name of Tenderer:

Date:

Signature:

Full name of signatory:

T2.2.23

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Contractor

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Witness 1

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Witness 2

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Employer

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Witness 1

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Witness 2

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE
T2.3 List of Returnable Documents

MAKHADO LOCAL MUNICIPALITY



CONTRACT NO: 24 of 2025

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

<p>T2.3 MBD FORMS</p>

T2.3

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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2



MBD 1

INVITATION TO BID

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE MAKHADO LOCAL MUNICIPALITY

BID NUMBER: 24 of 2025 CLOSING DATE: **09 May 2025** CLOSING TIME: 12h00pm
DESCRIPTION: *UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE*

The successful bidder will be required to fill in and sign a written Contract Form (MBD 7).

BID DOCUMENTS MAY BE POSTED TO:

(TENDERS TO REACH MAKHADO LOCAL MUNICIPALITY BEFORE CLOSING)

DATE AND TIME

OR

DEPOSITED IN THE BID BOX SITUATED AT *(STREET ADDRESS)*

Civic Centre, 83 Krogh Street, Makhado 0920

Bidders should ensure that bids are delivered timeously to the correct address. If the bid is late, it will not be accepted for consideration.

The bid box is generally open 7h00 to 16h00 a day, 7 days a week.

ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS – (NOT TO BE RE-TYPED)

THIS BID IS SUBJECT TO THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT

THIS BID WILL BE EVALUATED AND ADJUDICATED ACCORDING TO THE FOLLOWING CRITERIA:

1. Relevant specifications
2. Value for money
3. Capability to execute the contract
4. PPPFA & associated regulations

..... *[insert any other criteria]*

NB: NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE (see definition on MBD 4 attached)

**THE FOLLOWING PARTICULARS MUST BE FURNISHED
(FAILURE TO DO SO MAY RESULT IN YOUR BID BEING DISQUALIFIED)**

NAME OF BIDDER

POSTAL ADDRESS

STREET ADDRESS

TELEPHONE NUMBER CODE.....NUMBER.....

CELLPHONE NUMBER

FACSIMILE NUMBER CODE NUMBER.....

VAT REGISTRATION NUMBER

HAS AN ORIGINAL TAX CLEARANCE CERTIFICATE BEEN ATTACHED (MBD 2)? YES/NO

ARE YOU THE ACCREDITED REPRESENTATIVE?
IN SOUTH AFRICA FOR THE GOODS/SERVICES OFFERED BY YOU? YES/NO
(IF YES ENCLOSE PROOF)

SIGNATURE OF BIDDER

DATE

CAPACITY UNDER WHICH THIS BID IS SIGNED

TOTAL BID PRICE..... TOTAL NUMBER OF ITEMS OFFERED

ANY ENQUIRIES REGARDING THE BIDDING PROCEDURE MAY BE DIRECTED TO:

Municipality / Municipal Entity: Makhado Local Municipality
Department: Technical

Contact Person: Thulare L

Tel: 015 519 3109

Fax: 015 516 1195

ANY REQUIRIES REGARDING SUPPLY CHAIN INFORMATION MAY BE DIRECTED TO:

Contact Person: Ms P Mudau

Tel: 015 519 3044/3024

TAX CLEARANCE REQUIREMENTS

IT IS A CONDITION OF BIDDING THAT -

1. The taxes of the successful bidder must be in order, or that satisfactory arrangements have been made with the Receiver of Revenue to meet his / her tax obligations.
2. The attached form "Application for Tax Clearance Certificate (in respect of bidders)", must be completed in all respects and submitted to the Receiver of Revenue where the bidder is registered for tax purposes. The Receiver of Revenue will then furnish the bidder with a Tax Clearance Certificate that will be valid for a period of twelve (12) months from date of issue. This Tax Clearance Certificate must be submitted in the original together with the bid. Failure to submit the original and valid Tax Clearance Certificate may invalidate the bid.
3. In bids where Consortia / Joint Ventures / Sub-contractors are involved each party must submit a separate Tax Clearance Certificate. Copies of the Application for Tax Clearance Certificates are available at any Receiver's Office.

APPLICATION FOR TAX CLEARANCE CERTIFICATE (IN RESPECT OF BIDDERS)

1. Name of taxpayer / bidder:

2. Trade name:

3. Identification number:

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4. Company / Close Corporation registration number:

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

5. Income tax reference number:

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

6. VAT registration number (if applicable):

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

7. PAYE employer's registration number (if applicable):

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Signature of contact person requiring Tax Clearance Certificate:

Name:

Telephone number: Code..... Number:

Address:

.....

.....

DATE: 20____ / ____ / ____

PLEASE NOTE THAT THE COMMISSIONER FOR THE SOUTH AFRICAN REVENUE SERVICE (SARS) WILL NOT EXERCISE HIS DISCRETIONARY POWERS IN FAVOUR OF ANY PERSON WITH REGARD TO ANY INTEREST, PENALTIES AND / OR ADDITIONAL TAX LEVIABLE DUE TO THE LATE- OR UNDERPAYMENT OF TAXES, DUTIES OR LEVIES OR THE RENDITION RETURNS BY ANY PERSON AS A RESULT OF ANY SYSTEM NOT BEING YEAR 2000 COMPLIANT.

**PRICING SCHEDULE – NON-FIRM PRICES
(PURCHASES)**

NOTE: PRICE ADJUSTMENTS WILL BE ALLOWED AT THE PERIODS AND TIMES SPECIFIED IN THE BIDDING DOCUMENTS.

IN CASES WHERE DIFFERENT DELIVERY POINTS INFLUENCE THE PRICING, A SEPARATE PRICING SCHEDULE MUST BE SUBMITTED FOR EACH DELIVERY POINT

Name of Bidder.....	Bid
number.....	
Closing Time	Closing Date

OFFER TO BE VALID FOR.....DAYS FROM THE CLOSING DATE OF BID

ITEM NO.	QUANTITY	DESCRIPTION	BID PRICE IN RSA CURRENCY (INCLUDING VAT)
-------------	----------	-------------	--

- Required by:

- At:

- Brand and model

-

- Country of origin.....

- Does offer comply with specification? *YES/NO

- If not to specification, indicate deviation(s)

- Period required for delivery

- Delivery:

*Firm/not firm

*Delete if not applicable

PRICE ADJUSTMENTS

A NON-FIRM PRICES SUBJECT TO ESCALATION

1. IN CASES OF CONTRACTS, NON FIRM PRICES WILL BE ADJUSTED (LOADED) WITH THE ASSESSED CONTRACT PRICE ADJUSTMENTS IMPLICIT IN NON FIRM PRICES WHEN CALCULATING THE COMPARATIVE PRICES

2. IN THIS CATEGORY PRICE ESCALATIONS WILL ONLY BE CONSIDERED IN TERMS OF THE FOLLOWING FORMULA:

$$Pa = (1 - V)Pt \left(D1 \frac{R1t}{R1o} + D2 \frac{R2t}{R2o} + D3 \frac{R3t}{R3o} + D4 \frac{D4t}{D4o} \right) + VPt$$

Where:

Pa	=	The new escalated price to be calculated.
(1-V) Pt	=	85% of the original bid price. Note that Pt must always be the original bid price and not an escalated price.
D1, D2..	=	Each factor of the bid price eg. labour, transport, clothing, footwear, etc. The total of the various factors D1,D2...etc. must add up to 100%.
R1t, R2t.....	=	Index figure obtained from new index (depends on the number of factors used).
R1o, R2o	=	Index figure at time of bidding.
VPt	=	15% of the original bid price. This portion of the bid price remains firm i.e. it is not subject to any price escalations.

3. The following index/indices must be used to calculate your bid price:

Index..... Dated..... Index..... Dated..... Index..... Dated.....

Index..... Dated..... Index..... Dated..... Index..... Dated.....

4. FURNISH A BREAKDOWN OF YOUR PRICE IN TERMS OF ABOVE-MENTIONED FORMULA. THE TOTAL OF THE VARIOUS FACTORS MUST ADD UP TO 100%.

FACTOR (D1, D2 etc. eg. Labour, transport etc.)	PERCENTAGE OF BID PRICE

B PRICES SUBJECT TO RATE OF EXCHANGE VARIATIONS

1. Please furnish full particulars of your financial institution, state the currencies used in the conversion of the prices of the items to South African currency, which portion of the price is subject to rate of exchange variations and the amounts remitted abroad.

PARTICULARS OF FINANCIAL INSTITUTION	ITEM NO	PRICE	CURRENCY	RATE	PORTION OF PRICE SUBJECT TO ROE	AMOUNT IN FOREIGN CURRENCY REMITTED ABROAD
				ZAR=		
				ZAR=		
				ZAR=		
				ZAR=		
				ZAR=		
				ZAR=		

2. Adjustments for rate of exchange variations during the contract period will be calculated by using the average monthly exchange rates as issued by your commercial bank for the periods indicated hereunder: (Proof from bank required)

AVERAGE MONTHLY EXCHANGE RATES FOR THE PERIOD:	DATE DOCUMENTATION MUST BE SUBMITTED TO THIS OFFICE	DATE FROM WHICH NEW CALCULATED PRICES WILL BECOME EFFECTIVE	DATE UNTIL WHICH NEW CALCULATED PRICE WILL BE EFFECTIVE

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 favouritism, 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 declare 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, hareholder²):.....

3.4 Company Registration Number:

3.5 Tax Reference Number:.....

3.6 VAT Registration 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 / NO**

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**

3.9.1 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 the evaluation and or adjudication of this bid? **YES / NO**

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 directors 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:

.....
.....

4. Full details of directors / trustees / members / shareholders.

Full Name	Identity Number	State Employee Number

.....
Signature

.....
Date

.....
Capacity

.....
Name of Bidder

DECLARATION FOR PROCUREMENT ABOVE R10 MILLION (VAT INCLUDED)

For all procurement expected to exceed R10 million (VAT included), bidders must complete the following questionnaire:

- 1 Are you by law required to prepare annual financial statements for auditing? **YES / NO**
- 1.1 If yes, submit audited annual financial statements for the past three years or since the date of establishment if established during the past three years.
-
-
- YES / NO**
- 2 Do you have any outstanding undisputed commitments for municipal services towards a municipality or any other service provider in respect of which payment is overdue for more than 30 days?
- 2.1 If no, this serves to certify that the bidder has no undisputed commitments for municipal services towards a municipality or other service provider in respect of which payment is overdue for more than 30 days.
- 2.2 If yes, provide particulars.
-
-
-
-

- 3 Has any contract been awarded to you by an organ of state **YES / NO** during the past five years, including particulars of any material non-compliance or dispute concerning the execution of such contract?

3.1 If yes, furnish particulars

.....

.....

4. Will any portion of goods or services be sourced from outside **YES / NO** the Republic, and, if so, what portion and whether any portion of payment from the municipality / municipal entity is expected to be transferred out of the Republic?

4.1 If yes, furnish particulars

.....

.....

CERTIFICATION

I, **THE** **UNDERSIGNED** **(NAME)**

.....

CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM IS CORRECT.

I ACCEPT THAT THE STATE MAY ACT AGAINST ME SHOULD THIS DECLARATION PROVE TO BE

FALSE.

.....
Signature

.....
Date

.....
..... Position 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

(delete whichever is not applicable for this tender).

- a) The applicable preference point system for this tender is the 90/10 preference point system.
- b) The applicable preference point system for this tender is the 80/20 preference point system.
- c) Either the 90/10 or 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

3.1. 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

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

Where

P_s = Points scored for price of tender under consideration

P_t = Price of tender under consideration

P_{min} = Price of lowest acceptable tender

3.2. 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:

$$\begin{array}{ccc} 80/20 & \text{or} & 90/10 \\ P_s = 80 \left(1 + \frac{P_t - P_{max}}{P_{max}} \right) & \text{or} & P_s = 90 \left(1 + \frac{P_t - P_{max}}{P_{max}} \right) \end{array}$$

Where

- P_s = Points scored for price of tender under consideration
 P_t = Price of tender under consideration
 P_{max} = 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 (90/10 system) (To be completed by the organ of state)	Number of points allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (90/10 system) (To be completed by the tenderer)	Number of points claimed (80/20 system) (To be completed by the tenderer)
100% Black ownership (attach CSD detail report)	N/A	10	N/A	
Woman Ownership (attach CSD detail report or Certified copy of Smart ID)	N/A	05	N/A	
Disability (Attach Disability letter from a Doctor)	N/A	05	N/A	

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:

.....

.....

.....

CONTRACT FORM - RENDERING OF SERVICES

THIS FORM MUST BE FILLED IN DUPLICATE BY BOTH THE SERVICE PROVIDER (PART 1) AND THE PURCHASER (PART 2). BOTH FORMS MUST BE SIGNED IN THE ORIGINAL SO THAT THE SERVICE PROVIDER AND THE PURCHASER WOULD BE IN POSSESSION OF ORIGINALLY SIGNED CONTRACTS FOR THEIR RESPECTIVE RECORDS.

PART 1 (TO BE FILLED IN BY THE SERVICE PROVIDER)

1. I hereby undertake to render services described in the attached bidding documents to **Makhado Municipality** in accordance with the requirements and task directives / proposals specifications stipulated bid no. . at the price/s quoted. My offer/s remain binding upon me and open for acceptance by the Purchaser during the validity period indicated and calculated from the closing date of the bid.
2. The following documents shall be deemed to form and be read and construed as part of this agreement:
 - (i) Bidding documents, viz
 - Invitation to bid;
 - Tax clearance certificate;
 - Pricing schedule(s);
 - Filled in task directive/proposal;
 - Preference claims for Broad Based Black Economic Empowerment Status Level of Contribution in terms of the Preferential Procurement Regulations 2011;
 - Declaration of interest;
 - Declaration of Bidder's past SCM practices;
 - Certificate of Independent Bid Determination;
 - Special Conditions of Contract;
 - (ii) General Conditions of Contract; and
 - (iii) Other (specify)
3. I confirm that I have satisfied myself as to the correctness and validity of my bid; that the price(s) and rate(s) quoted cover all the services specified in the bidding documents; that the price(s) and rate(s) cover all my obligations and I accept that any mistakes regarding price(s) and rate(s) and calculations will be at my own risk.
4. I accept full responsibility for the proper execution and fulfilment of all obligations and conditions devolving on me under this agreement as the principal liable for the due fulfillment of this contract.
5. I declare that I have no participation in any collusive practices with any bidder or any other person regarding this or any other bid.
6. I confirm that I am duly authorised to sign this contract.

NAME (PRINT)

CAPACITY

SIGNATURE

NAME OF FIRM

DATE

WITNESSES

1

2

DATE:

CONTRACT FORM - RENDERING OF SERVICES

PART 2 (TO BE FILLED IN BY THE PURCHASER)

1. I **KENT MBAVHALELO NEMANAME** in my capacity as **MUNICIPAL MANAGER** accept your bid under reference number..... dated for the rendering of services indicated hereunder and/or further specified in the annexure(s).
2. An official order indicating service delivery instructions is forthcoming.
3. I undertake to make payment for the services rendered in accordance with the terms and conditions of the contract, within 30 (thirty) days after receipt of an invoice.

DESCRIPTION OF SERVICE	PRICE (ALL APPLICABLE TAXES INCLUDED)	COMPLETION DATE	B-BBEE STATUS LEVEL OF CONTRIBUTION	MINIMUM THRESHOLD FOR LOCAL PRODUCTION AND CONTENT (if applicable)
			N/A	

4. I confirm that I am duly authorised to sign this contract.

SIGNED AT **MAKHADO** ON

NAME (PRINT) **MR KENT MBAVHALELO NEMANAME**

SIGNATURE

OFFICIAL STAMP

WITNESSES

1

2

DATE:

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	<p>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?</p> <p>(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).</p> <p>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.</p>	<p>Yes</p> <input type="checkbox"/>	<p>No</p> <input type="checkbox"/>
4.1.1	If so, furnish particulars:		
4.2	<p>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)?</p> <p>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.</p>	<p>Yes</p> <input type="checkbox"/>	<p>No</p> <input type="checkbox"/>
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 <input type="checkbox"/>	No <input type="checkbox"/>
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 <input type="checkbox"/>	No <input type="checkbox"/>
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 <input type="checkbox"/>	No <input type="checkbox"/>
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

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 *per se* prohibition meaning that it cannot be justified under any grounds.

- 3 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. take all reasonable steps to prevent such abuse;
 - b. reject 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.

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, 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.
8. 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.
9. 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

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.**

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.

.....
Signature

.....
Date

.....
Position

.....
Name of Bidder

MAKHADO LOCAL MUNICIPALITY



CONTRACT NO: 24 of 2025

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

C. THE CONTRACT

Part C1: Agreements and Contract Data

- C1.1 Form of Offer and Acceptance
- C1.2 Contract Data
- C1.3 Form of Guarantee
- C1.4 OHS

Part C2: Pricing Data

- C2.1 Pricing Instructions
- C2.2 Bills of quantities

Part C3: Scope of Work

- C3 Scope of Work

Part C4: Site Information

- C4 Site Information

Part C5 : Additional Documentation

- C5 Additional Documentation

C1

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE
C1 Agreements and Contract Data

MAKHADO LOCAL MUNICIPALITY



CONTRACT NO: 24 of 2025

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

C1 AGREEMENTS AND CONTRACT DATA

- C1.1 Form of Offer and Acceptance
- C1.2 Contract Data
- C1.3 Form of Guarantee
- C1.4 Agreement in Terms of the Occupational Health and Safety Act, 1993 (ACT NO 85 OF 1993)

C1.1

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE
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:

.....

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 Tender Schedules, and by submitting this Offer has accepted the Conditions of Tender.

By the representative of the Tenderer, deemed to be duly authorised, 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

.....

..... Rand (in words); R (in figures).

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(s) _____

Name(s) _____

Capacity _____

For the tenderer _____
(Name and address of organisation)

Name & Signature
Of Witness _____

Name

Date

C1.2

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

C1 Agreements and Contract Data

ACCEPTANCE

By signing this part of this 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 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 Agreements and Contract Data (which includes this Agreement)
- Part 2 Pricing Data
- Part 3 Scope of Work
- Part 4 Site information
- Part 5 Additional Documentation

and drawings and documents or parts thereof, which may be incorporated by reference into Parts 1 to 4 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 authorised representative(s) of both parties.

The Tenderer shall within two weeks 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 bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the Conditions of Contract identified in the Contract Data at or just after the date 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 one fully completed original copy of this document, including the Schedule of Deviations (if any). Unless the Tenderer (now Contractor) within five 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(s)		
Name(s)		
Capacity		
For the tenderer		
	(Name and address of organisation)	
Name & Signature Of Witness		
	Name	Date

C1.3

<i>Contractor</i>	<i>Witness 1</i>	<i>Witness 2</i>	<i>Employer</i>	<i>Witness 1</i>	<i>Witness 2</i>

SCHEDULE OF DEVIATIONS

Notes:

1. 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 Conditions of Tender.
2. A Tenderer's covering letter shall not be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid become the subject of agreements reached during the process of Offer and Acceptance, the outcome of such agreement shall be recorded here.
3. 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.
4. 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

C1.4

<div></div> <div>Contractor</div>	<div></div> <div>Witness 1</div>	<div></div> <div>Witness 2</div>	<div></div> <div>Employer</div>	<div></div> <div>Witness 1</div>	<div></div> <div>Witness 2</div>
-----------------------------------	----------------------------------	----------------------------------	---------------------------------	----------------------------------	----------------------------------

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE
C1 Agreements and Contract Data

between the parties arising from this Agreement.

FOR THE TENDERER:

Signatures (s) _____

Name(s) _____

Capacity _____

(Name and address of Organisation)

Name & Signature
Of Witness _____ Date _____

FOR THE EMPLOYER

Signatures (s) _____

Name(s) _____

Capacity _____

(Name and address of Organisation)

Name & Signature
Of Witness _____ Date _____

C1.5

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C1.2 CONTRACT DATA

PART 1: DATA PROVIDED BY THE EMPLOYER

CONDITIONS OF CONTRACT

This Contract will be based on the "General Conditions of Contract for Construction Works General Conditions of Contract 2015 (GCC 2015, Third Edition).

Documents can be ordered from SAICE who can be contacted through their website www.saice.org.za. Physical address: SAICE House, Block 9, Thorn hill Office Park, Bekker Street, Midrand, Johannesburg. Telephone number: (011) 805 5947.

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

SPECIAL CONDITIONS OF CONTRACT

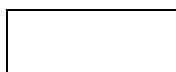
These Special Conditions of Contract (SCC) form an integral part of the Contract. The Special Conditions of Contract shall amplify, modify or supersede, as the case may be, the General Conditions of Contract 2015 to the extent specified below, and shall take precedence and shall govern.

The clauses of the Special Conditions hereafter are numbered "SCC" followed in each case by the number of the applicable clause or subclause in the General Conditions of Contract 2015, 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.

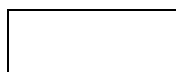
PART 1: Data provided by the Employer

Clause	Data
1.1.14	The Name of the Employer is MAKHADO MUNICIPALITY
1.2.2	The address of the Employer is: Civic Centre 83 Krogh Street Makhado 0920 Telephone: 015 519 3000 Fax: 015 516 1195
1.1.15	The name of the Engineer is Morula Consulting Engineers cc
1.2.2	The address of the Engineer is:

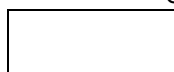
C1.6



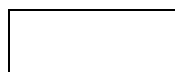
Contractor



Witness 1



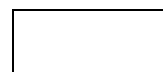
Witness 2



Employer



Witness 1



Witness 2

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

C1 Agreements and Contract Data

	54A Dorp Street Morula Place Polokwane 0699 Telephone : 072 791 9934 Facsimile : 086 558 6446
	The Employer's Agent is required in terms of his appointment with the Employer to obtain the following specific approvals from the Employer: 1. Approval of extension of time 2. Approval of additional costs 3. Approval of variation orders 4. Approval for the utilization of any contingencies
	The health and safety Plan shall be delivered and approved by the Employer before the site handover/commencement date.
1.6 38	The special non-working days are the official builder's holiday plus all statutory public holidays. The year end break commences on the second Friday of December and the first Monday of the subsequent year.
5.3.1	The documents required before commencing with the works are: 1. Health and Safety File including Safety plan 2. Initial Programme 3. Security/Guarantee 4. Insurance 5. Cash Flow 6. Other Documents as specified in the contract
7	The time to deliver the Deed of Guarantee is 14 days.
7	The Form of Guarantee is to contain the wording of the pro-forma document included in the General Conditions of Contract (Pro-forma included in section C1.3 to this document).
7	The liability of the guarantee shall be 10 %.
10	The Contractor shall commence executing the Works within 14 days from the Commencement Date.
12.2	The Contractor shall deliver his programme of work within 14 days.
35.1.1.2.2	The value of the materials supplied by the Employer to be included in the insurance sum is nil.
35.1.1.2.3	The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is nil.
	Professional fees not included in the contract price is nil
35.1.3	The limit of indemnity for liability insurance required should not be less than the contract amount
	the following additional and valid insurances are required: CAR & SASRIA
42.1	The Works shall be completed within 8 months including special non-working days
43.1	The penalty for failing to complete the works is R 2500.00 per calendar day including special non-working days .
49.1.5	The percentage advance on materials not yet built into the Permanent Works is 80 %.
49.3	The percentage retention on the amounts due to the Contractor is 10 %.
49.3	The limit of retention money is 10 % of the contract value.
53.1	The Defects Liability Period is 12 months.

C1.7

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

C1 Agreements and Contract Data

<p>4.5.2</p> <p>49.6.1 to 4.9.6.3</p> <p>55.1.8</p>	<p>The variations to the General Conditions of Contract</p> <p>Replace the term “Safety” with “Occupational Health and Safety”</p> <p>Replace the term “Bank” with “ Bank of Insurance Company”</p> <p>Replace sub-clause with” The Contractor or anyone on his behalf or in his employ would pay, offer or offer as payment to any person in the employ of the Employer, or in the employ of the Engineer, a gratuity or reward or commission.</p>
<p>42.3.2</p>	<p>The additional clauses to the General Conditions of Contract are:</p> <p>Extensions of time in respect of clause 42 in respect of abnormal rainfall shall be calculated using the following formula for each calendar month or part thereof:</p> $V = (Nw - Nn) + \frac{(Rw - Rn)}{X}$ <p>Where:</p> <p>V = Extension of time in calendar days in respect of the calendar month under consideration.</p> <p>Nw = Actual number of days during the calendar month on which a rainfall of 10 mm or more has been recorded.</p> <p>Nn = Average number of days in the relevant calendar month , as derived from existing rainfall records, on which a rainfall of 20mm or more has been recorded for the calendar month.</p> <p>Rw = Actual average rainfall in mm recorded for the calendar month under consideration.</p> <p>Rn = Average rainfall in mm for the calendar month as derived from existing rainfall records as stated in the Site Information.</p> <p>For purposes of the Contract Nn, Rn, X and Y shall have those values assigned to them in the South African Weather Service’s rainfall records of the nearest station to the site.</p> <p>If V is negative and its absolute value exceeds Nn, then V shall be taken as equal to minus Nn.</p> <p>The total extension of time shall be the algebraic sum of all monthly totals for the period under consideration, but if the total is negative the time for completion shall not be reduced due to subnormal rainfall. Extensions of time for part of a month shall be calculated using pro rata values of Nn and Rn.</p> <p>This formula does not take account flood damage which could cause further or concurrent delays and will be treated separately as far as extension of time is concerned.</p> <p>The factor (Nw – Nn) shall be considered to represent a fair allowance for variations from the</p>

C1.8

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

C1 Agreements and Contract Data

	<p>average in the number of days during which rainfall exceeds 10 mm. The factor (Rw-Rn) shall be considered to represent a fair allowance for variations from the average in the number of days during which the rainfall did not exceed 10 mm but wet conditions prevented or disrupted work.</p> <p>For the purpose of applying the formula, accurate rain gauging shall be taken at a suitable point on the Site and the Contractor shall at his own expense, take all necessary precautions to ensure that rain gauges cannot be interfered with by unauthorized persons.</p>
42	<p>A delay caused by inclement weather conditions will be regarded as a delay only if, in the opinion of the Engineer, all progress on an item or items of work on the critical path of the working programme of the contractor has been brought to a halt. Delays on working days only (based on a five-day working week) will be taken into account for the extension of time, but the Contractor shall make provision in his programme of work for an expected delay of "n" working days caused by normal rainy weather, for which he will not receive any extension of time, where "n" equals days. Extension of time during working days will be granted to the degree to which actual delays, as defined above, exceed the number of "n" workings days.</p>
5.14	<p>The contractor agrees to complete all remaining tasks and deliverables within 28 days following the issuance of the practical completion certificate. This includes addressing any outstanding issues, finalizing all work, and ensuring that all contractual obligations are met to the satisfaction of the Employer. Failure to meet this deadline will result in the practical completion certificate being revoked and penalties as stipulated in the contract will be applied accordingly.</p>

PART 1: DATA PROVIDED BY THE CONTRACTOR

The Contractor is advised to read the *General Conditions of Contract for Construction Works 2015*)^{3rd Edition}, published by the South African Institution of Civil Engineering, in order to understand the implications of this Data which is required to be completed.

Each item of data given below is cross-referenced to the clause of Conditions of Contract to which it mainly applies.

Clause	Data
1.8	The Contractor is:
1.2.2	<p>Name:</p> <p>The Address of the Contractor is:</p> <p>Address (physical):</p> <p>.....</p> <p>Address (postal):</p> <p>Telephone: Facsimile:</p>

C1.9

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

C1 Agreements and Contract Data

	E-mail:
37.2.2.3	The percentage allowance to cover overhead charges is 14%.
42.1	The Works are to be completed within 8 month.

C1.3 FORM OF GUARANTEE

FORM OF GUARANTEE

CONTRACT NO: 24 of 2025

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

WHEREAS

at
(Hereinafter referred to as "the Employer")

entered into, on the Day of2019, at

a Contract with

at
(Hereinafter called "The Contractor")

for the construction of

AND WHEREAS it is provided by such Contract that the Contractor shall provide the Employer with security by way of surety ship 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 security;

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

C1.10

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

C1 Agreements and Contract Data

1. The Employer shall, without reference and/or notice to us, have complete liberty of action to act in any manner authorised and/or contemplated by the terms of the said contract, and/or to agree to any modifications, variations, alterations, directions or extensions of the Due 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 Due Completion Date which the Employer may make, give, concede or agree to under the said Contract.
2. The Employer shall be entitled, without reference to us, to release any securities held by it, and to give time to or compound or make any other arrangement with the Contractor.
3. 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.
4. Our total liability hereunder shall not exceed the sum of (R.....).
5. We hereby choose domicilium citandi et executandi for all purposes arising hereof at

.....

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

this..... day of

As witnesses:

1. Signature

2. Duly authorised to
sign on behalf of

Address

.....

.....

C1.11

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C1.4 AGREEMENT IN TERMS OF THE OCUPATIONAL HEALTH AND SAFETY ACT, 1993 (ACT NO 85 OF 1993)

C1.4 AGREEMENT IN TERMS OF THE OCUPATIONAL HEALTH AND SAFETY ACT, 1993 (ACT NO 85 OF 1993)

THIS AGREEMENT made at

on this the _____ day of _____ in the year _____

between **MAKHADO LOCAL MUNICIPALITY** (hereinafter called "**the Employer**") of the one part, herein represented by

in his capacity as

and

(hereinafter called "**the Mandatory**") of the other part, herein represented by

in his capacity as

WHEREAS the Employer is desirous that certain works be constructed, viz **CONTRACT NO: 24 of 2025 : UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE** and has accepted a Bid by the Mandatory for the construction, completion and maintenance of such Works and whereas the Employer and the Mandatory have agreed to certain arrangements and procedures to be followed in order to ensure compliance by the Mandatory with the provisions of the Occupational Health and Safety Act, 1993 (Act 85 of 1993);

NOW THEREFORE THIS AGREEMENT WITNESSETH AS FOLLOWS:

- 1 The Mandatory shall execute the work in accordance with the Contract Documents pertaining to this Contract.

C1.12

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

C1 Agreements and Contract Data

- 2 This Agreement shall hold well from its Commencement Date, which shall be the date of a written notice from the Employer or Engineer requiring him to commence the execution of the Works, to either
 - (a) the date of the Final Approval Certificate issued in terms of Clause 5.16.1 of the General Conditions of Contract (hereinafter referred to as "the GCC"),
 - (b) the date of termination of the Contract in terms of Clauses 9.1 of the GCC.
- 3 The Mandatory declares himself to be conversant with the following:
 - (a) All the requirements, regulations and standards of the Occupational Health and Safety Act (Act 85 of 1993), hereinafter referred to as "The Act", together with its amendments and with special reference to the following Sections of The Act:
 - (i) Section 8 : General duties of employers to their employees;
 - (ii) Section 9 : General duties of employers and self-employed persons to persons other than employees;
 - (iii) Section 37 : Acts or omissions by employees or mandatories, and
 - (iv) Subsection 37(2) relating to the purpose and meaning of this Agreement.
 - (b) The procedures and safety rules of the Employer as pertaining to the Mandatory and to all his subcontractors.
- 4 In addition to the requirements of Clause 8 of the GCC and all relevant requirements of the above-mentioned Volume 3, the Mandatory agrees to execute all the Works forming part of this Contract and to operate and utilise all machinery, plant and equipment in accordance with the Act.
- 5 The Mandatory is responsible for the compliance with the Act by all his subcontractors, whether or not selected and/or approved by the Employer.
- 6 **The Mandatory warrants that all his and his subcontractors' workmen are covered in terms of the Compensation for Occupational Injuries and Diseases Act, 1993 which cover shall remain in force whilst any such workmen are present on site. A letter of good standing from the Compensation Commissioner to this effect must be produced to the Employer upon signature of the agreement.**
- 7 The Mandatory undertakes to ensure that he and/or subcontractors and/or their respective employers will at all times comply with the following conditions:
 - (a) The Mandatory shall assume the responsibility in terms of Section 16.1 of the Occupational Health and Safety Act. The Mandatory shall not delegate any duty in terms of Section 16.2 of this Act without the prior written approval of the Employer. If the Mandatory obtains such approval and delegates any duty in terms of section 16.2 a copy of such written delegation shall immediately be forwarded to the Employer.
 - (b) All incidents referred to in the Occupational Health and Safety Act shall be reported by the Mandatory to the Department of Labour as well as to the Employer. The Employer will further be provided with copies of all written documentation relating to any incident.

C1.13

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

C1 Agreements and Contract Data

(c) The Employer hereby obtains an interest in the issue of any formal inquiry conducted in terms of section 32 of the Occupational Health and Safety Act into any incident involving the Mandatory and/or his employees and/or his subcontractors.

In witness thereof the parties hereto have set their signatures hereon in the presence of the subscribing witnesses:

SIGNED FOR AND ON BEHALF OF THE EMPLOYER:

WITNESS 1

NAME 1
(IN CAPITALS)

SIGNED FOR AND ON BEHALF OF THE MANDATORY:

WITNESS 1

NAME 1
(IN CAPITALS)

C1.14

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

C1 Agreements and Contract Data

**CERTIFICATE OF AUTHORITY FOR SIGNATORY TO AGREEMENT IN TERMS OF
OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 (ACT NO 85 OF 1993)**

The signatory for the company that is the Contractor in terms of the above-mentioned Contract and the Mandatory in terms of the above-mentioned Act shall confirm his or her authority thereto by attaching to this page a duly signed and dated copy of the relevant resolution of the Board of Directors.

An example is given below:

"By resolution of the Board of Directors passed at a meeting held on _____
20.....,

Mr/Ms _____ whose
signature

appears below, has been duly authorised to sign the AGREEMENT in terms of THE
OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 (ACT 85 of 1993) on behalf of

SIGNED ON BEHALF OF THE COMPANY :

IN HIS/HER CAPACITY AS :

DATE : _____

SIGNATURE OF SIGNATORY :

WITNESS 1

NAME 1
(IN CAPITALS)

C1.15

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

MAKHADO LOCAL MUNICIPALITY



CONTRACT NO: 24 of 2025

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

C2 PRICING DATA

- C2.1 Pricing Instructions
- C2.2 Bill of Quantities

C2.1

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

MAKHADO LOCAL MUNICIPALITY



CONTRACT NO: 24 of 2025

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

C2.1 PRICING INSTRUCTIONS

1. The Tender Data the Scope of Work and the Drawings are to be read in conjunction with the Schedule of Quantities.
2.
 - a. The Schedule comprises items covering the Contractor's profit and costs of general liabilities and of the construction of temporary and permanent Works.
 - b. Although the Tenderer is at liberty to insert a rate of his own choosing for each item in the Schedule, his attention is drawn to the fact that the Contractor has the right, under various circumstances, to payment for additional works carried out and that the Engineer is obliged to base his assessment of the payment to be paid for such additional work on the rates inserted in the Schedule by the Contractor.
 - c. Clause 8 of each Standardized Specification and the measurement and payment clause of each Particular Specification, read together with the relevant clause of the Project Specification, set out what ancillary or associated activities are included in the rate for the operations specified.
3. Descriptions in the Schedule of Quantities are abbreviated. The schedule has been drawn up generally in accordance with the latest issue of "Civil Engineering Quantities". Should any requirement of the measurement and payment clause of the applicable Standardized Specification, or the Project Specification, or the Particular Specification(s) conflict with the terms of the Schedule or, when relevant "Civil Engineering Quantities", the requirement of the Standardized, Project or Particular Specification, as applicable, shall prevail.
4. Unless otherwise stated, items are measured net in accordance with the Drawings, and no allowance has been made for waste.
5. The prices and rates to be inserted in the Schedule of Quantities are to be the full inclusive prices to the Employer for the work described under the several items. The prices and rates shall be exclusive of Value Added Tax. Such prices shall cover all costs and expenses that may be required in and for the construction of the work described, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the documents on which the tender is based.
6. A price or rate is to be entered, in **BLACK INK**, against each item in the Schedule of Quantities.
7. In the event of the Tenderer failing to price any item it will be held that the Tenderer has made adequate allowance under other items for all labour, material and costs required for the execution, not only of the quantum of work covered by the unpriced item but also for any increase in the said quantum which may have to be undertaken during the course of the Contract.

C2.1.1

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Contractor

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Witness 1

--

Witness 2

--

Employer

--

Witness 1

--

Witness 2

MAKHADO LOCAL MUNICIPALITY
CONTRACT NO.: 24 of 2025
UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

SECTION 1200

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
1200	<u>GENERAL REQUIREMENTS AND PROVISIONS</u>				
	(i) Payment of Community Liason Officer (R 6000.00 per month)	Prov Sum	1.00	72,000.00	R 72,000.00
	(ii) Payment of 4 Student Trainee (R 5000.00 per month)	Prov Sum	1.00	200,000.00	R 200,000.00
	(iii) Payment of PSC Members for the duration of project (R250.00 per person per month)	Prov Sum	1.00	18,000.00	R 18,000.00
	(v) Handling costs and profit in respect of (i), (ii) and (iii) above	%	R 290,000.00		
B12.02	Structured Training (as specified in part D of the project specification)				
	(a) Engineering Skills	Prov Sum	1.00	150,000.00	150,000.00
	(b) Enterpreneurial Skills	Prov Sum	1.00	75,000.00	75,000.00
	(c) Generic Skills	Prov Sum	1.00	25,000.00	25,000.00
	(d) Provision of training venue (only if required)	Prov Sum	1.00	10,000.00	10,000.00
	(e) Handling costs and profit in respect of sub-items (a, (b), (c) and (d) above	%	R 260,000.00		
B12.03	The Contractors Obligations In Respect of Local Labourers				
	(a) Provision for Medical Examination for Local Labourers	L/Sum	1.00		
PS12.05	Protection, removal,relocation and replacement of Utility services.				
	(a) Utility services				
	(i) Protection, removal,relocation and replacement of utility services.	Prov Sum	1.00	100,000.00	100,000.00
	(ii) Realignment of Electrical infrastructure	Prov Sum	1.00	300,000.00	300,000.00
	(iii) Handling costs and profit in respect of sub-items (a) (i), (ii) above	%	R 400,000.00		
B12/C1.1	Contractor's initial obligation in respect of the OHS Act and Construction Regulations including compliance to Covid 19 Regulations	L/Sum	1.00		
B12/C1.2	Contractor's Time related Obligations in respect of the OHS Act and Construction Regulations	Month	8.00		
B12/C1.3	Submission of Health and Safety File	L/Sum	1.00		
B12.08	Supply, transport to site and erect contract sign boards as per drawing	no	2.00		
1200	TOTAL CARRIED TO SUMMARY				

MAKHADO LOCAL MUNICIPALITY

CONTRACT NO.: 24 of 2025

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

SECTION 1300

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
1300	<u>CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS</u>				
13.01	The Contractor's general obligations:				
	(a) Fixed obligations	-	lump	sum	
	(b) Value-related obligations	-	lump	sum	
	(c) Time-related obligations	month	8		
1300	TOTAL CARRIED TO SUMMARY				

MAKHADO LOCAL MUNICIPALITY
CONTRACT NO.: 24 of 2025
UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

ITEM NO	DESCRIPTION	UNIT	QUANTITY	SECTION 1400	
				RATE	AMOUNT
1400	<u>HOUSING, OFFICES AND LABORATORIES FOR THE ENGINEER'S SITE PERSONNEL</u>				
14.01	Office and laboratory accommodation:				
	(a) Offices (interior floor space only)(preferably contained within a building)	m²	80		
	(e) Ablution units	m²	40		
14.02	Office and laboratory furniture:				
	(a) Chairs	number	30		
	(d) Desks, complete with drawers and locks	number	4		
	(f) Conference tables	number	1		
14.03	Office and laboratory fittings, installations and equipment:				
	(a) Items measured by number:				
	(i) 220/250 volt power points	number	3		
	(ii) Double 80 watt fluorescent-light fittings complete with ballast and tubes	number	2		
	(iii) Single incandescent-light fittings complete with 100 watt globes	number	2		
	(vi) General-purpose steel cupboards with shelves	number	2		
14.04	(v) Air Conditioner(12000BTU)	number	2		
14,04a	Car-ports	number	2		
	Contract Nameboard	number	2		
1400	TOTAL CARRIED FORWARD				

MAKHADO LOCAL MUNICIPALITY
 CONTRACT NO.: 24 of 2025
 UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	Brought forward				
B14.11	Telecommunications System				
	(a) Supply (1)Cellular Phone	Prov Sum	1.00	15,000.00	R 15,000.00
	(b) Costs of calls by Engineer	Prov Sum	1.00	16,800.00	R 16,800.00
	(c) Handling costs and profit in respect of subsubitem 14.11(a), (b) above	%	R 31,800.00		
	(d) Provision of Laptop for the use of Engineer.	-	Prov	Sum	R 26,000.00
	Handling costs and profit in respect of sub item 14.11(d) above	%	R 26,000.00		
	Services				
	(a) Services at offices and laboratories				
	(i) Fixed costs	Lump Sum	1		
	(ii) Running Costs	month	8		
1400	TOTAL CARRIED TO SUMMARY				

C2.2.5

C2.2.4

MAKHADO LOCAL MUNICIPALITY
CONTRACT NO.: 24 of 2025
UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

					SECTION 1500
ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
1500	ACCOMMODATION OF TRAFFIC				
15.01	Accommodating traffic and maintaining temporary deviations	km	4.00		
15.02	Earthworks for temporary deviations:				
	(a) Shaping of temporary deviations	km	4.00		
	(b) Cut and borrow to fill	m³	60.00		
	(c) Cut to spoil	m³	60.00		
B15.03	Temporary traffic-control facilities:				
	(a) Flagmen	man-day	768.00		
	(b) Portable STOP and GO-RY signs	number	2.00		
	(e) Road signs, R- and TR-series, (size indicated)	number	15.00		
	(f) Road signs, TW-series, (size indicated)	number	15.00		
	(g) Road signs, STW-, DTG-, TGS- and TG-series (excluding delineators and barricades)	m²	25.00		
	(h) Delineators (DTG50J):				
	(i) Single	number	20.00		
	(ii) Mounted back to back	number	50.00		
	(j) Traffic cones 600mm	number	20.00		
	(l) Movable barriers (type indicated)	No	6.00		
	(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	m³	400.00		
15.06	Watering of temporary deviations	kilolitre	8,000.00		
1500	Total carried forward				

MAKHADO LOCAL MUNICIPALITY

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UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

SECTION 1500

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	Brought forward				
15.07	Blading by road grader of:				
	(a) Temporary deviations	km-pass	64.00		
	(b) Existing roads used as temporary deviations	km-pass	32.00		
1500	TOTAL CARRIED TO SUMMARY				

MAKHADO LOCAL MUNICIPALITY
CONTRACT NO.: 24 of 2025
UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

SECTION 1600

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
1600	OVERHAUL				
16.02	Overhaul on material in excess of 1.0 km (ordinary overhaul)	m ³ -km	35,024.64		
1600	TOTAL CARRIED TO SUMMARY				

MAKHADO LOCAL MUNICIPALITY
 CONTRACT NO.: 24 of 2025
 UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

SECTION 1700

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
1700	<u>CLEARING AND GRUBBING</u>				
17.01	Clearing and grubbing	ha	3.0		
17.02	Removal and grubbing of large trees and tree stumps				
(a)	Girth exceeding 1 m up to and including 2m	No	13		
(b)	Girth exceeding 2 m up to and including 3m	No	2		
1700	TOTAL CARRIED TO SUMMARY				

MAKHADO LOCAL MUNICIPALITY
 CONTRACT NO.: 24 of 2025
 UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

SECTION 1800

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
1800	<u>DAYWORKS</u>				
B18.01	Labourers:				
	(i) Unskilled	h	1		
	(ii) Semi-skilled	h	1		
	(iii) Skilled	h	1		
B18.02	Foreman	h	1		
B18.03	Tipper trucks:				
	(i) 3 - 5 ton	h	45		
	(ii) 5.1 - 10 ton	h	45		
B18.04	Loader (0,5m³)	h	45		
B18.05	Grader (CAT 140G or similar)	h	45		
B18.06	LDV	km	50		
	4 Ton Flatbed Truck	km	50		
B18.07	Compaction rollers:				
	(i) Vibratory roller	h	45		
	(ii) Tamping roller	h	45		
	(iii) Grid roller	h	45		
B18.08	Hand controlled compactors				
	(i) Pedestrian roller (Bomag BW90)	h	45		
	(ii) Vibratory plate	h	45		
	(iii) Rammers	h	45		
B18.09	Water truck (min. 10000litre)	h	45		
B18.10	Dozer (D7 or similar)	h	45		
1800	TOTAL CARRIED TO SUMMARY				

MAKHADO LOCAL MUNICIPALITY
 CONTRACT NO.: 24 of 2025
 UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

SECTION 2100

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
2100	<u>DRAINS</u>				
21.01 LIC	Excavation for open drains:				
	(a) Excavating soft material situated within the following depth ranges below the surface level:				
	(i) 0 m up to 1,5 m	m³	400		
	(ii) 1.5 m up to 3 m	m³	100		
	(b) Extra over subitem 21.01(a) for excavation in hard material, irrespective of depth	m³	280		
21.02 LIC	Clearing and shaping existing open drains	m²	533		
21.05	Banks and dykes	m³	50		
2100	TOTAL CARRIED TO SUMMARY				

SECTION 2200

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
2200	<u>PREFABRICATED CULVERTS</u>				
22.01	Excavation:				
	(a) Excavating soft material situated within the following depth ranges below the surface level:				
	(i) 0 m up to 1,5 m	m³	113		
	(b) Extra over subitem 22.01(a) for excavation in hard material, irrespective of depth	m³	28		
22.02	Backfilling:				
	(a) Using the excavated material	m³	39		
	(c) Extra over subitems 22.02(a) and (b) for soil cement backfilling containing 2% cement	m³	17		
22.03 LIC	Concrete pipe culverts:				
	Class 100 D with interlocking joint				
	(c) On class C bedding:*				
	(1) 450 diam	m	80		
	(2) 900 diam	m	20		
B22.07	Cast in situ concrete and formwork:				
	(b) (i) In floor slabs and wingwalls for portal or rectangular culverts including formwork, joints and class U2 surface finish (class 25/19)	m²	68		
	(ii) Between culvert units (class 15/19)	m²	20		
22.10	Steel reinforcement:				
	(a) Mild-steel bars	t	1.0		
	(b) High-tensile steel bars	t	0.5		
B22.12	Removing of existing concrete				
	(a) Plain concrete	m²	10.00		
	(b) Reinforced concrete	m²	10.0		
B22.14	Removing and stacking of existing				
	(a) Prefabricated culvert boxes of various sizes	m	10		
	(b) Round stormwater pipes in various diameters	m	20		
2200	TOTAL CARRIED FORWARD				

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	Brought forward				
22.18	Brickwork				
	(a) 115 mm thick	m ²	20		
	(b) 230 mm thick	m ²	32		
22.19	Plaster	m ²	40		
22.20	Benching	m ²	5		
22.23	Service ducts				
	(a) Unplasticised PVC Pipes				
	(i) 110mm diameter	m	50		
	(ii) 150mm diameter	m	40		
22.23	(b) Encasing of service duct in 1:12 cement soil mixture (75mm min. all round)	m	90		
22.25	Overhaul on excavated material carted to spoil,backfill material (but excluding Portland cement in the case of soil cement, existing structures demolished and removed to spoil, and removing and relaying, and removing and stacking existing prefabricated culverts for haul in excess of the free-haul distance.	m ³ -km	247		
2200	TOTAL CARRIED TO SUMMARY				

MAKHADO LOCAL MUNICIPALITY
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 UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

SECTION 2300

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
2300 LIC	<u>CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES, AND CONCRETE LININGS FOR OPEN DRAINS</u>				
23.01 LIC	Concrete kerbing:				
	(a)(i) Prefabricated mountable kerb, SABS 927 fig 8c, as shown on the Drawings	m	4,500.00		
	(ii) Prefabricated mountable kerb, SABS 927 fig 3, as shown on the Drawings	m	220.00		
	(iii) 25 Mpa Concrete Edge beam (200mm deep x 200 wide mm)	m³	5.0		
23.04 LIC	Cast in situ concrete chutes (measured by components):				
	(a) Concrete				
	(1) Class 20/19	m³	8.0		
	(b) Formwork				
	(1) F1 Surface finish	m²	150		
	(2) F2 Surface finish	m²	150		
23.07 LIC	Trimming of excavations for concrete-lined open drains:				
	(a) In soft material	m²	2,800		
	(b) In hard material	m²	935		
23.08 LIC	Concrete lining for open drains:				
	(a) Cast in situ concrete lining-class 25MPa concrete	m³	500		
23.12 LIC	Steel reinforcement:				
	(a) Welded steel fabric Ref 193	kg	6800.00		
23.15	Precast concrete block in outlet structure	no	50.00		
2300	TOTAL CARRIED FORWARD TO SUMMARY				

MAKHADO LOCAL MUNICIPALITY

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UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

SECTION 3100

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
3100	<u>BORROW MATERIALS</u>				
31.01	Excess overburden	m³	700		
31.03	Finishing-off borrow areas in:				
	(a) Hard Excavation	ha	1.5		
	(b) Intermediate material	ha	1.5		
	(c) Soft material	ha	1.5		
B31.04	<u>Compensation to Landowners</u>				
	(a) Prime Cost Sum for compensation to landowners PC	PC Sum	1	50,000.00	R 50,000.00
	(b) Handling cost and profit in respect of sub-item % 33/B31.04 (a) above	%	50,000		
31.05	Fencing of borrow pit	km	1		
3100	TOTAL CARRIED TO SUMMARY				

MAKHADO LOCAL MUNICIPALITY

CONTRACT NO.: 24 of 2025

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

SECTION 3200

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
3200	<u>SELECTION, STOCKPILING AND BREAKING-DOWN THE MATERIAL FROM BORROW PITS, CUTTINGS AND EXISTING PAVEMENT LAYERS, AND PLACING AND COMPACTING THE GRAVEL LAYERS</u>				
32.06	Stockpiling of material	m ³	2,970		
3200	TOTAL CARRIED TO SUMMARY				

MAKHADO LOCAL MUNICIPALITY
 CONTRACT NO.: 24 of 2025
 UPGRADE OF ROAD LEADING TO MAVHOYI FET COLLEGE

SECTION 3300

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
3300	<u>MASS EARTHWORKS</u>				
33.01	Cut and borrow to fill, including free-haul up to 0,5 km:				
	(a) Material in compacted layer thicknesses of 200 mm and less:				
	(i) Compacted to 90% of modified AASHTO density	m ³	14,377.0		
	(c) Rock fill (as specified in subclause 3209c)	m ³	150		
33.03	Extra over item 33.01 for excavating and breaking down material in:				
	(a) Intermediate excavation	m ³	7,907		
	(b) Hard rock excavation	m ³	2,875		
33.04	Cut to spoil, including free-haul up to 0,5 km. Material obtained from:				
	(a) Soft excavation	m ³	12,652		
33.07	Removal of unsuitable material (including free-haul of 0,5 km):				
	(b) In layer thicknesses exceeding 200 mm:				
	(i) Stable material	m ³	300		
	(ii) Unstable material	m ³	300		
33.10	Roadbed preparation and the compaction of material:				
	(a) Compaction to 90% of modified AASHTO density	m ³	3,350		
33.13	Finishing-off cut and fill slopes				
	(a) Cut slopes	m ²	1,200		
	(b) Fill slopes	m ²	1,020		
B33.20	Reshaping the road formation with material obtained from the road reserve and compacted to 90% of modified AASTHO density	m ³	550		
3300	TOTAL CARRIED TO SUMMARY				

MAKHADO LOCAL MUNICIPALITY
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 UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

SECTION 3400

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
3400	<u>PAVEMENT LAYERS OF GRAVEL MATERIAL</u>				
34.01	Pavement layers constructed from gravel taken from cut or borrow including free-haul up to 1,0 km:				
	(a) Gravel Selected layer compacted to:				
	(i) 93% of modified AASHTO density for a compacted layer thickness of 150 mm (G7)	m³	3,465.00		
	(b) Gravel subbase compacted to:				
	(ii) 95% of modified AASHTO density for a compacted layer thickness of 150 mm (G6)	m³	3,317		
	(c) Gravel base compacted to:				
	(ii) 150 mm C4 Base compacted to 97% of Modified AASHTO Density	m³	3,317		
	(g) Gravel shoulders compacted to:				
	(i) 93% of Modified AASHTO density for a compacte layer thickness of 150mm (G6)	m³	1,000		
3400	TOTAL CARRIED TO SUMMARY				

SECTION 3400

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
3500	<u>STABILIZATION</u>				
35.01	Chemical stabilization extra over unstabilized compacted layers:				
	(c) Gravel base, 150 mm thick*	m³	3,317		
35.02	Chemical stabilizing agent:				
	(a) Ordinary Portland cement	t	219		
35.04	Provision and application of water for curing	kl	1,200		
3500	TOTAL CARRIED TO SUMMARY				

MAKHADO LOCAL MUNICIPALITY

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UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

SECTION 4100

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
4100	<u>PRIME COAT</u>				
41.01	Prime coat:				
	(c) MC-30 cut-back bitumen	litre	370		
	(d) MC-70 cut-back bitumen	litre	-		rate only
	(e) Invert bituminous emulsion	litre	-		rate only
41.02	Binder Variation				
	(a) 60/70 pen.grade bitumen	t	1		
4100	TOTAL CARRIED TO SUMMARY				

MAKHADO LOCAL MUNICIPALITY
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 UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

SECTION 4200

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
4200	ASPHALT BASE AND SURFACING				
42.02	Asphalt surfacing				
	(a) Continuously medium graded using 60/70 penetration grade bitumen: (30mm thick).	m ²	370		
42.04	Tack coat of 30% stable-graded emulsion.	litre	-		rate only
42.05	Binder Variation				
	(a) 60/70 pen.grade bitumen	t	1		
4200	TOTAL CARRIED TO SUMMARY				

MAKHADO LOCAL MUNICIPALITY

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UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

SECTION 5200

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
5100	<u>PITCHING, STONEMWORK AND PROTECTION AGAINST EROSION</u>				
LI 51.01	Stone pitching: (b) Grouted stone pitching 150 mm thickness	m ²	200		
5200	TOTAL CARRIED TO SUMMARY				

MAKHADO LOCAL MUNICIPALITY
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UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE
SECTION 5200

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
5200	<u>GABIONS</u>				
LI 52.01	Foundation trench excavation and backfilling				
	(b) In all other classes of material.	m ³	20		
LI 52.02	Surface preparation for bedding the gabions	m ²	20		
LI 52.03	(a) Galvanised gabions boxes with cells of 1000mm x 1000mm formed by diaphragms using mesh with a nominal size of 80mm manufactured from galvanized wire with a nominal diameter of 2.7mm with diaphragms spaced 1.0m intervals				
	(i) 1m x 1m x 1m	m ³	357		
	(b) Galvanised mattresses boxes with cells of 1000mm x 1000mm formed by diaphragms using mesh with a nominal size of 80mm manufactured from galvanized wire with a nominal diameter of 2.7mm with diaphragms spaced 1.0m intervals				
	(i) 0.3m x 1m x 2m	m ³	15		
52.04	Filter fabric, Grade 3	m ²	360		
B52.05	Backfilling behind gabion erosion protection walls, including all haul	m ³	20		
5200	TOTAL CARRIED TO SUMMARY				

SECTION 5400

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
5400	<u>GUARDRAILS</u>				
LI 1/54.01	Guardrails complete on timber posts including reflectors (as per the drawings) (a) Galvanised	m	260		
5400	TOTAL CARRIED TO SUMMARY				

MAKHADO LOCAL MUNICIPALITY
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UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE
SECTION 5600

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
5600	<u>ROAD SIGNS</u>				
56.01	Road sign boards with painted or coloured semi-matt background. Symbols, lettering and borders in semi-matt black or Class I retro-reflective material, where the sign board is constructed from: (a) Aluminium sheet (2,0 mm thick): (i) Area not exceeding 2 m ²	m ²	40		
56.02	Extra over item 56.01 for using: (a) Background of retro-reflective material: (i) Class 3	m ²	40		
56.03	Road sign supports (overhead road sign structures excluded): (b) Timber, 150 mm dia treated with creosote	m	80		
LI 56.05	Excavation and backfilling for road sign supports (not applicable to kilometre posts)	m ³	20		
LI56.06	Extra over item 56.05 for cement-treated soil backfill	m ³	10		
56.07	Extra over item 56.05 for Rockfill excavation	m ³	10		
B56.10	Danger plate at culvert / structures	no	26		
5600	TOTAL CARRIED TO SUMMARY				

MAKHADO LOCAL MUNICIPALITY
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 UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

SECTION 5700

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
5700	ROAD MARKINGS				
57.02	Retro-reflective road-marking paint including pre-marking				
	(a) White line (100mm wide broken or unbroken)	km	3.50		
	(b) Yellow line (100 mm wide broken or unbroken)	km	0.1		
	(c) White lettering and symbols	km	0.90		
57.04	Variation in rate of application				
	(a) White paint	litre	1		
	(b) Yellow paint	litre	1		
	(c) Red paint	litre	1		
	(d) Retro-reflective beads	kg	2		
5700	TOTAL CARRIED TO SUMMARY				

MAKHADO LOCAL MUNICIPALITY
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 UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

SECTION 5900

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
5900	<u>FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS</u>				
59.01	Finishing the road and road reserve:				
	(b) Single-carriageway road	km	3.50		
5900	TOTAL CARRIED TO SUMMARY				

MAKHADO LOCAL MUNICIPALITY
 CONTRACT NO.: 24 of 2025
 UPGRADE OF ROAD LEADING TO MAVHOYI FET COLLEGE

SECTION 4200

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
7300	<u>CONCRETE BLOCK PAVING FOR ROADS</u>				
73.01 LIC	Concrete block paving:Road and Walkway				
	(a) 80 mm thick, Class 25,including 20mm sand bedding	m ²	25140		
	(b) 60 mm thick, Class 25,including 20mm sand bedding	m ²	1815.60		
	(c) Construction of speed hump as per drawing	No	8.00		
73.03 LIC	Provision of approved herbicide and ant poison:				
	(a) Provision of materials	PC Sum	1.0	85,000.00	85,000.00
	(b) Contractor's charges and profit added to the Prime Cost Sum	%	10%	85,000.00	8,500.00
B73.06	Supply and install concrete Bus stops shelter complete	no	4		
7300	TOTAL CARRIED TO SUMMARY				

MAKHADO LOCAL MUNICIPALITY
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 UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

SECTION 8100

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
8100	<u>TESTING MATERIALS AND WORKMANSHIP</u>				
81.02	Other special tests requested by the Engineer:				
	(a) Cost of testing	Prov Sum	1.00	120000.00	R 120,000.00
	(b) Charge on Prime Cost Sum	%	120,000		
8100	TOTAL CARRIED TO SUMMARY				

SUMMARY OF SCHEDULE OF QUANTITIES

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	_____
1600	OVERHAUL.....	R	_____
1700	CLEARING AND GRUBBING.....	R	_____
1800	DAYWORKS.....	R	_____
2100	DRAINS.....	R	_____
2200	PREFABRICATED CULVERTS.....	R	_____
2300	CONCRETE KERBING, CONCRETE CHANNELING, CHUTES AND DOWNPIPES AND CONCRETE LINING FOR OPEN DRAINS.....	R	_____
3100	BORROW MATERIALS.....	R	_____
3200	SELECTION, STOCKPILING AND BREAKING-DOWN THE MATERIAL FROM BORROW PITS, CUTTINGS AND EXISTING PAVEMENT LAYERS, AND PLACING AND COMPACTING THE GRAVEL LAYERS.....	R	_____
3300	MASS EARTHWORKS.....	R	_____
3400	PAVEMENT LAYERS OF GRAVEL MATERIAL.....	R	_____
3500	STABILISATION.....	R	_____
4100	PRIME COAT.....	R	_____
4200	ASPHALT BASE AND SURFACING.....	R	_____
5100	PITCHING, STONEMWORK AND PROTECTION AGAINST EROSION.....	R	_____
5200	GABIONS.....	R	_____
5400	GUARDRAILS.....	R	_____
5700	ASPHALT BASE AND SURFACING.....	R	_____
5600	ROAD SIGNS.....	R	_____
5900	FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS.....	R	_____
7300	CONCRETE BLOCK PAVING.....	R	_____
8100	TESTING MATERIAL AND WORKMANSHIP TREATING OLD ROADS	R	_____

TOTAL R _____

CALCULATION OF TENDER SUM

SUMMARY OF SCHEDULE OF QUANTITIES TOTAL.....	R	_____
ADD CPA The sum provided here is under the sole control of the Engineer and may be deducted in whole or in part. (The Tenderer must add 2,5% of the total of schedule of quantities)	R	_____
ADD CONTINGENCIES The sum provided here is under the sole control of the Engineer and may be deducted in whole or in part. (The Tenderer must add 7,5% of the total of schedule of quantities)	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	_____

C3 SCOPE OF WORK

MAKHADO LOCAL MUNICIPALITY

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

PART C3

SCOPE OF WORK

Specifies and describes the supplies, services, or engineering and construction works which are to be provided and any other requirements and constraints relating to the manner in which the contract work is to be performed

Part C3.1 Project Scope of Work

Part C3.1 Project Scope of Work

CONTRACT NO:24 of 2025

CIDB Category 6CE or Higher

**FOR
MAKHADO LOCAL MUNICIPALITY**

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

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PART I : STANDARD SPECIFICATIONS

PROJECT SPECIFICATIONS

PART A GENERAL

A1 MISCELLANEOUS

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

The Project Specifications form an integral part of the Contract Documents, supplement the Standard Specifications, and take precedence in the event of discrepancies with the Standard Specifications, the Schedule of Quantities or the Drawings.

A2 DESCRIPTION OF THE WORKS

(1) THE SITE

(i) Employer's Objectives

The Employer's objective is to deliver public infrastructure using labour-intensive methods in accordance with EPWP Guidelines.

The main objective of the employer is to provide the Makhado Local Municipality UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE. Objectives during construction are to provide black empowered economic enterprise contractors with a portion of the work, work opportunities to the local communities, provide training to local and other labourers and to execute and complete the work with a high degree of safety, sensitivity to the environment and quality within a period of Eight (8) months.

(ii) General Description of the Project Route

The project entails the upgrading of a gravel road by constructing pavement layers and a concrete block paving wearing course. The project is with total length measured to be approximately 3.3KM.

(iii) Extent of the works

The main items of work to be undertaken in terms of the contract involve the following:

- Site Establishment.
- Setting out of works.
- Construction of Road 3.3 km internal streets (Roadbed, Subbase, Base)
- Construction of kerbs.
- Constuction of Edge beam.
- Sealing road using 80mm Interlocking Concrete Pave Blocks.
- Sealing side walk using 60mm Interlocking Concrete Pave Blocks.

- Construction of Storm water drainage.
- Construction of Side Drains.
- Construction of Speed humps.
- Construction of Bus Stops
- Road marking.
- To install the road signs.
- To finish the road after completion of the works.
-

(c) Accommodation of Traffic

The existing roads will be under construction and allowance for small deviations of traffic will be allowed as measured in the bill of quantities.

(d) Existing Services

The following existing services may be encountered within the road reserve:

- Overhead/underground power lines
- Electrical cables
- Water supply lines

Any overhead services crossing the road must clear the final road level by at least 6,1m.

A3 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 an unreduced print of each of the Drawings. These prints will be issued free of charge and the Contractor must make any additional prints he may require at his own cost.

Any information in the possession of the Contractor that is required by the Engineer's Representative to complete his as-built drawings must be supplied to the Engineer'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 Engineer. The Engineer will supply any figured dimensions that may have been omitted from the Drawings.

The levels given on the Structural Drawings are subject to confirmation on the Site and the Contractor shall submit all levels to the Engineer for confirmation before he commences construction of any structure. The Contractor shall also check all clearances given on the Drawings and shall inform the Engineer of discrepancies.

A4 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.

A5 CONSTRUCTION IN CONFINED AREAS

It will be necessary for the Contractor to work in confined areas. No additional payment will be made for work in "restricted areas", except in the case of structures as described in Sub clause 6108(d) 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 depends 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.

A6 CONTRACTOR'S CAMP SITE

(Read with SANS 1921 - 1 : 2004 clause 4.14)

The Contractor is responsible to provide a suitable site for his camp and to provide accommodation for his personnel and labourers. If the Employer can make any specific site available to the Contractor, such site will be pointed out to the Contractor.

The chosen site shall be subject to the approval of the Engineer, the local Tribal Authorities and the Project Liaison Committee (PLC). Possible locations for a campsite shall be pointed out at the Site inspection. The Contractor shall conform to all local authority, environmental and industrial regulations.

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

The Contractor shall provide security watchmen for the contract as he deems fit at no extra cost for the Employer. The Contractor must ensure that all his employees as

well as the employees of his subcontractors are able to identify themselves as members of the construction team.

No employees except for security guards will be allowed to sleep or be accommodated on the site in urban areas.

No housing is available for the Contractor's employees and the Contractor shall make his own arrangements to house his employees and to transport them to site.

No informal housing or squatting will be allowed.

The Contractor shall provide all the necessary ablution facilities at his camp site and the site of the works for the use of his employees. Chemical toilets only will be allowed where temporary facilities have to be provided.

A7 SECURITY

The Contractor shall be responsible for the security of his personnel and Constructional Plant on and around the Site of the Works and for the security of his camp, and no claims in this regard will be considered by the Employer. Provision is made in these specifications for the erection of a security fence around the site offices.

A8 WATER FOR CONSTRUCTION PURPOSES

The Contract will be undertaken in an arid area with scarce water resources. The Contractor must make adequate provision in his Tender for all negotiations and procurement of water for construction activities, and all related costs will be deemed to be included in his tendered rates.

A9 ADDITIONAL REQUIREMENTS FOR CONSTRUCTION ACTIVITIES

- (a) The travelling public shall have the right of way on public roads, and the contractor shall make use of approved methods to control the movement of his equipment and vehicles so as not to constitute a hazard on the road.
- (b) Failure to maintain road signs, warning flashing lights, etc, in a good condition shall constitute ample reason for the engineer to bring the works to a stop until the road signs, etc, have been repaired to his satisfaction.
- (c) The contractor may not commence constructional activities before adequate provision has been made to accommodate traffic in accordance with the

requirements of this document and the South African Road Traffic Signs Manual (SARTSM – Vol 2, Chapter 13).

- (d) The contractor may not proceed with permanent works before the required offices and laboratories of the engineer's site personnel have been erected by him. This includes the provision of electricity, sanitary arrangements, potable water and telephone, e-mail and fax facilities. In the event where the contractor cannot obtain telephone lines timeously from Telkom, a wireless system shall be provided for telephone, e-mail and fax facilities.
- (e) Co-ordinating the main contract work with that of the selected subcontractor for the supply and installation of street lighting. The main contract work includes the following civil works relating to the street lighting subcontract : the excavation and backfill of trenches, construction of bedding , installation of marker tape for cables and ducts, the excavation and backfill of holes pertaining to the scissor masts, the installation of 110mm diameter ducts for the cables crossing road P115-5 and providing general attendance to the selected street lighting subcontractor.

A10 TEMPORARY LATRINES

The Contractor shall provide sufficient latrine facilities for the use of his employees. He shall be entirely responsible for enforcing their use and for maintaining such latrines in a clean, orderly and sanitary condition to the satisfaction of the Engineer and the Employer. Latrines shall be positioned within walking distance from wherever employees or labourers are employed on the Works.

Where required, latrines shall be provided at the rate of one for ten persons and where applicable, the Contractor shall make his own arrangements and pay all charges for the removal of sewage.

A11 MOVING EXISTING SERVICES

Services belonging to any public or private authority, which require moving, shall be dealt with in the manner specified in clause B1202.

The plans show the positions of services determined from observations and measurement but neither the Employer nor the Engineer accepts responsibility neither for the accuracy of the information nor for the omission of any information. The Contractor shall locate and mark the positions of hidden services in advance of construction and take all reasonable steps to protect existing works against damage, which may arise as a result of his operations on the site.

The Contractor will be held responsible for direct or consequential damage to any existing works including any claims which may arise as a result thereof and the cost of repair of any such damage shall be borne by the Contractor unless it is established

by the Engineer that the Contractor exercised reasonable care and damage was unavoidable.

The owners and the Engineer shall be notified immediately of any damage done to existing works.

If so directed by the Engineer the positions of existing works shall be changed by the Contractor to meet the requirements of the proposed work. The cost of such work shall be paid for at the applicable rates set out in the Schedule of Quantities or, in the absence of such rates, at rates mutually agreed between the Engineer and the Contractor.

Work required on known services has been tabulated in a services schedule. The schedule must be read in conjunction with the services plans.

All communication by the contractor with the relevant authorities in connection with services must be directed through the Engineer.

A12 TRAINING

Technical skills, generic and management skills training shall be provided with the aim of providing locally employed labour with the technical skills required to undertake the work involved in the Contract, and of furthering small contractor development. Part D of the Project Specifications deals specifically with matters regarding training, and a payment item for that is included in Clause B 1231 of Part B of the Project Specifications.

A13 USE OF LOCAL RESOURCES

A major objective of this Contract is the optimum use of local resources. One of the methods to be adopted to achieve this objective is through the implementation of labour-optimising construction methods. Labour-optimising construction is defined in Clause B 1156 of Part B of the Project Specifications.

A14 LABOUR-OPTIMISING CONSTRUCTION ACTIVITIES

(a) General

The portions of the Works listed in Subclause (b) below shall, unless otherwise instructed by the Engineer, be constructed under this Contract using labour-optimising construction methods only. Payment for works identified in Subclause (b) below shall be made in accordance with the pay items provided in the bill of quantities.

In respect of those portions of the Works which are not listed in Subclause (b), the construction methods adopted and Plant used shall be at the discretion of the Contractor, provided always that the construction methods adopted and Plant used by the Contractor are appropriate in respect of the nature of the Works to be executed and the standards to be achieved in terms of the Contract.

(b) Operations to be executed using labour-optimising construction methods

Labour-intensive work shall be constructed/maintained using local workers who are temporarily employed in terms of the scope of work.

The following portions of the Works shall be executed using labour-optimising construction methods:

- i.* Clearing and grubbing the site
- ii.* Removing and grubbing large trees and tree stumps
- iii.* Clearing and grubbing at inlets and outlets of hydraulic structures
- iv.* Cleaning of hydraulic structures
- v.* Excavating for all open drains, culverts, inlet and outlet structures, concrete structures, fence posts, road sign posts and guardrail posts
- vi.* Constructing catch-water banks and mitre banks
- vii.* Backfilling and compacting all excavations
- viii.* Removing oversize material
- ix.* Removing existing concrete and masonry work, irrespective of class and type
- x.* Stone pitching and erosion protection
- xi.* Finishing off cut and fill slopes
- xii.* Finishing the road and road reserve
- xiii.* Treating old roads and temporary diversions
- xiv.* Carrying out maintenance activities

A15 RESTRICTIONS ON THE USE OF PERSONNEL IN THE PERMANENT EMPLOY OF THE CONTRACTOR

- (a) The Contractor shall limit the use on the Contract Works of his permanently employed personnel to that of key personnel only (as defined in Part C of the Project Specifications) and shall, subject to the further provisions of the following parts of the Project Specifications

- (i) Part C - Provision of the temporary workforce,
- (ii) Part D - Provision of structured training,

execute and complete the Works using a temporary workforce employed directly by the Contractor and/or by Subcontractors.

- (b) The Engineer may at his discretion, upon receipt of a written and fully motivated application from the Contractor and where he deems the circumstances to warrant, authorise in writing that the Contractor may use in the execution of the Works,

workers not being his key personnel but who are in his permanent employ. Without limiting the generality of application of this subclause, circumstances which may be considered by the Engineer to warrant the authorization of the use of the Contractor's permanent employees not being key personnel, include:

- (i) The unavailability of sufficient numbers of temporary workers and/or Subcontractors to execute the Works, provided always that the Contractor has proven that he has exercised his best endeavours and taken all reasonable actions to recruit sufficient numbers of temporary workers and Subcontractors and has exhausted all reasonable recruitment options
- (ii) The unavailability within the temporary worker pool and/or subcontractor sources available to the Contractor in terms of the Contract, of sufficient of the required knowledge and skills necessary for the execution of the Works or specific portions thereof, in cases where the time for completion allowed in the Contract is insufficient to facilitate the creation of the necessary skills through the provision of training as contemplated in this Contract
- (iii) Any other circumstances which the Engineer may deem as constituting a warrant.

A16 COMMUNITY LIAISON AND COMMUNITY RELATIONS

In all dealings with the various communities and workers employed from within the communities, the Contractor shall take due cognisance of the character, culture and circumstances of the communities involved and shall at all times use his best endeavours to avoid the development of disputes and to foster a spirit of co-operation and harmony towards the Contract.

The Contractor shall at all times keep the Engineer fully informed on all matters affecting the Contract and the communities, and shall attend all meetings of the Project Co-ordinating Committee as may be reasonably required by the Engineer. All matters concerning the communities shall be discussed and where possible, resolved at such meetings.

Where any resolution of the Project Co-ordinating Committee shall be contrary to the terms and provisions of the Contract, the Contractor shall not give effect to them without a prior written instruction from the Engineer. Where the Contractor is of the opinion that any instruction of the Engineer issued in terms of this clause will result in him incurring additional costs which were not provided for in his tendered rates and prices, and/or that a delay in the progress of the Works will result, he will be entitled to submit a claim in terms of Clause 51 of the Conditions of Contract, provided always that the period of twenty-eight (28) days referred to in Clause 51 shall be reduced to three (3) normal working days in respect of all claims submitted in terms of this clause.

A17 EXTENDED PUBLIC WORKS PROGRAMME SPECIFICATIONS

17.1 Labour-Intensive Competencies of Supervisory and Management Staff

Contractors shall only engage supervisory and management staff in labour-intensive works that have completed the skills programme including Foremen/ Supervisors at NOF level 4 “National Certificate Supervision of Civil Engineering Construction Processes” and Site Agent/Manager at NQF level 5 “Manage Labour-intensive Construction Processes” or equivalent QCTO qualifications.

Personnel	NQF level	Unit standard titles	Skills programme description
Team leader / supervisor	2	Apply Labour Intensive Construction Systems and Techniques to Work Activities	This unit standard must be completed, and
		Use Labour Intensive Construction Methods to Construct and Maintain Roads and Storm water Drainage	Any one of these 3 unit standards
		Use Labour Intensive Construction Methods to Construct and Maintain Water and Sanitation Services	
		Use Labour Intensive Construction Methods to Construct, Repair and Maintain Structures	
Foreman/ supervisor	4	Implement labour Intensive Construction Systems and Techniques	This unit standard must be completed, and
		Use Labour Intensive Construction Methods to Construct and Maintain Roads and Storm water Drainage	Any one of these 3 unit standards
		Use Labour Intensive Construction Methods to Construct and Maintain Water and Sanitation Services	
		Use Labour Intensive Construction Methods to Construct, Repair and Maintain Structures	
Site Agent / Manager (i.e. the contractor's most senior representative that is resident on the site)	5	Manage Labour Intensive Construction Processes	Skills Programme against this single unit standard
Details of these skills programmes may be obtained from the CETA ETQA manager (e-mail: gerard@ceta.co.za , tel: 011-265 5900)			

A18 PROGRAMME REQUIREMENTS FOR CONSTRUCTION ACTIVITIES

The contractor shall programme his activities to be suitable in terms of his resources to complete the contract inside the stipulated time period.

A19 PROCUREMENT

PREFERENTIAL PROCUREMENT POINT SYSTEM POLICY

A19.1 GENERAL CONDITIONS

The abovementioned provisions of this policy document shall apply subject to the following terms and conditions:

A19.1.1 Company Registration

Whereas the Employer shall have the above responsibilities, the respective and prospective service providers shall be:

- (a) Formally registered entity, in compliance with the applicable legislation such as the Companies Act, the Close Corporations Act , other related industry regulatory bodies, and professional bodies, where required;
- (b) Registered with the South African Revenue Services for all categories of taxes applicable to it.

A19.1.2 Tender Evaluation

- (a) Only a tenderer who has completed and signed the declaration part of the tender documentation may be considered for preference points.
- (b) The Employer may, before a tender is adjudicated or at any time, require a tenderer to substantiate claims it has made with regard to preference.
- (c) The Employer shall, when calculating comparative prices, take into account any discounts, which have been offered unconditionally.

- (d) A discount, which has been offered conditionally must, despite not being taken into account for evaluation purposes, be implemented when payment is effected.
- (e) In the event that different prices are tendered for different periods of a contract, the price for each period must be regarded as a firm price if it conforms to the definition of a “firm price”.
- (f) Points scored must be rounded off to the nearest 2 decimals.
- (g) In the event that two or more tenders have scored equal total points, the successful tender must be the one scoring the highest number of preference points for specified goals. Should two or more tenders be equal in all respects, the award shall be decided by the drawing of lots.

A19.1.3 Principles

- (a) Preference points stipulated in respect of a tender must include preference points for equity ownership by HDIs.
- (b) The equity ownership contemplated in sub-regulation (A19.1.3 (a)) must be equated to the percentage of an enterprise or business owned by individuals or, in respect of a company, the percentage of a company’s shares that are owned by individuals, who are actively involved in the management of the enterprise or business and exercise control over the enterprise, commensurate with their degree of ownership as the closing date of the tender.
- (c) In the event that the percentage of ownership contemplated in sub regulation (A19.1.3 (b)) changes after the closing date of the tender, the tenderer must notify The Employer and such tenderer will not be eligible for any preference points.
- (d) Preference points may not be claimed in respect of individuals who are not actively involved in the management of an enterprise or business and who do not exercise control over an enterprise or business commensurate with their degree of ownership.
- (e) Subject to sub-regulations A19.1.3 (a), (b), (c) and (d), all claims made for equity ownership by an HDI must be considered according to the following criteria:
 - i. Equity within private companies must be based on the percentage of equity ownership;

- ii. Preference points may not be awarded to public companies and tertiary institutions;
- iii. The following formula must be applied to calculate the number of points for equity ownership by an HDI:

$$NEP = NOP \times \frac{EP}{100}$$

Where

NEP = Points awarded for equity ownership by an HDI

NOP = The maximum number of points awarded for equity ownership by an HDI

EP = The percentage of equity ownership by an HDI within the enterprise or business, determined in accordance with sub-regulations A19.1.3 (a), (b), (c) and (d).

- (f) Equity claims for a Trust may only be allowed in respect of those persons who are both trustees and beneficiaries and who are actively involved in the management of the Trust.
- (g) Documentation to substantiate the validity of the credentials of the trustees contemplated in sub-regulation A19.1.3 (f) must be submitted to the relevant The Employer.
- (h) A Consortium or Joint Venture may, based on the percentage of the contract value managed or executed by their HDI members, be entitled to equity ownership in respect of an HDI.
- (i) The number of points scored for a Consortium or Joint Venture must be added to the number of points scored for achieving specified goals.
- (j) The points contemplated in sub-regulation A19.1.3 (i) must be added to the points scored for price, in order to establish the total number of points scored.
- (k) Subject to regulations A19.1.3 (i), the contract must be awarded to the tender, which scores the highest points.
- (l) A person awarded a contract as a result of preference for contracting with, or providing equity ownership to, an HDI, may not subcontract more than 25 % of the value of the contract to a person who is not an HDI or does not qualify for such preference.

A19.1.4 Declarations

A tenderer must, in the stipulated manner, declare that-

- (a) The information provided is true and correct;
- (b) The signatory to the tender document is duly authorised; and
- (c) Documentary proof regarding any tendering issue will, when required, be submitted to the satisfaction of the Employer.

A19.1.5 Penalties

- (a) The Employer shall, upon detecting that a preference in terms of the Act and these regulations has been obtained on a fraudulent basis, or any specified goals are not attained in the performance of the contract, act against the person awarded the contract.
- (b) The Employer may, in addition to any other remedy it may have against the person contemplated in sub-regulations A19.1.5(a).
- (c) Recover all costs, losses or damages it has incurred or suffered as a result of that person's conduct;
- (d) 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;
- (e) Impose a financial penalty more severe than the theoretical financial preference associated with the claim which was made in the tender; and
- (f) Restrict the contractor, its shareholders and directors from obtaining business from the Employer for a period not exceeding 10 years.
- (g) The Employer reserves the right to have access and/or require production of the original or certified proof of any such registration at a time agreed to by the parties or as may be prescribed by law.
- (h) In the event that the Tenderer fails to substantiate that any failure to achieve the Contract Participation Goal relating to the granting of a preference was due to quantitative under runs, the elimination of items, or any other reason beyond the Contractor's control which may be acceptable to the Employer, it shall be liable to pay to the Employer a financial penalty calculated in the following manner:

$$P = 0,15 \times \frac{(D - D_0)}{(100)} \times N_A$$

Where D = tendered Contract Participation Goal percentage.

Do = the Contract Participation Goal which the Employer's representative based on the credits passed, certifies as being achieved upon completion of the Contract.

N_A = Net Amount
P = Rand value of penalty payable

A19.1.6 Areas of Policy Coverage

The above-mentioned provisions of this policy shall apply subject to, but not limited to, the following entities and/or activity:

- (a) Procurement of goods or services;
- (b) Appointment of consultants;
- (c) Appointment of contractors, subcontractor, consortia and joint venture contractors;

A19.1.7 Criteria for Tender Evaluation

The Employer shall use the following criteria to evaluate tenders: -

- (a) Compliance with tender conditions;
- (b) Preference point system 90/10 on tenders with a Rand value above R500 000 (five hundred thousand Rand) and preference point system 80/20 for tenders with a Rand value equal to, or above R30 000 but up to a Rand value of R500 000 (Five hundred thousand Rand);
- (c) Status of the enterprise; and
- (d) Price and functionality.

A19.2 APPOINTMENT OF CONTRACTORS

A19.2.1 Procedure for Invitation of Tenders

Tenders will be invited publicly through the general media and other forms of communication to ensure that the target communities are reached. The intention is to

ensure that the SMME's in rural areas that may not be in a position to access the general press is also reached.

A19.2.2 The tender invitation shall include:

- (a) Specifications and description of project or service to be procured.
- (b) Tendering information and documentation will be in English;
- (c) A non-refundable charge shall be payable to cover the cost of the tender documents and specifications;
- (d) In the event where normal tendering is not practical due to other constraints, at least three (3) selected service providers shall be invited to submit quotations.

A19.2.3 Compulsory Requirements

The following requirements shall be applicable to all tenders and non-adherence thereto shall result in an automatic disqualification of the tender submitted:

- (a) Attendance of site inspection for briefing;
- (b) Submission of valid original tax clearance certificate.
- (c) Authority to act and contractually bind the tenderer.

A19.2.4 Closure and Opening of Tenders

Tenders shall close on a date and time specified in tender document and shall be opened and read in public.

A19.2.5 Evaluation of Tenders

Tenders to be evaluated in the same manner as prescribed in the tender data.

A19.2.6 Cessions

A service provider awarded a contract may not cede or subcontract a contract/project or any part thereof without written consent of the Employer and where such consent is granted, a signed agreement involving the cedent, cessionary and the Employer shall be entered into.

In any event, not more than 25% of the value of the contract shall be subcontracted. Both the cedent and the cessionary shall be jointly and severally liable for the quality of the material supplied and workmanship.

A19.2.7 Performance Guarantees

The Employer shall strive to facilitate the participation of HDI's and SMME by waiving or reducing the maximum amounts of sureties as follows:

- (a) No surety for projects between 0 to 500 000
- (b) 1% surety for projects between 500 000 to R1 million
- (c) 2,5% surety for projects between R1 million to R2 million
- (d) 10% surety for projects above R2 million

The period required to provide surety shall be 21 calendar days. However, depending on circumstances, a shorter period may be prescribed. In the event of failure to submit the surety within the stipulated period, the Employer shall be entitled to cancel the contract and award the tender to a suitable contractor.

Sureties may only be accepted from a banking institution registered in terms of the Bank Act, 1996, an insurer registered in terms of the Insurance Act, 1943 or from governmental institutions established for such purposes.

A19.2.9 Notification of Acceptance

Successful service tenderer/s shall be notified before the tender validity period expires.

A19.2.10 Contractual Agreement

The relationship between the Employer and contractor shall be managed under the following contractual documents:

- (a) The tender document submitted by the tenderer
- (b) The project drawings relevant for the tendered project
- (c) The General Conditions of Contract for Construction Works (GCC 2004) and the COLTO Standards Specifications for Road Bridge Works for State Authorities as they may apply from time to time.
- (d) Employers Procurement Policy
- (e) Any other relevant legislation aimed at meeting other government policy initiatives.

A19.3.11 Tax Compliance Status

No contract shall be awarded to an entity, which fails to submit a valid original Tax Clearance Certificate from the South African Revenue Service (SARS) certifying that the taxes of the said entity are in order or that suitable arrangements have been made with SARS, and submitted proof as part of the tender documentation.

In case where the successful tenderer has only submitted a letter from SARS, the tenderer will be given seven (7) working days to submit the original Tax Clearance Certificate. Failure to produce same will disqualify the tenderer and the next recommended tenderer shall be awarded the contract.

A19.2.12 Variations

- (a) The Employer shall have the right to reduce or increase the scope of work by no more than 20% of the tendered amount without affecting the preliminary and general items.

PROJECT SPECIFICATIONS

PART B: MATTERS RELATING TO THE STANDARD SPECIFICATIONS

B1 PROJECT SPECIFICATIONS REFERRING TO THE STANDARD SPECIFICATIONS AND ADDITIONAL SPECIFICATIONS

In certain clauses the Standard Specifications allow a choice to be specified in the Project Specifications between alternative materials or construction methods, and for additional requirements to be specified to suit a particular contract. Details of such alternatives or additional requirements applicable to this Contract are contained in this part of the Project Specifications. It also contains some additional specifications required for this particular Contract.

The number of each clause and each payment item in this part of the Project Specifications consists of the prefix B followed by a number corresponding to the number of the relevant clause or payment item in the Standard Specifications. The number of a new clause or a new payment item that does not form part of a clause or a payment item in the Standard Specifications and is included here, is also prefixed by B followed by a new number. The new numbers follow on the last clause or item number used in the relevant section of the Standard Specifications.

B2 SECTION 1100: DEFINITIONS AND TERMS

Works specifications shall comply with the following specifications:
Standard specifications for road and bridge works for state road authorities (COLTO)

B 1115 GENERAL CONDITIONS OF CONTRACT

REPLACE "for National and Provincial Road and Bridge Works", IN THE SECOND AND THIRD LINES WITH "for Road and Bridge Works for State Road Authority".

ADD THE FOLLOWING CLAUSE:

"B 1156 LABOUR-OPTIMISING CONSTRUCTION

The cost effective employment of as great a portion of labour as is practically and technically feasible to produce a standard of construction as required by the

Specifications, thus the economic substitution of plant and mechanical equipment in favour of available labour using hand tools, on condition that this method is not more expensive than the conventional construction practices."

B3 SECTION 1200: GENERAL REQUIREMENTS AND PROVISIONS

B 1202 SERVICES

Add the following:

"Information regarding known services is shown on the drawings.

The information shown on the schedule of services is based on the best available information. No guarantee as to the accuracy of the information can be given and the schedule should, therefore, be used as a guide only.

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.

The relocation and protection of services shall be carried out in conjunction with the service owners and in compliance with the Machinery and Occupational Safety Act 6 of 1983.

Where protective measures involve the construction of permanent work, payment as specified in the order given by the engineer, shall be either at contract rates, where these are applicable, or where no contract rates are applicable, in accordance with the provisions of Clause 6 of the General Conditions of Contract.

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 workings be accepted as a basis for claiming an extension of time for completing the Works."

B 1204 PROGRAMME OF WORK

Insert the following before the first paragraph:

"A bar-chart programme shall be provided showing the various activities in such detail as may be required by the engineer. The programme shall be updated monthly in accordance with the progress made by the contractor. The critical path of the programme of work shall also be indicated.

In compiling the programme of work, the contractor shall incorporate the following important factors specified in these specifications:

- The specified contract period.
- Percentage of work to be done by Black Economic Empowered Enterprises and labour intensive work including a breakdown of the labour intensive work.
- Weather limitations regarding the application of bituminous products as specified in sections 4100, 4200, 4400 and 4500 of the standard specifications.
- The relocation and protection of services.
- Accommodation of traffic proposals.
- Phase construction detail relating to the relocation and protection of services, accommodation of traffic and weather limitations.

The contractor shall take note of various factors contained in these specifications which will have a significant influence on the compilation of the programme of work.”

B 1205 WORKMANSHIP AND QUALITY CONTROL

Replace the third paragraph with the following:

“The contractor shall determine his own frequencies at which quality or process control tests are to be undertaken. The engineer will, however, undertake all acceptance control tests for the judgement of workmanship and quality of products.”

Add the following at the end of this clause:

“The engineer shall, for the purpose of acceptance control on products and workmanship, assess test results and measurements in accordance with the provisions of section 8300 of the standard specifications (quality control scheme 2). Where small quantities of work are involved, a lot shall mean a full day's production for a specific item of work subject to acceptance control testing.”

B 1206 THE SETTING-OUT OF WORK AND PROTECTION OF BEACONS

Add the following:

“Before commencing construction the contractor shall align the road horizontally according to the information given on the drawings and shall establish a stake line for controlling purposes. Subsequently he shall supply the Engineer's Representative with a full set of cross-sections taken at 10 m intervals along the centreline of the road. These cross-sections shall cover the full width of the road reserve. Stake-line beacons shall be clearly marked and protected during construction.”

Amend the first line of the last paragraph as follows:

“The setting-out of work including the survey and staking of the new road centreline will not be measured and paid for

B 1209 PAYMENT

(b) Rates to be inclusive

Add the following to the first paragraph:

"VAT shall be excluded from the tendered rates and sums and provided for as a lump sum in the summary of the Schedule of Quantities."

(e) Materials on the site

Add the following to the end of the clause:

"The engineer may at his sole discretion allow payments under "Materials on the site" in respect of any construction materials, if stored off-site, providing that:

- the site selected for this purpose is approved by the engineer;
- such land is physically separated from any production plant or operation;
- only materials for use under this contract are stockpiled on such land, and

the contractor has provided proof of an agreement with the owner of such land that the owner has no objection to using the land for these purposes and has no claim whatsoever on any materials stockpiled on such land."

Add the following subclause:

"(g) Payment certificates

With reference to Clause 6.10 of the General Conditions of Contract, the Engineer'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 Engineer. The cost of duplicating and delivering copies of the certificate to the Contractor, the Engineer and the Employer shall be borne by the Contractor. The Engineer and the Employer require a total of four sets of A4-sized paper copies."

B 1210 CERTIFICATE OF PRACTICAL COMPLETION OF THE WORKS

Add the following at the end of the clause:

“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 also have been met:

- (i) 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.
- (ii) 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.
- (iii) 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.”

B 1213 VARIATION FROM SPECIFIED NOMINAL RATES OF APPLICATION OR NOMINAL MIX PROPORTIONS

Add the following to the first paragraph:

“Tenderers shall, for the purpose of calculating tender rates, take note that the nominal rates of application and/or nominal mix proportions of a number of products are amended in these project specifications.”

B 1215 EXTENSION OF TIME RESULTING FROM ABNORMAL RAINFALL

Add the following:

“Extension of time for completion in terms of Clause 5.12 of the General Conditions of Contract in respect of abnormal rainfall shall be determined in terms of Method (ii) (The Critical Path Method) as described under Clause 1215 of the Standard Specifications. This formula does not take account of flood damage that could cause further or concurrent delays. Extension of time due to delays resulting from flood damage will be in accordance with the provisions of Clause 8.4 of the General Conditions of Contract.”

The Critical Path Method

The critical path method is specified in the project specifications for determining extension of time resulting from abnormal rainfall and it shall be applied as follows:

A delay caused by inclement weather conditions will be regarded as a delay only if, in the opinion of the engineer all progress on the item/s of work on the critical path of the working programme of the contractor has been brought to a halt. Delays on working days only (based on a five-day working week) will be taken into account for the

extension of time, but the contractor shall make provision in his programme of work for an expected delay of “n” working days caused by normal rainy weather, for which he will not receive any extension of time. **The value of “n” shall be given in the project specifications by the Engineer.**

Extension of time during working days will be granted to the degree to which actual delays as defined above exceed the number of “n” working days as mentioned in the project specifications.

The Value of “n” for this contract is 54 days

(derived from the average number of days when rainfall of 10mm or more falls during normal rainy season using records from 2004 to 2012)

B 1217 PROTECTION OF THE WORKS AND REQUIREMENTS TO BE MET BEFORE CONSTRUCTION OF NEW WORK ON TOP OF COMPLETED WORK IS COMMENCED

Add the following clauses:

- “(h) Prior to the start of any excavation in the existing pavements on any part of the works, the contractor shall submit to the engineer for approval a method statement for the execution of that part of the work. The contractor is responsible for the protection of the underlying pavement layers and the drying out and/or keeping dry of such excavations. The contractor's programme shall make provision for the speedy backfilling of the excavations and the drainage thereof if inundation cannot be prevented.

The contractor shall, at his own cost, be responsible for the repair of pavement layers which have been damaged due to his own works or his neglect to submit his planning to the engineer for approval or to adhere to approved precautionary measures.

- (i) Concrete elements adjoining the road which is designated for resurfacing, shall be covered with protective material prior to any spraying operations to prevent the concrete from being stained with bituminous binder. The protection of concrete elements shall be to the engineer's satisfaction and no additional payment will be applicable for taking the specified protection measures.”

B 1224 THE HANDING-OVER OF THE ROAD RESERVE

Add the following to the first paragraph:

“The total length of the road reserve will be handed over to the contractor at the start of the contract period.”

B1229 SABS CEMENT SPECIFICATIONS

Replace the last paragraph of this clause with the following:

“Where reference is made in this specification or the standard specifications to the cement specifications, eg. SABS 471: Portland cement and rapid hardening Portland cement, it shall be replaced with the new specification:

SABS ENV 197-1: Cement-composition, specifications and conformity criteria.

Part 1: Common cements.

Furthermore, where reference is made in this specification or the standard specifications to the different cement types, the following new names/types shall apply:

Old product nomenclature	Typical new product nomenclature	
	Cement type	Cement strength class
OPC	CEM I	32,5
	CEM I	32,5R
RHC	CEM I	42,5
	CEM I	42,5R
LASRC	No provision made	No provision made
PC15SL	CEM II/A-S	32,5
	CEM II/A-S	32,5R
	CEM II/A-S	42,5
	CEM II/A-V	32,5
	CEM II/A-V	32,5R
	CEM II/A-W	32,5
	CEM II/A-W	32,5R
RH15FA	CEM II/A-V	42,5
	CEM II/A-V	42,5R
	CEM II/A-W	42,5
	CEM II/A-W	42,5R
PBFC	CEM III/A	32,5
	CEM III/A	32,5R
PFAC	CEM II/B-V	32,5
	CEM II/B-W	32,5
RH30SL	CEM II/B-S	32,5R
	CEM II/B-S	42,5

Old product nomenclature	Typical new product nomenclature	
	Cement type	Cement strength class
RH40SL	CEM III/A	32,5R
	CEM III/A	42,5

CEM I 32,5, CEM II A-S 32,5, CEM II/A-V 32,5, or CEM III A may be used for the manufacture of reinforced concrete members.”

Add the following new clauses:

B 1230 SUBCONTRACTORS

It is a condition of the contract that an approved subcontractor shall not sublet part of his work, covered in his appointment by the main contractor, to another subcontractor without the consent and approval of the engineer.

B 1231 CONTRACTOR’S ACTIVITIES ON PRIVATE PROPERTY

(a) Action required prior to entering property

The contractor shall not enter onto private property or property not belonging to the employer for the purpose of carrying out any work in connection with the contract without having completed the following formalities well ahead of the intended date for entering such property:

- The contractor shall give notice, in writing, to the owner, lessee or occupier, on a form approved by the engineer, of his intention of entering upon the property, together with full details of the work he intends to carry out on the property and the intended dates and duration of occupation.
- The contractor shall arrange a meeting with the owner, lessee or occupier, to:
 - conform that the owner, lessee or occupier, has permitted the contractor to enter upon the property for the said purpose;
 - obtain details from the owner, lessee or occupier, regarding any special precautions that should be taken by the contractor during the execution of the works;
 -

record details, with photographs if necessary, of the condition of the property at that stage, including any defects in buildings, swimming pools, outbuildings, fences, etc. that may be affected by his activities;

- record in writing the details of the above; the form and substance of such records and agreements shall be subject to the engineer's approval and a copy of the details as recorded shall be sent to the engineer for his records and his approval.
- In the event of the contractor failing to reach agreement with the owner, lessee or occupier of the property on any of the matters referred to above, the matter shall be referred to the engineer for further action.

B 1232 MATERIALS

The Contractor, when using materials that are required to comply with any standard specification, shall, if so ordered, furnish the Engineer 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 Engineer's office on the Site free of charge.

Where proprietary products have been specified, similar products may be used subject to the prior written approval of the Engineer.

Unless otherwise specified, all proprietary materials shall be used and placed in strict accordance with the relevant manufacturer's current published instructions.

Unless anything to the contrary is specified, all manufactured articles or materials supplied by the Contractor for the permanent works shall be unused.

Earth, stone, gravel, sand, and all other materials excavated or present on the Site or in borrow areas provided by the Employer shall not become the property of the Contractor, but will be at his disposal only in so far as they are approved for use on the Contract. Existing structures on the Site shall remain the property of the Employer and except as and to the extent required elsewhere in the Contract, shall not be interfered with by the Contractor in any way.

No materials to be included in the works shall be damaged in any way and, should they be damaged on delivery or by the Contractor during handling, transportation, storage, installation or testing they shall be replaced by the Contractor at his own expense.

All places where materials are being manufactured or obtained for use in the Works, and all the processes in their entirety connected therewith shall be open to inspection by the Engineer (or other persons authorised by the Engineer) at all reasonable times, and the Engineer shall be at liberty to suspend any portion of work which is not being executed in conformity with these specifications.

B 1233 TRAINING

Temporary personnel involved in the Contract in accordance with the provisions set out in Part D. The selection of the candidates will be approved by the Engineer, the representatives of the local communities and the Employer's Representative in the area, subject to the required entrance levels. All training courses must be offered

through approved accredited training organizations, nominated by the Engineer upon the written instruction of the Employer.

The Contractor shall provide the following for the training:

- (a) Electrified venue with sufficient lighting and furniture
- (b) All necessary stationery, consumables and study material
- (c) Transport to and from the training venue
- (d) Wages for candidates attending technical skills training during working hours
- (e) Payment to approved training organizations for the provision of training.
- (f) Details of training venue (location, size, facilities available)

B1234 WORKMEN'S COMPENSATION ACT

All labour employed on the site shall be covered by the Workmen's Compensation Act. The contractor shall pay in full, including the payment of the necessary levies, such amounts, as are due in terms of the Act. The contractor at the commencement of the contract shall resolve the manner in which Workmen's Compensation will be handled. Amounts paid by the contractor shall not be included in the wage rates but shall be an extra payment allowed for by the contractor.

B 1235 MEASUREMENT AND PAYMENT

Item	Unit
B12.01 Protection, removal, realignment and Replacement of Services	
(a) Utility services	
(i) Relocation of services and payments to service owners.	Provisional sum
(ii) Handling costs and profit in respect of Sub item B12.01 (a) (i) above	percentage (%)

The provisional sum for utility services shall be expended in accordance with Clause 6.6.1 of the General Conditions of Contract. The tendered percentage is a of the amount actually spent under item B12.01 (a) (i), which shall be paid to the Contractor for full compensation for handling costs and profit in connection with dealing with utility services.

B4 SECTION 1300: CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS

B 1302 GENERAL REQUIREMENTS

(a) Camps, construction plant and testing facilities

Add the following:

“There is no area available within the road reserve for the establishment of the contractor’s organization, camp and constructional plant on site.

The contractor shall make his own arrangements regarding the establishment of a camp site and housing for his construction personnel. No personnel will be allowed to reside on the site. Only night watchmen may be on the site after hours.

The contractor shall be responsible for the security of his personnel, construction plant on and around the site of the works, and of his camp. The cost of this will be deemed to be included in item B13.01.

“The contractor's offices, laboratory and stores shall, unless otherwise agreed, be erected in close proximity to the engineer's offices and laboratory. The entire area shall be fenced with a minimum of 1,8m height razor taped mesh. The contractor's offices, laboratory and stores and engineer's offices and laboratory shall be provided with sufficient perimeter lighting.

The contractor shall provide security guards from a reputable security company for protection of the engineer's offices and laboratory. The security guards must be provided with a two way radio and be in constant contact with the control room of the security company and an armed response unit. The security guards must be armed and accompanied by trained guard dogs. Payment for the above shall be included in item B13.01.”

“The contractor shall provide at each work site at least one portable chemical latrine unit per 10 workers for use by construction workers employed on the project. The latrine units shall be serviced daily and kept in a hygienic and orderly state to the satisfaction of the engineer. The contractor shall move them to the required positions, and finally remove them, on completion of the works, all to the satisfaction of the Health Department of the relevant authority. Toilets must be screened from public view and their use shall be enforced. No separate payment shall be made for this requirement and payment 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 (As specified)	Lump Sum

Add the following after the fifth paragraph:
C3.35

"The combined total tendered for sub-items (a), (b) and (c) shall not exceed 15% of the tender sum, excluding VAT.

Should the contractor be of the opinion that 15% is inadequate to cover his costs in terms of section 1300, he shall indicate separately with his tender where such costs have been allowed for in his tender. If no such indication is given, the contractor shall not at any stage during the contract for any reason whatsoever claim additional compensation under this item."

B5 SECTION 1400: HOUSING, OFFICES AND LABORATORIES FOR THE ENGINEER'S SITE PERSONNEL

B 1402 OFFICES AND LABORATORIES

(a) General

: Add the following

"It is a requirement of the contract that the offices for the engineer's supervisory staff shall be supplied with approved burglar proofing, the cost of which shall be included in the relevant tendered rates."

(b) Offices

Replace subsubclause (xii) with the following:

"A complete telephone service together with fax equipment shall be provided. The cost of telephone and cell phone calls and fax transmissions are included in the prime cost sum for the provision of the telephone service.

The following list is indicative of the number and sizes of offices and other accommodation that will be required:

	Description	Area
•	Office for the engineer's personnel	4 x 12m ²
•	Conference room	23m ²
•	Car ports	4 x 15m ²

(c) Laboratories

Add the following:

"The layout, sizes and general requirements for the laboratory are shown on the drawings in Volume 4. All doors and windows of the laboratory shall close air tight to ensure that the instruments are not affected by draughts. The doors shall be double to allow the importing of apparatus. The sides of the store shall be similar to the walls of the laboratory.

“Uninterrupted power supply (UPS) units shall be supplied for all electronic equipment.”

(g) Ablution units

Add the following:

“Two ablution units are required on site. Each unit shall contain at least a wash-hand basin, flush toilet, urinal, shower unit and the necessary accessories.

Both ablution units shall be provided with hot and cold water.

The towels shall be replaced with clean towels every second day and soap supplied as necessary.

One of the units shall contain a lockable clothing cupboard for at least four employees. The other unit shall contain a lockable clothing cupboard for at least two employees.

The ablution units shall each have an interior floor area of at least 10m² and a 1,5m wide veranda on one side with a 100mm concrete floor.

The tendered rate under Item B14.01(e) shall include full compensation for the supply, erection and maintenance of the complete units as specified.”

Add the following new subclause:

“(i) Kitchen units

The contractor shall provide two kitchen units with minimum interior floor area of 12m², a 1,5m wide veranda on one side with a 100 mm thick concrete floor in the vicinity of the offices.

Each unit shall contain at least two opening windows, a lockable door, a two-plate electrical stove without oven, a steel framed formica topped table (0,6 m x 1,2 m), four steel framed bar or kitchen stools, a lockable refrigerator of one hundred and fifty litres capacity, a kitchen sink supplied with clean hot and cold potable water, a drain board coupled to a suitable drainage system and a lockable steel grocery cupboard.”

B 1403 HOUSING

(c) Rented accommodation

Add the following:

“The engineer will arrange for the obtaining of rented accommodation for his supervisory personnel on site. Payment of rent shall be made under the Provisional Sum in subitem 14.07(a) and shall be expended on a monthly basis as ordered by the engineer.”

(a) Accommodation for labourers

Add the following:

"Curtains must be provided to the windows of the housing unit."

B 1404 SERVICES

(b) Water, electricity and gas

Add the following:

"The power supply shall be regulated by a suitable voltage regulator in order to maintain a constant current and voltage level at all times to prevent damage to the office and laboratory equipment and related electronic equipment during power surges. In the event of damage to the office and laboratory equipment and related electronic equipment because of a faulty voltage, the contractor shall be liable for payment of all repair or replacement costs of such damaged items."

B 1406 MEASUREMENT AND PAYMENT

Change the unit of measurement of Item 14.01(e) to "number" and renumber as follows:

Item	Unit
B14.01 (e) Ablution units	number (No.)

Add the following subitem to item 14.01:

Item	Unit
B14.01 (g) Kitchen units	number (No.)

The unit of measurement and payment shall be the authorized number of units erected, complete and in accordance with the specifications and drawings, together with all items as specified in Clause B1402.

The tendered rate shall include full compensation for the supply and erection of units, accessories, furniture, etc. as specified and for the proper maintenance, cleaning and provision of daily requirements.

Add the following subitem to Item 14.03:

Item	Unit
"B14.03 (a)(xvii) Uninterrupted power supply units	number (No.)

The unit of measurement and payment shall be the authorized number of units erected, complete and in accordance with the specifications and drawings, together with all items as specified in Clause B1402.

The tendered rate shall include full compensation for the supply and erection of units, accessories, furniture, etc. as specified and for the proper maintenance, cleaning and provision of daily requirements."

B6 SECTION 1500 : ACCOMMODATION OF TRAFFIC

B1501 SCOPE

Add the following:

"It is a condition of this contract that traffic is accommodated in accordance with the provisions of the latest edition of the South African Road Traffic Signs Manual (SARTSM). The latest version for use in the accommodation of traffic is Volume 2, Chapter 13 of the June 1999 edition. Copies of this publication are available from the South African National Roads Agency Limited, P.O. Box 415, Pretoria, 0001."

B 1502 GENERAL REQUIREMENTS

(a) Safety

Add the following:

"The Contractor shall take all precautions necessary to programme and conduct his construction operations in such a manner that inconvenience and annoyance to public traffic, property owners and road users is kept to a minimum. The Contractor shall also ensure that safety requirements are strictly enforced at all times.

The Contractor shall be responsible for maintaining the existing road within the site of the Works in a safe and trafficable condition for the duration of the contract.

The Contractor, before starting work on any part of the site or at any position, shall submit to the Engineer his method statement and programme for accommodating traffic on that section."

(e) Access to properties

Add the following:

"Where the alignment of the new road coincides with the alignment of the existing road, a number of accesses to private properties will have to be operational and maintained during the constructional period. No separate payment will be made for providing acceptable and safe access across the new road at all times during construction of the road."

(i) Traffic safety officer

Add the following to the second paragraph:

“The Contractor shall submit a CV of the candidate to the engineer for approval before the Traffic Safety Officer is appointed. The Traffic Safety Officer shall be available to discuss road safety and traffic accommodation matters whenever required by the engineer.”

Replace subsubclauses (ii) and (iii) with the following:

“(ii) Record on neat and dimensioned sketches and submit to the engineer 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 from identifiable permanent features or survey points located on 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 engineer.

The records shall be amended whenever changes are made in the field and the revised detailed sketches shall be submitted to the engineer. Such changes shall include the recording of the position of flagmen and STOP/GO control men and their associated traffic accommodation equipment wherever used.

(iii) Personally inspect the position and condition of each traffic accommodation feature on the entire site of works twice each day before 09:30 and at 16:30, to record all irregularities discovered and the remedial action taken, and to sign off as correct and submit to the engineer such record sheets by midday of the next working day. The Traffic Safety Officer shall keep a duplicate book for this specific purpose.

The Traffic Safety Officer shall also submit with this report to the engineer the daily labour returns of flagmen, STOP/GO and traffic signal control men employed.”

Add the following new subsubclauses:

(ix) The Traffic Safety Officer shall be equipped with a cellular telephone and shall have a vehicle and 3 labourers at his disposal 24 hours a day and he shall be directly answerable to the Contractor’s Site Agent. The Traffic Safety vehicle shall be a truck with a capacity of 3 tons and shall be equipped with a high visibility rear panel in accordance with the requirements of Volume 2 Chapter 13 of the South African Road Traffic Signs

Manual. The words “TRAFFIC CONTROL” shall be written on the high visibility panel in highly legible letters not less than 140mm high.

The Traffic Safety Officer shall have a direct line of communication at all times with the police and traffic officers responsible for the area within limits of the contract.

The provision of the Traffic Safety Officer, the Traffic Safety vehicle, the driver and three labourers and the cost of the cellular telephone shall be deemed to be included in the rate tendered for Pay Item B15.01 : Accommodation of traffic and maintaining temporary deviations.

- (x) Ensure that all obstructions related to the contractor's activities be removed before nightfall where applicable and as instructed by the engineer and that the roads are safe for night traffic.
- (xi) Be responsible for removal of broken down vehicles off the roadway and implementing actions requested by the traffic authorities with regard to the work to be carried out and be responsible for the erection and maintenance of all traffic signs necessary for the accommodation of traffic.
- (xii) In the event of an accident, record details of the accident in a written report, to a format agreed with the engineer accompanied by photographs and a neat sketch plan on which is shown identifiable permanent features, relevant dimensions and the position of all temporary traffic control facilities or other devices used for traffic accommodation.”

Add the following new subclauses:

“(j) Overnight parking of plant

During non-working hours, all plant and traffic hazards shall be removed from the road and all signs no longer applicable to the situation shall be removed or effectively covered. No plant shall be left adjacent to the road during overnight parking. Plant which is impractical to be parked at the contractor's camp may be parked at the construction site, provided it is parked at least 5 m from the edge of the road surface.

(k) Use of reflective safety jackets

The Contractor shall ensure that all site 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 in proximity of the travelled way. The safety

jackets shall be of an approved Level 2 type, bright/fluorescent orange, red-orange or yellow in colour with retro-reflective strips as indicated in Chapter 13 of Volume 2 of the South African Road Traffic Signs Manual (SARTSM), Figure 13.30 (Detail 13.30.2). Any person found not wearing a reflective safety jacket under these circumstances shall be removed from the site until such time as he/she 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 engineer, ineffective shall be immediately replaced by the contractor.

The provision of these safety jackets shall be deemed to be included in the rate tendered for item B15.01 : Accommodation of traffic and maintaining temporary deviations.

(l) 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 traveling public, accommodation of traffic, and the provision of plant and personnel in accordance with these specifications or as required by statutory authorities or ordered by the engineer, shall be sufficient cause for the engineer to impose penalties as follows:

- 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 section B1500 of the project specifications.
- In addition 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 the engineer has given an instruction to this effect. The engineer'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."

(m) Handing over the site

The total extent of the site between the limits of construction as described in this document and indicated on the drawings will be handed over to the contractor at the commencement of the contract period. The engineer however reserves the right to adjust this arrangement should progress or safe passage of traffic warrant such a change.

(n) Use of explosives in close proximity of temporary deviations

The contractor shall arrange all necessary traffic control and other requirements to safeguard the traffic on temporary deviations during

blasting operations.

(o) Land taken up for deviations

Negotiations with landowners to obtain the land taken up by temporary deviations will be undertaken by the employer. A prime cost sum is allowed in the bill of quantities for payment of compensation to affected landowners. All other negotiations regarding temporary access to properties, land-use, fencing requirements etc. shall be dealt with by the contractor in conjunction with the engineer and be confirmed in writing and be kept on record by the contractor.

B 1503 TEMPORARY TRAFFIC-CONTROL FACILITIES

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

The contractor shall provide, erect and maintain the necessary traffic-control devices, road signs, channelization devices, barricades, warning devices and road markings (hereinafter referred to as traffic-control devices) in accordance with the project specifications, the South African Road Traffic Signs Manual (SARTSM) and as shown on the drawings and remove them when no longer required. It shall be incumbent upon the contractor to ensure that the abovementioned traffic-control devices are present where required at all times and are functioning properly.≡

Replace the third paragraph with the following:

“The type of construction, spacing and placement of traffic-control devices shall be in accordance with the SARTSM. The recommended arrangements of the traffic control devices illustrated and/or drawings issued by the engineer shall not be departed from without prior approval of the engineer. The arrangements expected to be most commonly used in the contract are given on the tender drawings.

The details shown for spacing and placement of traffic-control facilities may however, be revised at the discretion of the engineer where deemed necessary to accommodate local site geometry and traffic conditions.”

(b) Road signs and barricades

Add the following:

“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, lost, or stolen.

All temporary road signs required to be moved often shall be mounted on portable supports for the easy moving of signs to temporary positions. The only permitted method of ballasting the sign supports shall consist of

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 in the tendered rates for the various types of temporary road signs.

The covering of permanent road signs, if applicable, shall be by utilizing a hessian bag that shall be pulled over the sign in the form of a hood and fastened to the signposts. Plastic bags or other materials and fastened by means of adhesive tape shall not be permitted. The cost of covering of permanent road signs shall be included in the tendered rates of items B15.01 and B15.10.”

(d) Channelization devices and barricades

Add the following:

“The use of drums as channelisation devices shall not be permitted. Drums may however be used to set up barriers as provided for in sub clause 1503(d).

Delineators shall:

- (i) comply with the manufacturing and reflective requirements of the SARTSM and the blades shall be reversible with dimensions as indicated on the drawings;
- (ii) have smooth and round edges and be mounted on a post and base. All components shall be of durable plastic material;
- (iii) have the lower edge of the reflective part of the delineator mounted not lower than 250mm above the road surface;
- (iv) be capable of withstanding the movement of passing vehicles and gusting winds up to 60 km/h in typical working conditions without falling over. To achieve this, the base shall be at least 0,18 m² and ballasted by sandbags with sand;
- (v) together with its mounting be designed such that it will collapse in a safe manner under traffic impact.

Traffic cones manufactured in a fluorescent red-orange or red plastic material may be used only at short term lane deviations during daylight. Cones shall not be used on their own, but shall be interspersed with delineators at a ratio not exceeding 3:1. Cones used on all deviations shall be 750 mm high. Lane closures which continue into the night time shall be demarcated by delineators only.”

(e) Warning devices

All construction vehicles utilized on site shall be equipped with visible rotating amber warning lights and these shall be operational at all times when travelling on site or when vehicles are stationary in construction areas. The contractor shall also provide the engineer's site personnel with warning lights for their vehicles (maximum of two (2) lights required). All construction vehicles shall clearly display an identification sign(s) with the legend "CONSTRUCTION VEHICLE" visible from the front and back of the vehicles.

No separate payment shall be made for the provision of warning lights or identification signs for construction vehicles and shall be deemed to be included in the tendered rate for Pay Item B15.01.

Add the following new subclauses:

(g) Maintenance

All temporary traffic control facilities shall be kept clean and maintained in good order at all times.

If the coefficient of retro-reflection of any of the Contractor's signs falls below 80% of the value given in Table 1 of CKS 191 - 1987 (observation angle 0,33 , entrance angle 5,0) for the grade and colour of the material used the sign shall be considered defective and shall either be rectified or removed and replaced.

(h) Sufficiency

The Contractor shall determine, from his proposed programme, the number of temporary traffic-control facilities required and shall not commence with any accommodation of traffic before sufficient traffic-control facilities have been delivered to the site.

The Contractor shall keep sufficient surplus barricades, signs and delineators on or around the site to allow for the replacement of damaged or missing items within a period of two (2) hours of the deficiency being discovered.

The Contractor shall allow in his tendered rates for the replacement of five (5) percent of the traffic-control facilities scheduled. This percentage is to allow for the replacement of traffic-control facilities which become unserviceable or damaged by public traffic or stolen and is beyond the Contractor's control and not the result of his actions or omissions during the period of accommodation of traffic on the site. The replacement of traffic control facilities over and above this five (5) percent of the scheduled items damaged by public traffic or stolen shall be payable at tendered rates.”

B1504 WIDTH AND LENGTH OF TEMPORARY DEVIATIONS

Replace the second paragraph with the following:

"Where the existing road is repaired, resurfaced or reconstructed in half widths, the roadway width for accommodating one-way traffic shall be at least 4m wide. The length of the half-width construction shall not exceed 4 000 m."

B 1517 MEASUREMENT AND PAYMENT

Item	Unit
B15.01 Accommodating traffic and maintaining temporary deviations	kilometre (km)

Add the following:

"The unit of measurement and payment under Item 15.01 shall apply mutatis mutandis to Item B15.01.

The tendered rates for Item B15.01 shall however include full compensation for all flagmen as required and as shown or specified on the accommodation of traffic drawings in accordance with the requirements of the South African Road Traffic Signs Manual Volume 2 Chapter 13."

Item	Unit
B15.03 Temporary traffic-control facilities	

Add the following:

"For the purposes of this Contract, it should be noted that measurement and payment for flagmen is included under Item B15.01."

Amend the paragraph headed "**General**" to read:

"The tendered rates for the respective traffic-control facilities shall include full compensation for the supply and initial erection complete with posts, stakes, portable stands and sandbags as may be required, for clearing, for their maintenance and the replacement of items which have become unserviceable due to normal wear and tear, and their removal when no longer required. As stated in subclause B15.03(k), the Contractor shall allow in his tendered rates for the replacement of at least five (5) percent of the traffic-control facilities scheduled. This percentage is to allow for the replacement of traffic-control facilities which become unserviceable or damaged by public traffic or stolen and is beyond the Contractor's control and not the result of his actions or omissions during the period of accommodation of traffic on site. The replacement of traffic control facilities over and above this five (5) percent of the scheduled items

damaged by public traffic or stolen shall be payable at tendered rates. 75% of the tariff will be payable when the items have been provided and erected in position for their first use on site and 25% when finally removed from the site.

The tendered rate for sub-item (h), delineators, shall also include full compensation for moving these signs laterally (as required or instructed by the engineer) as specified in Subclause B1503 (c) so as to widen the travelled way when work is not in progress on that part of the section that is closed, or vice versa.≡

Add the following new Item :

“Item	Unit
B15.14 Penalty to be deducted for non-compliance with requirements for accommodation of traffic	
(a) Fixed penalty per occurrence	number (No.)
(b) Time related penalty per hour	hour (hr)

In subitem B15.14(a), 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 section B1500 of the project specifications.

In addition in subitem B15.14(b), a time-related penalty of R500-00 per hour over and above the fixed penalty in sub-item B15.14(a) which shall be deducted for non-compliance to rectify any defects in the accommodation of traffic within reasonable time after the engineer has given an instruction to this effect. The engineer=s instruction shall state the time in hours for re-instatement of the defects. Should the contractor fail to adhere to the instruction, the time-related penalty will be applied from the time the instruction was given.”

Add the following new clause:

B 1518 ADDITIONAL REQUIREMENTS

The following additional requirements shall apply:

- The contractor's tendered rates for the relevant items in the schedule of quantities shall include full compensation for all possible additional costs which may arise from the above, and no claims for extra payment due to inconvenience as a result of the modus operandi will be considered.
- No section of the road shall be closed to traffic during the construction works and at least one lane in each direction shall be open to traffic at all times.

- The travelling public shall have the right of way on public roads, and the contractor shall make use of approved methods to control the movement of his equipment and vehicles so as not to constitute a hazard on the road.
- Failure to maintain road signs, warning signs or flicker lights, etc. in a good condition shall constitute ample reason for the engineer to bring the works to a stop until the road signs, etc. have been repaired to his satisfaction.
- The contractor may not commence construction activities before adequate provision has been made to accommodate traffic in accordance with the requirements of this document and the South African Road Traffic Signs Manual.
- The contractor shall submit proposals for each traffic accommodation in connection with directional signs to the engineer for approval.

B7 SECTION 1600: OVERHAUL

B 1602 DEFINITIONS

(a) Overhaul material

Add the following:

- (vii) Any material, irrespective of the type of material, which is removed from the existing pavement layers and spoiled at designated spoil sites, or is re-used in other parts of the works or to approved stockpiles or from stockpiles to any part of the works.

(b) Overhaul

Add the following:

Overhaul shall not be payable on materials transported from commercial sources.

B8 SECTION 1700: CLEARING AND GRUBBING

B1702 DESCRIPTION OF WORK

(a) Clearing

Add the following:

“Clearing shall include the removal of material to a thickness of up to 150mm in-situ material as ordered by the engineer. No payment shall be made for temporary stockpiling of topsoil material in the case where this material is applied as topsoil after completion of roadside slopes.

Should the required depth exceed 150mm, the total volume of material removed shall either be classified as “temporary stockpiling of topsoil” or “unsuitable roadbed material” or “cut to spoil” whichever is applicable as allowed for in the standard specifications. In these cases no payment shall be made for clearing and grubbing.

Clearing as described shall in all cases be undertaken in such a manner that the topsoil is preserved and not contaminated with other debris or rubbish. Cross-sections for the determination of earthworks quantities shall be taken after clearing (topsoil or unsuitable roadbed material) and roadbed preparation if applicable.

The payment for the clearing of concrete structures which cannot be cleared by means of a bulldozer as described under clause 1702(a), shall be made according to item B17.08.”

Add the following subclauses:

“(e) Existing roads

Where new construction work extends over existing roads, the existing road surface shall be ripped and removed if so directed by the engineer. The work as described above will be paid for under item B17.01.

(f) Removal of trees

Only trees identified and marked by the engineer shall be removed.”

B 1703 EXECUTION OF THE WORK

(a) Areas to be cleared and grubbed

Add the following:

“Apart from normal clearing and grubbing, the fill embankments of the existing roads are also to be cleared and grubbed over the areas where the new horizontal alignment coincides with the alignment of the existing road, or where repairs are required to the fill embankments of the approaches of bridges. Provision is made for separate payment for clearing and grubbing of the existing fill embankments where conventional machinery might be suitable to undertake the work due to the steep side slopes of the embankments. An additional pay-item is allowed for in the bill of quantities for this type of clearing and grubbing which may have to be undertaken by hand or similar manner

(c) Disposal of material

Add the following:

“(i) Non toxic waste (trees, tree stumps, plain and reinforced concrete, rubble, etc.)

All surplus or unsuitable material (non-toxic waste) shall be disposed of at an approved dumping site. The local authority within whose boundaries the site is located, must approve such site, and the dumping must comply with all statutory and municipal regulations. Rates tendered shall include an unlimited free haul distance to the approved dumping site.

(ii) Toxic waste (bitumen products, etc.)

The contractor shall identify a approved toxic waste dumping site. Pay item B17.08 has been provided in the schedule of quantities to compensate the contractor for all costs associated with the removal and disposal of existing toxic waste, viz existing bitumen products.

Toxic waste generated by the contractor during construction shall be removed and disposed of by the contractor at his own cost. No pay item has been provided for this work. The cost thereof shall be deemed to be included in the contractor’s tendered rates.”

B 1704 MEASUREMENT AND PAYMENT

Add the following new Item:

Item	Unit
B17.08 Disposal of toxic waste including dumping site fees and an unlimited free-haul distance to an approved dumping site	cubic metre (m ³)

The unit of measurement shall be the cubic metre of in-situ material removed.

The tendered rate shall include full compensation for all excavation, demolition and for loading, transporting and disposal of the toxic waste, including dumping site fees and an unlimited free-haul distance to an approved dumping site.

B9 SECTION 1800: DAY WORK

Add the following new Section:

B 1801 SCOPE

This section covers the listing of daywork items for use in determining payment for work which cannot be quantified in specific pay item “units” in the bill of quantities or work ordered by the engineer during the construction period which was not foreseen at tender stage for which no applicable rate exists in the schedule or for work of a special or different character warranting special payment as decided by the engineer. No surcharge is applicable to the rates tendered under Section B1800 of the schedule of quantities.

B1802 ORDERING OF DAYWORK

No daywork shall be undertaken unless specific written authorisation is obtained from the engineer.

B1802 GENERAL

The contractor shall submit records of the work performed in accordance with the requirements of Clause 6.5 "Day work" of the general conditions of contract to the engineer.

B1803 MEASUREMENT AND PAYMENT

Only work ordered by the Engineer to be carried out under dayworks shall be measured and paid for at the rates given in the daywork schedule.

The daywork rates submitted for labour shall cover overhead charges and profit, site supervision and administration staff, use of small hand tools and appliances, non-mechanical plant and equipment, consumable stores and site supervisors transport.

The daywork rates for vehicles, plant and equipment shall be all-inclusive hire charge for the use of the vehicle and driver or plant/equipment and operator and shall apply only to vehicles, plant and equipment nominated in writing by the engineer.

The mark-ups on daywork items in accordance with the Appendix to the Tender shall not be applicable on daywork items listed in the bill of quantities in terms of the above specifications. In the event of new daywork rates being requested for items not appearing in the bill of quantities, then the provisions of the general conditions of contract and the Appendix to the Tender shall apply.

Prior to the commencement of any work by the labourers described under item B18.01, the contractor must obtain written consent from the engineer regarding the classification and composition of all labourers in terms of “unskilled” and “skilled” labourers required for the work as ordered by the engineer.”

Item

Unit

B18.01 Unskilled Labourers

- | | |
|---------------------------------|-----------|
| (a) Normal working hours | hour (hr) |
| (b) Overtime | hour (hr) |
| (c) Sundays and public holidays | hour (hr) |

The unit of measurement shall be the hours worked by unskilled labourers.

The tendered rates shall include full compensation for all costs, for the use of tools and for financial charges of any description incurred by the contractor and his sub-contractor as well as for all insurance, accommodation, travelling, travelling time, supervision, overheads and profit. Payment for a foreman will only be made when the foreman is in full time attendance of the day work.

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

B18.02 Semi-skilled Labourers

- | | |
|---------------------------------|-----------|
| (a) Normal working hours | hour (hr) |
| (b) Overtime | hour (hr) |
| (c) Sundays and public holidays | hour (hr) |

The unit of measurement shall be the hours worked by semi-skilled labourers.

The tendered rates shall include full compensation for all costs, for the use of tools and for financial charges of any description incurred by the contractor and his sub-contractor as well as for all insurance, accommodation, travelling, travelling time, supervision, overheads and profit. Payment for a foreman will only be made when the foreman is in full time attendance of the day work.

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

B18.03 Skilled Labourers

- | | |
|--------------------------|-----------|
| (a) Normal working hours | hour (hr) |
|--------------------------|-----------|

- | | |
|---------------------------------|-----------|
| (b) Overtime | hour (hr) |
| (c) Sundays and public holidays | hour (hr) |

The unit of measurement shall be the hours worked by skilled labourers.

The tendered rates shall include full compensation for all costs, for the use of tools and for financial charges of any description incurred by the contractor and his sub-contractor as well as for all insurance, accommodation, travelling, travelling time, supervision, overheads and profit. Payment for a foreman will only be made when the foreman is in full time attendance of the day work.

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

B18.04 Foreman

- | | |
|---------------------------------|-----------|
| (a) Normal working hours | hour (hr) |
| (b) Overtime | hour (hr) |
| (c) Sundays and public holidays | hour (hr) |

The unit of measurement shall be the hours worked by foreman.

The tendered rates shall include full compensation for all costs, for the use of tools and for financial charges of any description incurred by the contractor and his sub-contractor as well as for all insurance, accommodation, travelling, travelling time, supervision, overheads and profit. Payment for a foreman will only be made when the foreman is in full time attendance of the day work.

Item	Unit
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B18.05 Hire of construction equipment (as specified in the schedule)hour (hr)

The unit of measurement shall be the number of hours the equipment has been used on the designated work. Standing time will not be measured for payment.

The tendered rates shall include full compensation for furnishing and using the equipment, including the cost of the operator, fuel, ground engaging tools, supervision, maintenance and for all other incidentals necessary to carry out the work.

B10 SECTION 2100: DRAINS

B2104 SUBSOIL DRAINAGE

(a) Materials

(i) Pipes

Pipes for subsoil drainage can be of internal diameter less than 100 mm, when used in composite in-plane (geocomposite) drainage systems.

High-density polyethylene (HDPE) drainage pipes with lattice wall construction.

(i) Synthetic-fibre filter fabric (Geotextile)

The geotextile shall be manufactured for civil engineering purposes by a manufacturer recognised by the Geosynthetic Interest Group of South Africa (GIGSA). It shall be manufactured from any suitable synthetic polymer, excepting polyamide, into a homogeneous sheet exhibiting uniform properties. These properties shall not be subject to a degradation of more than 10 % during the design life of the structure by the chemicals and organisms encountered in normal soils. Immersion in fresh or sea water during its design life shall not alter the specified qualities of the geotextile.

When used for filtration, drainage or separation the filter properties of the geotextile/soil interface shall not develop a permeability lower than that of the surrounding soil during the design life of the structure. The geotextile shall have an initial permeability not less than ten times the permeability of the surrounding soil which property the fabric shall maintain for the design life of the structure.

In order to ensure that the geotextile performs properly and survives the construction process, the grade of the geotextile to be used shall be specified according to the minimum index strength properties corresponding to the severity of the installation as given by the mechanical properties in tables 2104/1 and 2104/2.

TABLE 2104/1: CONSTRUCTION SURVIVABILITY-STRENGTH REQUIREMENTS

PROPERTY	UNITS	GRADE					TEST METHOD
		1	2	3	4	5	
Trapezoidal tear	N	225	275	325	425	525	ASTM D4533-85
CBR	kN	1.5	2.0	2.5	3.0	4.0	SABS 0221-88
Dart test	mm	28	24	20	16	14	TRH 15 TEST

							METHOD B2
Tensile strength	kN/m	9	11	13	19	25	SABS 0221-88

Numerical values represent the **minimum** average values (in the weaker principle direction), except for the dart test where the numerical value represent the **maximum** allowable diameter of hole made by the falling dart.

Geotextile acceptance shall be based on the specified test methods.

TABLE 2104/2 : INSTALLATION CONDITIONS RELATING TO GRADE OF GEOTEXTILE

INSTALLATION CONDITION	GRADE				
	1	2	3	4	5
Trench less than 2.0 deep, with rough or irregular sides and/or sharp drainage stone, with moderate degree of compaction.*	•				
Trench less than 2.0 deep, with rough or irregular sides and/or sharp drainage stone, with high degree of compaction.*		•			
Trench greater than 2.0 deep with smooth sides and rounded drainage stone, with moderate degree of compaction.			•		
Trench greater than 2.0 deep, with rough or irregular sides and/or sharp drainage stone, with high degree of compaction.*				•	
Erosion protection with stone hand-packed directly onto geotextile (gabions and mattresses).			•		
Erosion protection with rock less than 100 kg placed on geotextile protected by 150-300 mm sand, or “zero drop height” (dumped or packed riprap).				•	
Erosion protection with rock heavier than 100 kg placed on geotextile protected by 150-300 mm sand, or “zero drop height” (dumped or packed riprap).					•

* The geotextile under this installation condition shall exhibit an elongation characteristic of not less than 20% in both directions.

The engineer shall assess the severity of the installation and/or confirm the grade of geotextile to be used in each case.

In certain applications the following minimum hydraulic properties will apply or as decided by the engineer.

TABLE 2104/3 : HYDRAULIC PROPERTIES

PROPERTY	UNIT	GRADE					TEST METHOD
		1	2	3	4	5	
		1	2	3	4	5	
Normal through flow @ 100 mm head	l/m ² /s	20	20	20	20	20	SABS 0221-88
Planar through flow under a confining pressure of 100 kPa	l/m/h	10	14	19	26	34	ASTM D4716-87

The contractor shall submit a sample 1,0 m x full roll width as well as commercial literature showing the flow curves of each grade of geotextile he proposes to use. Before bringing the material onto site the contractor shall obtain the approval of the engineer for the make and grade of material to be used. The engineer may, at any time, require random samples of the material used on site to be tested from time to time. Products found to vary markedly from the specified norms may be rejected and replaced at the contractor's cost.

(iv) Composite in-plane drainage fabric (for geocomposite drain)

The geocomposite drain shall, excluding the pipe, consists of a synthetic drain core sandwiched between two layers of geotextile. The geotextile shall allow the free passage of

water, but not the soil particles, and the thicker drain core shall permit the water to move in the plan of the composite with virtually no head loss.

The geotextile shall comply with the requirements of Subclause (iii) above.

The drain core shall be manufactured from any suitable synthetic polymer. It shall not be subject to degradation by the chemicals and organisms encountered in normal soils. Immersion in fresh or sea water during its design life shall not significantly alter the specified properties of the material.

The thickness of the drain core shall not be reduced by more than 30 % under a confining pressure of 100 kPA.

The geotextile jacket shall not reduce the flow capacity of the geocompositedrain by more than 50 % under a confining pressure of 100 kPA.

Crushed stone

The crushed stone used for subsurface drains shall be clean, hard, durable, crushed stone from approved sources. The aggregate crushing value of the stone shall not exceed 30 when tested in accordance with method B1 of TMH1.

The crushed stone shall conform to the following grading:

GRADE	SIEVE SIZE (mm)	PERCENTAGE PASSING BY MASS
Course grade	26,5	100
	13,2	60 – 85
	6,70	15 min
	2,36	15 max

The aggregate shall be evenly graded between the coarse and fine fractions with no excessive discontinuities.

B2107 MEASUREMENT AND PAYMENT

Add the following new items:

“Item

Unit

C3.57

B21.08 (e) HDPE flexible pipe metre (m)

Measurement and payment shall be as specified for item 21.08(e) in the standard specifications.

Item **Unit**

B21.20 Subsoil drainage markers Number (No)

Measurement and payment shall be as specified for item 22.24 in the standard specifications.”

'Item	Unit
B21.21 Extra over item 21.16 for cement-treated soil backfill	cubic metre (m ³)

The unit of measurement shall be the cubic metre of excavation backfilled with cement –treated soil, measured as specified for item 21.16.

The tendered rate shall include full compensation for the additional cost of providing and mixing in cement (Cem II 32,5 @ 5%) in the backfill material.

B11 SECTION 2200 : PREFABRICATED CULVERTS

B2201 SCOPE

Add the following:

“All rectangular culverts with spans from 0,9m up to and including 2,4m shall be constructed with precast units.

The attention of the contractor is drawn to the fact that information given on the plans, longitudinal sections or drainage schedules may have to be altered to suit actual site conditions and, therefore, the contractor shall only construct these culverts after the engineer has verified the information on the drawings from detail surveys taken on site by the contractor as directed by the engineer.

Precast units shall be ordered by the contractor from actual measurements of length acquired on the site and not from lengths stated in the drainage schedule or from the bill of quantities.

No precast units shall be ordered until the engineer has satisfied himself that the proposed units have been manufactured to the required tolerances and loading standards. The engineer must be given the opportunity to load test units if he considers this necessary”.

B2203 MATERIALS

(f) Skewed Ends

Delete the second and third paragraphs and substitute with the following:

“Precast portal and rectangular culverts placed on a skew shall be supplied with cast in situ skewed ends as shown on the drawings. In situ skew ends are to be constructed simultaneously with the wingwalls and headwalls”.

B2204 CONSTRUCTION METHODS

Add the following:

“In all cases where soft founding materials is classified as suitable for culvert bedding construction, the in situ material shall be ripped, moistened and compacted to 90% or 93% modified AASHTO density. The depth of preparation and compaction of founding material shall be as indicated on the drawings or as specified by the engineer. Allowance for measurement and payment for this work is made in the bill of quantities under this section.”

(c) Excavation by hand

Where circumstances prevent the use of mechanical excavators and material can be removed only by hand tools, the engineer shall authorise the supplementary payment to the contractor for such work at the tendered rates for excavation by hand should he be satisfied that the contractor had been unable to prevent the necessity for excavation by hand by proper planning and precautionary measures. The supplementary rate for excavation by hand shall not apply to minor finishing or clearing jobs in excavations which are otherwise being done by mass excavation plant.

Payment for hand excavation shall be an "extra over" payment to normal excavation as allowed for in item 22.01.”

B2205 EXCAVATION FOR CONSTRUCTION BY TRENCH METHOD

Add the following subclauses:

"(c) Excavation by hand

Where circumstances prevent the use of mechanical excavators and material can be removed only by hand tools, the engineer shall authorise the supplementary payment to the contractor for such work at the tendered rates for excavation by hand should he be satisfied that the contractor had been unable to prevent the necessity for excavation by hand by proper planning and precautionary measures. The supplementary rate for excavation by hand shall not apply to minor finishing or clearing jobs in excavations which are otherwise being done by mass excavation plant.

Payment for hand excavation shall be an "extra over" payment to normal excavation as allowed for in item 22.01.

(d) Drainage of excavations

The contractor shall apply suitable, effective drainage and dewatering methods for preventing the ingress of water into the excavation and to keep them dry.

Drainage measures, with the exception of pumping, shall be maintained until the backfilling has been completed. Between various construction stages, pumping may be interrupted in consultation with the engineer.

Any draining or pumping of water shall be done in a manner as will preclude the concrete or materials or any part thereof from being carried away.

Allowance for measurement and payment for dewatering and keeping dry of culvert excavations is made in the schedule in this section”.

B2210 LAYING AND BEDDING OF PREFABRICATED CULVERTS

B.2210(b)(i) Cast in situ invert slabs

Replace with the following:

"In accordance with the drawings, transverse construction joints are required in cast in situ concrete invert slabs for portal culverts. In addition, longitudinal construction joints as shown on the drawings between the invert slabs of each of the barrels of multiple culverts are required. Allowance for measurement and payment for a Class F1 surface finish and soft board in these joints is made in the bill of quantities. No payment shall be made for formwork on the outside edges of invert slabs (closest to excavated face).

All culverts (precast as well as in situ) shall be constructed with an in situ reinforced concrete floor laid on a 75mm concrete screed".

Delete subclause B.2210(b)(ii) : “Prefabricated floor slabs.”

B2211 BACKFILLING OF PREFABRICATED CULVERTS

Change the last sentence in the fourth paragraph to read "90% or 93% as shown on the drawings or as directed by the engineer."

B2212 INLET AND OUTLET STRUCTURES, CATCHPITS AND MANHOLES

(b) Concrete work

Add the following:

“The type of surface finish for in situ concrete in the culverts shall be as indicated on the drawings. Generally all exposed faces shall be of Class F2 formwork and faces covered by backfill shall be Class F1. The top of parapet walls and wingwalls shall be finished to a Class U2 surface finish.”

(h) Prefabricated inlet and outlet structures

Add the following:

“The use of precast concrete inlets and outlets as described in clause 2212(h), shall not be allowed under any circumstances. Cast in situ concrete wingwall type inlets and outlets shall be constructed as indicated on the drawings and shall be in accordance with section 6000 of the Standard Specifications. Allowance for measurement and payment for wingwall type inlets and outlets is made in the schedule in this section.”

B12 SECTION 3100 : BORROW MATERIALS

B3102 NEGOTIATIONS WITH OWNERS AND AUTHORITIES

Add the following to sub-clause 3102(a):

“Arrangements regarding to access to borrow pits and the alignment of haul roads shall be made between the contractor and the owners of the land on which borrow pits are situated. The engineer’s representative on site shall be present at all such negotiations, which shall be confirmed in writing by the contractor. All costs involved with such negotiations as well as the requirements contained in clause 3102 and clause 1225 of the specifications shall be borne entirely by the contractor.”

B3103 OBTAINING BORROW MATERIALS

(a) General

Add the following:

“The expropriation and compensation for land from which borrow materials is obtained shall be negotiated and paid for by the employer.”

In addition to all the requirements for borrow pits, the contractor shall take cognizance of and implement any requirements in the Environmental Management Plan relating to borrow pits

(b) Use of borrow materials

Add the following to the second paragraph of this subclause:

“Compensation to owners and arrangements with owners for taking material from alternative borrow pits proposed by the contractor shall be the contractor’s responsibility and entirely at his own expenses.”

B3104 OPENING AND WORKING BORROW PITS AND HAUL ROADS

(c) Excess overburden

Add the following:

“All excess overburden removed at borrow pits shall be replaced over the entire area of the borrow pit after initial shaping has been undertaken in an even layer. Payment for this requirement shall be deemed to be included in pay item 31.01

(f) Protecting borrow pits

Add the following:

"It is a requirement of the contract that, where-ever required by the landowner, borrow pits shall be provided with temporary fencing around the perimeters of the borrow areas. The temporary fencing shall be erected prior to entering the land for borrowing purposes and shall on final finishing of the borrow areas as specified, be dismantled and removed and discarded as decided upon by the contractor. Payment for temporary fencing around borrow pits shall be made in accordance with the stipulations of section 5500 in these specifications."

Add the following new subclause:

“(h) Haul roads

Haul roads to designated borrow pits along the road shall be constructed along alignments as instructed by the engineer and shall be maintained at the contractor’s own cost to the satisfaction of the engineer."

B3105 FINISHING-OFF BORROW AREAS AND HAUL ROADS

Add the following to this clause:

"Should the employer, engineer or any other authority approved by the engineer, require a higher standard of shaping and finishing off of borrow pits than specified in the standard specifications, measurement and payment for such extra work shall be made using daywork items as scheduled under this section."

The contractor shall provide detailed proof of payment before payment shall be certified to the contractor.

B13 SECTION 3200: SELECTION, STOCKPILING AND BREAKING-DOWN THE MATERIAL FROM BORROW PITS, CUTTINGS AND EXISTING PAVEMENT LAYERS, AND PLACING AND COMPACTING THE GRAVEL LAYERS

B3201 SCOPE

Add the following after the first paragraph:

For safety reasons, all material for the construction of layerworks, dumped in heaps next to the road surface where traffic is accommodated, shall be flattened on the same day. Payment for this activity shall be deemed to be included in the relevant tendered rates under sections 3300, 3400 and 3600.

B3204 BREAKING-DOWN THE MATERIAL

(a) Initial breaking-down of the material in cuttings, borrow pits and existing pavement layers

Add the following to the table in the second paragraph of this subclause:

"Pioneer layers - 500mm maximum dimension

(b) Further breaking-down of pavement material

Add the following:

"Material used for the construction of selected, and wearing course layers shall be broken down by means of normal grid-rolling or additional normal grid-rolling to such an extent that the compacted pavement layer shall contain material of which 95% of the aggregate size shall not exceed 65mm. All oversize material, after breaking-down, shall be removed".

B3209 PLACING AND COMPACTING THE MATERIALS IN LAYER THICKNESSES IN EXCESS OF 200mm AFTER COMPACTION

Add the following new subclauses:

(c) Pioneer layer

"The maximum size rock used in pioneer layers shall be 500mm and the layer thickness before compaction shall not be more than one-and-a-half times the maximum actual size of the rock. Not more than 20% of pioneer layer material shall pass through the 2,0mm sieve. Pioneer layer processing and compaction shall be as specified in subclause 3307(c) of the standard specifications".

"(d) Joints

Joints between adjacent portions of the same layer, be it as a result of half-width construction or longitudinal joints between individual work areas, shall not correspond with the joint in the layer below and shall be offset a minimum of 150mm. During the placement of material adjacent to a joint, the existing material shall be cut back sufficiently to ensure tie-in with sound compacted material.

At permanent tie-ins at the start and end of the newly constructed section of the base, as well as tie-ins required at structures and intersections, the existing pavement materials shall be removed to sufficient depth to allow for the construction of the new subbase and base layers.”

B 3212 MEASUREMENT AND PAYMENT

In the fifth line of the first paragraph after the words "given in this section", insert the words "including the forming of all joints as specified".

B14 SECTION 3300: MASS EARTHWORKS

B 3302 MATERIALS

(a) Roadbed and cut

Add the following:

“The CBR of the upper 150mm of the roadbed shall be not less than 10 at 93% of modified AASHTO density and the CBR of the lower 150mm layer shall not be less than 7 at 93% of modified AASHTO density. If this is not attainable the material shall be deemed as unsuitable and treated in accordance with subsection 3305(a) Removing unsuitable material.”

(b) Fill

Add the following to paragraph (ii):

“The top 150mm of the fill shall have a CBR not less than 10 at 93% of modified AASHTO density while the lower 150mm layer shall have a CBR of not less than 7 at 93% of modified AASHTO density.”

(iii) 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 engineer.≡

Add the following to paragraph (iv):

AThe maximum swell at 100% Mod ASSHTO density compaction shall not be more than 2%.”

B3305 TREATING THE ROADBED

(a) Removing unsuitable material

Add the following to the third paragraph:

"For the purpose of this contract, excavation and removal of in-situ clayey material over areas where the road is in a fill condition shall be classified as removal of unsuitable material, irrespective of the stability or moisture condition of the in-situ material".

(b) Preparing and compacting the roadbed

Delete the last sentence of the first paragraph “If necessary, roadbed..... depth of compaction” and replace as follows:

“Where demarcated by the engineer, prior to the roadbed being scarified, the excess in situ material forming part of the present roadway, and within the limits of the roadbed, and in close proximity of the layer works, but falling within the limits of the layerworks, shall be bladed to controlled level in order to achieve the required level and necessary depth of compaction.”

B3307 FILLS

(c) Constructing a pioneer layer

Add the following to the first paragraph:

"For the purpose of this contract, pioneer layers shall be completed by means of eight-pass roller compaction using vibratory rollers as specified in subclause 3304(b) of the standard specifications.”

(d) Benching

Add the following:

“Benching of fill and pavement layer material is required to be undertaken into the existing fill embankments and pavement layers. No additional payment shall be made over and above the normal pay items applicable to earthworks and pavement layers where benching is required for widening of the existing road formation. Benching shall be undertaken as shown on the drawings.

It is a requirement that benching shall always be started at the bottom of the

existing fill progressing to the top of the formation. The dimensions and details of benching are shown on the drawings.”

B 3312 MEASUREMENT AND PAYMENT

General Directions

- (3) Work in Restricted areas

Add the following:

“Widening of existing fills as specified in sub-clause 3307(i) shall not be classified as restricted in terms of this sub-clause and no additional payment over and above payment under items 33.15 and 33.18 shall be considered in this regard.

B16 SECTION 3400 : PAVEMENT LAYERS OF GRAVEL MATERIALS

B 3401 SCOPE

Add the following paragraphs:

This section also covers the construction of subbase layers from designated borrow pit by the contractor for the construction of the layers.

The source of the material to be used on the layers is located in Mapakophele Village approximately 1.5km from the construction work.

B3402 MATERIALS

(a) General

(i) Selected layer

Materials for the selected layer shall be obtained from an approved borrow pit and comply with the following:

- (1) Selected layer:

- Minimum CBR at specified density 20
- Maximum plasticity index 3GM + 10
- Minimum grading modulus 0,75

(ii) Subbase layers

The subbase layers shall be constructed from material obtained from an approved borrow pit material source. Subbase layer shall be unstabilized.

Stabilisation shall be as directed by the engineer.

Materials used in the subbase layers shall comply with the following requirements:

- (1) Subbase layer:
 - Minimum grading modulus 1,50
 - Maximum size of aggregate 63 mm

(iii) Base layer

The subbase layers shall be constructed from material obtained from an approved borrow pit material source. Subbase layer shall be stabilized. Stabilisation shall be as directed by the engineer.

Materials used in the base layers shall comply with the following requirements prior to the addition of the stabilizing agent:

- (1) Base layer:
 - Minimum grading modulus 1,50
 - Maximum size of aggregate 63 mm

Materials used in the base layers shall comply with the following requirements after the addition of the stabilizing agent:

- (2) Base:
 - Minimum UCS at specified density 1 500 kPa
 - Maximum plasticity index 6

(iv) Gravel shoulders and gravel wearing course

Gravel shoulders and gravel wearing course shall be constructed from material imported from an approved borrow pit. The gravel shoulders and the gravel wearing course shall be unstabilized.

Materials for shoulders and gravel wearing course shall comply with the following:

- Oversize index < 5%
- Shrinkage product (LS x % < 0,425 mm) 100 – 365
- Grading co-efficient (% < 26,5 mm - % < 2,0 mm) x % < 4,75 mm/10016 – 34
- CBR at 93% of modified AASHTO density > 15

Compaction requirements

The minimum in-situ dry density required for the various layers, in terms of modified AASHTO density, are as follows:

▪ selected subgrade	93%
▪ subbase	95%
▪ Base	97%
▪ Shoulders	93%

B3405 CONSTRUCTION TOLERANCES

(a) Level

Add the following paragraph:

“The spacing of level control poles for the construction of layerworks shall not exceed ten meters in the longitudinal direction unless otherwise authorized by the engineer”.

B3406 ROUTINE INSPECTION AND TESTS

Statistical control on layer thickness, compaction and stabiliser content will be applied in accordance with Section 8100 Quality Control (Scheme 2).

B17 SECTION 3500: STABILIZATION

B3502 CHEMICAL STABILIZATION

(i) Construction limitations

In table 3503/1, delete “8 hours” for ordinary Portland cement and cement blends and replace with “6 hours”.

B3506 TOLERANCES

(b) Uniformity of mix (chemical stabilization)

Add the following:

“The method described under 3506(b)(ii) shall be applicable to this contract.”

B3507 **ROUTINE INSPECTION AND TESTS**

Statistical control as per Section 8300 (Scheme 2) will apply.

Add the following sub-clause:

(j) Rejection of stabilized layers

Where newly constructed layers have been stabilized and have been rejected, the following shall apply:

- (i) if rejected within seven (7) days of construction – 50% stabilizing agent shall be added and the layer reworked.
- (ii) if rejected more than seven (7) days of construction – the material shall be removed and replaced and the layer reworked with 100% stabilizing agent.

B 4303 **PLANT AND EQUIPMENT**

(a) General

Add the following:

“Apart from the specified capacity and condition of plant used for sealwork, the operators and attendants of binder distributors and chip spreaders shall prove their abilities to the engineer to apply the binder and sealwork aggregate within the specified tolerances for application rates, widths of application and making good of all seemingly minor defects which may occur during sealwork operations. Able operators and attendants shall be kept in service throughout the construction period and shall not be rotated with reserve staff who might not be familiar with the equipment or final product requirements.

The engineer will instruct the removal of incompetent staff from site if satisfactory performance is not achieved and maintained.”

B20 **SECTION 5200: GABIONS**

B5201 SCOPE

Add the following paragraph

“This section also covers the removal, dismantling and stacking of existing gabion work, and the reuse of these materials where authorised by the engineer.”

B5203 CONSTRUCTION OF GABION CAGES

(a) General

Add the following new sub-clause:

“(iii) Reno mattresses or similar may be used as alternative to gabion boxes. These Reno mattresses are to be manufactured of 80mm x 100mm mesh (2,5mm diameter wires, diaphragm spacing 0,6m).

B5204 CONSTRUCTING GABIONS

(c) Assembly

Delete and substitute with:

(c) Assembly, erection and stretching

(i) Assembly

“Prior to assembly, the gabion material shall be opened out flat on the ground and stretched to remove any kinks and bends. The gabion boxes shall then be assembled individually by raising the sides, ends and diaphragms ensuring that all creases are in the correct position and that the tops of all four sides are even. The four corners of the gabion boxes shall be laced first followed by the edges of internal diaphragms to the sides. In all cases lacing shall commence at the top of the box by twisting the end of the lacing wire around the selvages. It shall then be passed round two edges being joined, through each mesh in turn and securely tied off at the bottom. The ends of all lacing wire shall be turned to the inside of the box on completion of each lacing operation.

(ii) Erection

Only assembled boxes, or groups of boxes, shall be positioned in the structure. The side, or end, from which work is to proceed, shall be secured to either completed work or by rods or stakes driven into the ground at the corners. These must be secured and reach at least to the top of the gabion box. Further gabions shall then be positioned in the structure as required, each being securely laced to the preceding one at all corners and diaphragm points.

(iii) Stretching

On completion of erection of a suitable length of gabion, the gabion boxes shall be stretched using a wire strainer or winch of at least one ton capacity firmly secured to the free end of the assembled gabion boxes.

Whilst under tension the gabion boxes shall be securely laced along edges (top, bottom and sides) and at diaphragm points, to all adjacent boxes and shall thereafter be filled.”

(d) Rock filling

Add the following new sub-sub-clause:

(iii) General

“Filling shall be carried out only whilst gabion boxes are under tension. Filling material shall consist of rock of size not less than 120mm and not greater than 250mm so placed to produce a neat face and line with a minimum of voids.

Internal horizontal bracing wire shall be provided at 500mm vertical centres or such spacing to ensure a ratio of four to every 1m³ of filling. These bracing wires shall be wrapped around two mesh wires and extended from front to back so positioned to ensure a neat face and line free of excessive bulges and depressions. Gabion boxes shall be filled in stages and horizontal bracing wires inserted as filling is brought up.

Similar bracing wires used vertically shall be provided in 0,5mm deep gabions at 330mm horizontal centres where water falls directly onto gabions or where a neat face is required.

Tension on the gabion boxes shall be released only when sufficiently full to prevent the mesh from slackening.

Gabion boxes shall be overfilled by 20 to 50mm above their tops to allow subsequent settlement of the filling.”

Add the following new sub-clauses:

(e) Final wiring

“Closing and wiring down of lids shall proceed as soon as possible after filling operations and certainly in the likelihood of storms or floods during construction. The wiring down shall consist of wrapping around wire at such intervals as required or specified.

Lids shall be stretched tight over the filling with bars and wired down securely through each mesh along all edges, ends and diaphragms. The ends of all tying and bracing wires shall be turned into the gabion box on completion of all lacing operations.

Tightness of mesh, well packed filling and secure lacing is essential in all structures.”

(f) Removal, dismantling and stacking of gabions

“Existing gabions, either damaged or not, that require to be removed or moved to a new location shall be dismantled. Material not required for re-assembly or unsuitable for re-use shall be neatly stacked at approved locations in accordance with the engineer’s instructions. Payment will be made only for gabions removed in accordance with the written instruction of the engineer.

Where gabions require moving, or as declared suitable by the engineer are re-usable, the contractor shall re-use all the material, plus supply such new materials as may be required to re-assemble the gabion again to the standard specification for new gabions.

B21 SECTION 5600: ROAD SIGNS

B5601 SCOPE

“This section also covers the supply and erection of permanent danger plates at culverts and bridges at the locations indicated on the drawings or as directed by the engineer.”

B5603 MANUFACTURING OF ROAD SIGN BOARDS AND SUPPORTS

(a) Road signboards

Add the following:

“The contractor shall make every effort to ensure that signboards are correct in all respect and before dispatching the boards from the manufacturer’s factory shall provide the Engineer with a 100mm x 150mm colour photograph of each sign face for approval of the correctness of the legend. Such approval will not imply final acceptance of the board. If the Contractor is in any doubt as to the correctness of the sign detail, the sign designer shall be contacted for verification.”

(a) (ii) Steel profile road signboards

Add the following:

“Where the letter or legends cross the horizontal joints of the sign panels, the letter shall be cut on the joint and both ends folded around the radius.

Retro-reflective material to adjoining Chromadek panels on a sign shall be practical visual match of the specified colour.”

B5604 ROAD SIGN FACES AND PAINTING

Add the following new subclause:

“(e) Application of retro-reflective material

All sign faces shall be faced with diamond grade retro-reflective material. Painted front sign faces shall not be used.

Where applied to Chromadek sections, retro-reflective material shall be applied as specified for aluminium section in Clause 5603(d) of the Standard Specification, and of Clause B5603(a)(ii) of this project Specification.”

B5605 STORAGE AND HANDLING

Add the following:

“The following shall not be allowed on the sign face:

Drilling of holes, except for the fastening of overlays

Application of any form of adhesive

Cleaning with any chemicals that are not specifically approved by the manufacturer of the retro-reflective material

Covering the sign face with an impermeable material that does not allow free circulation of air.”

B5606 ERECTING ROAD SIGNS

(c) Erection

Add the following:

“After erection the signboard shall be thoroughly cleaned with a cleaning agent approved by the retro-reflective material’s manufacturer.

All vegetation obstructing the new or replaced sign board shall be removed and disposed of as instructed by the Engineer.”

B5608 DISMANTLING, STORING AND RE-ERECTING EXISTING ROAD SIGNS

Add the following:

“Existing overhead and ground mounted road signs that are being replaced by new signs shall be dismantled and disposed of by the Contractor. Where possible the dismantling of the signs shall not be before the replacement sign is erected and displayed. Where dismantling of the sign is required before erection of the replacement sign, the dismantling shall not take place until immediately before work is to commence on the replacement, and the replacement shall be completed and the new sign displayed as soon as possible thereafter (within 72 hours).

Dismantling shall include sign panels and ground mounted sign supports.

Ground mounted sign supports shall be cut off just below ground level. Material excavated for removal of buried poles shall be replaced, and any depression made good using excess material from excavation for new signs.

Pay items are provided in the Bill of Quantities. Payment will differentiate between different types of sign panels.”

B22 SECTION 5700: ROAD MARKINGS

B5701 SCOPE

Road marking plans shall be issued during construction

B 5707 APPLYING THE PAINT

(c) Replace the last paragraph with the following:

"Permanent road marking work as specified by the engineer shall be carried out within 14 days of opening the road full width to traffic after the completion of the double seal surfacing."

Add the following:

“B5715 ESTABLISHMENT OF PAINTING UNIT

Allowance is made in the schedule of quantities for the re-establishment of the painting unit at designated intervals during the contract period. The engineer will instruct the re-establishing of the painting unit as required.”

B5714 MEASUREMENT AND PAYMENT

Add the following new items

"Item	Unit
B57.10 Re-establishing the painting unit at intervals during the contract period	number (No)

The unit of measurement shall be the number of times the painting unit is re-established on site during the contract period. The tendered rate shall include full compensation for all items as specified.

The tendered rate shall include full compensation for the re-establishment on the site and for later removing all special equipment, personnel, etc. as may be required for painting the road-traffic markings. The contractor will be paid at tendered rates for painting the road-traffic markings."

**B23 SECTION 5900 : FINISHING THE ROAD AND ROAD RESERVE AND
TREATING OLD ROADS**

B 5902 FINISHING THE ROAD AND ROAD RESERVE

Add the following:

"The contractor shall pay special attention to the collection and removal of all waste materials originating from surfacing and other roadworks activities. Excess aggregate or asphalt broomed from the road surface shall not be discarded onto the side-slopes of the road formation. These aggregates, together with all other materials trimmed or excavated from the road shall be collected and removed from the road reserve to the satisfaction of the engineer.

This requirement shall be incorporated in the tendered rates for item 59.01 of the Schedule of Quantities."

PROJECT SPECIFICATIONS

PART C PROVISION OF THE TEMPORARY WORKFORCE

CONTENTS

- C 01 SCOPE
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TEMPORARY WORKFORCE
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C 01 SCOPE

This Specification covers the provisions and requirements relating to the provision of the temporary workforce.

C 02 INTERPRETATIONS

C 02.01 Supporting documents

The Tender Rules, Conditions of Contract, Standard and Project Specifications, Drawings and statutory minimum requirements relating to the employment and remuneration of labour shall *inter alia* be read in conjunction with this Specification.

C 02.02 Definitions and abbreviations

For the purposes of this specification, the definitions given in the Conditions of Contract, the Standard Specifications and the Project Specifications, together with the following additional definitions shall, unless the context dictates otherwise, apply:

- (a) "Key Personnel" means all contracts managers, site agents, materials and survey technicians, trainers, supervisors, foremen, skilled plant operators, artisans and the like, and all other personnel in the permanent employ of the Contractor or

Subcontractor who possesses special skills and/or who play key roles in the Contractor's or Subcontractor's operation

- (b) "Project Committee" means a committee consisting of the Employer, the Engineer, the Contractor, (or their nominated representatives) as well as representatives of the temporary workforce, which is convened from time to time at the discretion of the Engineer, for the purposes of acting as an avenue for effective communication and liaison between all the parties referred to, in all matters pertaining to the Contract
- (c) "Subcontractor" means any person or group of persons in association, or firm, or body corporate (whether formally constituted or otherwise) not being the Contractor, to whom specific portions or aspects of the Works are sublet or subcontracted by the Contractor in accordance with the provisions of the Contract
- (d) "Worker" for the purposes of this Specification means any person, not being one of the Contractor's key personnel, nor any key personnel of any Subcontractor, who is engaged by the Contractor, a Subcontractor or the Employer to participate in the execution of any part of the Contract Works and shall include unskilled labour, semi-skilled and skilled labour, clerical workers and the like
- (e) "Workforce" means the aggregate body comprising all workers and shall, unless the context dictates otherwise, include the workforces of the Contractor and all Subcontractors
- (f) "Liaison Officer" means a representative from the temporary workforce, duly elected by them, to act on their behalf and through whom all matters pertaining to the temporary workforce can be channelised.

C 02.03 Status

Where any provisions or requirements of this Specification are in conflict with anything elsewhere set out in the Contract, the provisions and requirements of this Specification shall take precedence and prevail.

C 03 PERMITTED SOURCES OF TEMPORARY WORKERS

The Contractor shall as far as possible make optimum use of the human resources outside his own workforce and the workforces of all subcontractors. The temporary workforce that is to be used in the execution of the Works in terms of Part A may consist of the workers of various communities, and shall not be bound to one particular community.

C 04 EMPLOYMENT RECORDS TO BE PROVIDED

- (a) The Contractor shall maintain accurate and comprehensive records of all workers engaged on the Contract and shall provide the Engineer at monthly intervals from the commencement of the Contract, with interim records substantiating the actual numbers of employment opportunities that shall have been generated to date and the amounts actually paid in respect thereof. Such interim records shall be in a format approved by the Engineer.
- (b) The Contractor shall, on completion of the Contract, and as a pre-requisite event to the release of any retention money in terms of the Conditions of Contract, provide the Engineer with copies of the Terms of Employment as well as independently audited documentary evidence of the total number of temporary and permanent employment opportunities actually generated during the Contract.

C 05 VARIATIONS IN WORKER PRODUCTION RATES

Notwithstanding anything to the contrary as may be stated in or inferred from any other provision of this Contract, the Contractor shall not be entitled to any additional payment or compensation whatever, in respect of any differences as may result between the production rates actually achieved by workers in the course of the execution of the Contract Works and those production rates on which he has based his tender.

C 06 TRAINING OF THE TEMPORARY WORKFORCE

- (a) Selected members of the workforce are to be provided with structured training in accordance with the provisions of Part D.
- (b) The Contractor shall make all necessary allowances in his programme of work to accommodate and facilitate the delivery of such structured training and shall comply fully with the requirements of Part D.
- (c) The provision of structured training as described in Part D shall not relieve the Contractor of any of his obligations in terms of the Conditions of Contract and the Contractor shall remain fully liable for the provision, at his own cost, of all training of the workforce, additional to that as provided for in Part D, as may be necessary to achieve the execution and completion of the works strictly in accordance with the provisions of the Contract.

C 07 RECRUITMENT AND SELECTION PROCEDURES

- C 07.01** The Contractor shall be fully responsible for the recruitment and selection of workers to constitute the temporary workforce.

- C 07.02** The Contractor shall advise the Engineer in writing of the numbers of each category of temporary worker which he requires, together with the personal attributes which he considers desirable that each category of worker shall possess (taking due cognisance of the provisions of the Contract relating to training).
- C 07.03** The Contractor shall, at his own cost, take all necessary actions to advertise within the communities comprising the personnel resources, the fact that temporary employment opportunities exist and the time and place where recruiting will occur.
- C 07.04** The Contractor shall record in writing, the details of all persons applying for employment, including *inter alia*:
- (a) Name, address, age and sex
 - (b) Marital status and number of dependants
 - (c) Qualifications and previous work experience (whether substantiated or not)
 - (d) Period since last economically active
 - (e) Preference for type of work or task.
- C 07.05** The Contractor shall make his selection of workers from amongst the applicants, taking due cognisance of his requirements for the workforce and the provisions of the contract in regard to the provision of training to the workforce and in accordance with the following principles:
- (a) No potential temporary worker shall be precluded from being employed by the Contractor on the execution of the Works, by virtue of his lack of skill in any suitable operation forming part of the Works, unless -
 - (i) all available vacancies have been or can be filled by temporary workers who already possess suitable skills, or
 - (ii) the Time for Completion allowed in the Contract, or the remaining portion of the Contract Period (as the case may be) is insufficient to facilitate the creation of the necessary skills.
 - (b) Preference shall be given to the unemployed and single heads of households.
 - (c) The Contractor shall, in so far as is reasonably practicable, give priority to accommodating the applicants' expressed preferences regarding the types of work for which they are selected.
 - (d) The selection process shall not be prejudicial to youth (over the age of fifteen years) and women.
- C 07.06** After making his selection, the Contractor shall advise the Engineer thereof, in writing and the Engineer shall, without undue delay, ratify the Contractor's selection.
- C 07.07** The provisions of this clause shall apply *mutatis mutandis* in respect of the selection of additional or replacement members of the workforce as may be necessary from time to time during the Contract.
- C 07.08** The Contractor shall, after selecting his temporary workforce, arrange at his own cost for the appointment of the Liaison Officer as representative of the

workforce to act on their behalf with regards to all matters pertaining to the workforce."

C 08 TERMS AND CONDITIONS PERTAINING TO THE EMPLOYMENT OF THE TEMPORARY WORKFORCE

C 08.01 All temporary workers engaged in accordance with the provisions of Part A of the Project Specifications, shall be employed on the terms and conditions of employment as are consistent with those as set out in this Contract. The Contractor shall implement and adhere strictly to such terms and conditions relating to the employment of the temporary workforce, and subject only to the provisions of this Contract, shall not employ any temporary worker on terms and conditions which are less favourable to the worker or inconsistent with the standards and norms generally applicable to temporary workers in the Civil Engineering Industry and applicable to the particular area.

C 08.02 The Contractor shall pay to all temporary workers engaged in terms of Part A of the Project Specifications, not less than the minimum rate of remuneration as specified in Form P : Appendix to Tender.

C 09 LABOUR RELATIONS AND WORKER GRIEVANCE PROCEDURES

C 09.01 The Contractor, as the Employer of the workforce, shall be fully responsible for the establishment and maintenance at his own cost, of satisfactory labour relations on site and the resolution of all grievances of temporary workers as may occur.

C 09.02 The Contractor shall at all times adhere to the accepted norms and standards of labour relations prevailing generally in the Civil Engineering Construction Industry and shall conduct himself in a fair and reasonable manner, within the constraints as may be imposed upon him by the terms of the Contract.

C 09.03 In the event of any temporary worker engaged by the Contractor in terms of the Contract, being aggrieved with regard to his Terms of Employment, working conditions and training, he shall have the right, at his discretion, to be supported in any inquiry or disciplinary hearing or investigation instituted by the Contractor in terms of Subclause C 09.02 above, by one member of the temporary workforce and one member of the Project Committee, which persons shall be nominated by the worker.

C 09.04 In the event of any grievance not being satisfactorily resolved through the application of normal dispute resolution procedures in accordance with Sub clauses C 09.02 and C 09.03, then either the Contractor or the worker concerned may require that the matter be referred to the Project Committee for further consideration, with a view to facilitate the resolution thereof.

C 10 THE SUBCONTRACTORS' WORKFORCES

C 10.01 The provisions of this Part C shall apply *mutatis mutandis* to the workforces employed by all subcontractors engaged by the Contractor and the Contractor shall be fully responsible for ensuring, at his own cost, that the terms of every subcontract agreement entered into are such as to facilitate the application of these provisions in respect of the workforces of all subcontractors.

C 10.02 The Contractor shall at his own cost and to the extent necessary, assist and monitor all subcontractors in the application of the provisions of this Specification, and shall, in terms of the Conditions of Contract, remain fully liable in respect of the acts, omissions and neglects of all subcontractors, in respect of the application of the provisions of this Specification.

C 11 COMMUNITY LIAISON OFFICER (CLO)

The contractor or his appointed agent will appoint a Project Liaison Officer (PLO) after consultation with the local communities, the engineer and the employer. The contractor shall direct all his liaison efforts with the local communities through the appointed officer. The contractor shall, however, accept the appointed as part of his management personnel.

C 11.01 Duties of the Community Liaison Officer

The Community Liaison Officer's duties will be:

- (i) To be available on site daily between the hours of 07h00 and 10h00 and at other times as the need arises. His normal working day will extend from 07h00 in the morning until 16h00 in the afternoon.
- (ii) To determine, in consultation with the contractor, the needs of the temporary labour for relevant skills training. He will be responsible for the identification of suitable trainees and will attend one of each of the training sessions.
- (iii) To communicate daily with the contractor and the engineer to determine the labour requirements with regard to numbers and skill, to facilitate in labour disputes and to assist in their resolution.
- (iv) To assist in and facilitate in the recruitment of suitable temporary labour and the establishment of a "labour desk".
- (v) To attend all meetings in which the community and/or labour are present or are required to be represented.
- (vi) To assist in the identification, and screening of labourers from the community in accordance with the contractor's requirements.
- (vii) To inform temporary labour of their conditions of temporary employment and to inform temporary labourers as early as possible when their period of employment will be terminated.
- (viii) To attend disciplinary proceedings to ensure that hearings are fair and reasonable.

- (ix) To keep a daily written record of his interviews and community liaison.
- (x) To attend monthly site meetings to report on labour and RDP matters.
- (xi) All such other duties as agreed upon between all parties concerned.
- (xii) To submit monthly returns regarding community liaison in a format prescribed by the engineer.

C 11.02 Payment for the project liaison officer

A special pay item is incorporated in section 1200 of the bill of quantities relating to payment of the liaison officer on a prime cost sum basis. This payment shall only be made for the period for which the duties of the liaison officer are required and not necessarily for the full duration of the contract. The remuneration of the PLO shall be determined jointly by the contractor, engineer and employer.

C 11.03 Period of employment of the project liaison officer

The period of employment of the community liaison officer shall be as decided upon jointly by the contractor, engineer and employer.

C 12 MEASUREMENT AND PAYMENT

The Contractor will not be separately reimbursed or compensated in respect of the provision of the workforce and creation of temporary employment opportunities and all the Contractor's costs associated with compliance with the provisions of this part of the Project Specifications shall, except to the extent provided for as relevant, be deemed to be included in the rates tendered for in Section 1300 of the Bill of Quantities.

Item	Unit
C12.01 Project Liaison	
(a) Project Liaison Officer(s)	Prime cost (PC) sum
(b) Project Liaison Committee	Prime cost (PC) sum
(c) Contractor's charge to allow for handling costs and profit in respect of subitem C12.01(a) and (b)	percentage (%)
Payment under the Prime cost (PC) sum provided in subitem C12.01(a) and (b) to cover the employment and remuneration of the Project Liaison Officer(s) and the attendant members of the Project Liaison Committee	

established by the Contractor, shall be effected in accordance with the provisions of Clause 45.2 of the General Conditions of Contract.

The tendered percentage in subitem C12.01(c) is the percentage of the amount actually spent under subitem C12.01(a) and (b) that will be paid to the contractor in full compensation for the contractor's handling costs and profit in respect of the employment and remuneration of the Liaison Officer(s) and Liaison Committee.

PROJECT SPECIFICATIONS

PART D: PROVISION OF STRUCTURED TRAINING

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D 04	GENERIC TRAINING
D 05	ENTREPRENEURIAL SKILLS TRAINING
D 06	MEASUREMENT AND PAYMENT

D 01 SCOPE

This specification covers the requirements for the provision of the following training:

- (a) Specified structured training to selected members of the workforce and small, medium and micro enterprises (SMME's) by a selected subcontractor as accepted by the Employer in terms of Clause 9 of the General Conditions of Contract.
- (b) Additional training deemed necessary by the Contractor, to members of the workforce and small, medium and micro enterprises (SMME's).

D 02 INTERPRETATIONS

D 02.1 Supporting documents

The tender rules, conditions of contract, standard, supplementary and specific specifications and project specifications and drawings shall *inter alia* be read in conjunction with this specification.

D 02.2 Application

The provisions of this specification shall apply in respect of all workers and small, medium and micro enterprises other than the Contractor's key personnel, who are engaged on the execution of the works.

D 03 ENGINEERING SKILLS TRAINING

D 03.1 The Contractor shall, from the commencement of the contract, implement a structured training programme comprising of the training delivered by the selected subcontractor and any additional training as provided for by the Contractor, in which the various skills required for the execution and completion of the works are imparted to the workers, and where applicable, small, medium and micro enterprises engaged thereon, in a programmed and progressive manner. Selected workers shall be trained progressively throughout the duration of the contract in the various stages of a particular type of work.

D 03.2 The skills training programme to be implemented by the selected subcontractor shall comply with the following minimum standards:

- (a) Be accredited by the Civil Engineering Training Authority (CETA) or other institutions recognised by the Department of Labour, as being appropriate for application on this project. Accredited training refers to both the trainers as well as to the training materials.
- (b) Be delivered by suitably qualified and experienced trainers accredited to do so.

D 03.3 The Contractor shall provide with his tender, full details of any additional accredited and in-house training, viewed to be necessary by the Contractor, which he intends to implement at his own cost. These details shall include the following:

- (a) The name of the accredited training institution and programme
- (b) The various aspects of each type of training comprised in the programme
- (c) The manner in which the training is to be delivered
- (d) The numbers and details of the trainers to be utilised.

Details of such additional skills training shall be attached to Form H of the forms to be completed by the Tenderer.

D 03.4 The Contractor shall be responsible for the provision of the necessary items for the delivery of the specified and additional skills training programme, including the following:

- (a) Sufficient skilled, competent and accredited trainers to deliver the additional training programme to workers in accordance with the training programme
- (b) A suitably furnished venue
- (c) Transport of the workers as required
- (d) Tools, equipment, and teaching aids
- (e) Stationery and all other necessary materials.

D 03.5 Selection of candidates

- (a) Members of the workforce will be selected by the Engineer, assisted by the Contractor and the Liaison Officer, to receive specific training as approved by the Engineer.
- (b) The following will be taken into account in the selection of the workers to receive the specified training:
 - i. Previous experience (if any)
 - ii. Previous courses completed (if any)
 - iii. Module specific requirements.

D 03.6 Duration of training

- (a) The Contractor shall allow in his programme for the selected members of the workforce to be engaged in the specified training modules.
- (b) Provision must also be made by the Contractor for members of the workforce to receive any additional training as provided for by the Contractor.

D 03.7 All specified skills-related training shall take place only during normal working hours and the Contractor shall ensure that the selected workers are available at the appropriate times to undergo such training.

D 03.08 Both the selected subcontractor's and the Contractor's additional training programme shall be subject to the approval of the Engineer, and if so instructed by the Engineer shall alter or amend the programme and course content to suit changing conditions on site and all changes in the Contractor's programme of work.

D 03.09 The Contractor shall keep comprehensive records of the training given to each worker involved in training as well as the nature and number of each task executed by the worker and whenever required shall provide copies of such records to the Engineer.

D 03.10 Workers shall be remunerated in respect of all time spent undergoing the specified training in terms of Clause D03.02, at the minimum specified wage rate for the area of the Works as indicated in Form P: Appendix to Tender.

D 03.11 Use of workers

The Contractor shall, in so far as it is reasonably feasible take due cognisance of the nature of the works to be executed at any given time, and use trained workers on those aspects of the works for which they have been trained.

D 04 GENERIC TRAINING

D 04.01 The Contractor shall, from the commencement of the contract, implement a structured progressive training programme comprising of the training delivered by the selected subcontractor and any additional training as provided for by the Contractor. Selected workers shall be trained progressively throughout the duration of the contract.

D 04.02 The generic training programme is to be implemented by a training subcontractor to be nominated by the Engineer, upon the instruction of the Employer.

D 04.03 The Contractor shall provide with his tender, full details of any additional recognised and in-house training viewed to be necessary by the Contractor, which he intends to implement at his own cost. These details shall include the following:

- (a) The name of the training institution and programme
- (b) The various aspects of each type of training comprised in the programme
- (c) The manner in which the training is to be delivered
- (d) The numbers and details of the trainers to be utilized.

Details of such additional generic training shall be attached to Form H of the forms to be completed by the Tenderer.

D 04.04 The Contractor shall be responsible for the provision of the necessary items for the delivery of the specified and additional generic training programme, including the following:

- (a) A suitably furnished venue
- (b) Transport of the workers as required
- (c) Tools, equipment, and teaching aids
- (d) Stationery and all other necessary materials.

D 04.05 All generic training shall take place outside of normal working hours.

D 04.06 The Contractor's training programme, if any, shall be subject to the approval of the Engineer, and if so instructed by the Engineer shall alter or amend the programme and course content.

D 04.07 The Contractor shall keep comprehensive records of the training given to each worker involved in training and whenever required shall provide copies of such records to the Engineer. At the successful completion of each course provided by the Contractor each student shall be issued with a certificate indicating the course contents as proof of attendance and completion.

D 04.08 No remuneration in respect of time spent undergoing training in terms of this Clause will be made to any of the workers.

D 05 ENTREPRENEURIAL SKILLS TRAINING

D 05.01 Training needs assessments of the Contractor and his sub-contractors will be undertaken during the course of the Contract by a sub-contractor to be nominated by the Engineer, on the instruction of the Employer. The training needs assessments shall have as their focus contractor development, and shall identify needs for business development, business management and technical construction management skills. Such training needs may be identified in personnel both in the permanent employ of the Contractor and/or his sub-contractors, as well as temporary employees thereof.

D 05.02 Once the needs assessments have been completed, training to meet the needs identified in the assessment phase will be provided, again by a sub-contractor to be nominated by the Engineer, upon the instruction of the Employer.

D 05.03 The Contractor shall assist in facilitating in the delivery of the training, by instructing and motivating personnel and subcontractors regarding attendance and participation therein.

D 05.04 The Contractor shall further make all reasonable efforts to co-ordinate the programming of the subcontractor's work with that of the delivery of the structured training.

D 05.05 Following completion of the structured training, members of small, medium and micro contractors/subcontractors that have demonstrated understanding of and

competence in the training material are to be appropriately certified by the accrediting body.

- D 05.06** The Contractor shall provide with his tender, full details of any additional accredited and in-house training, viewed to be necessary by the Contractor, which he intends to implement at his own cost. These details shall include the following:
- (a) The name of the training institution and programme
 - (b) The various aspects of each type of training comprised in the programme
 - (c) The manner in which the training is to be delivered
 - (d) The numbers and details of the trainers to be utilized.

Details of such additional entrepreneurial training shall be attached to Form H of the forms to be completed by the Tenderer.

- D 05.07** The Contractor shall be responsible for the provision of the necessary items for the delivery of the entrepreneurial training programme, including the following:
- (a) A suitably furnished venue
 - (b) Transport of the subcontractors as required
 - (c) Tools, equipment, and teaching aids
 - (d) Stationery and all other necessary materials.

- D 05.08** All specified entrepreneurial training shall take place within normal working hours.

- D 05.09** The Contractor's training programme, if any, shall be subject to the approval of the Engineer, and if so instructed by the Engineer shall alter or amend the programme and course content.

- D 05.10** The Contractor shall keep comprehensive records of all training given to personnel and subcontractors involved in training and whenever required shall provide copies of such records to the Engineer. At the successful completion of each course each subcontractor shall be issued with a certificate indicating the course contents as proof of attendance and completion.

- D 05.11** No remuneration in respect of time spent undergoing specified training in terms of this Clause will be made to any of the subcontractors.

D 06 MEASUREMENT AND PAYMENT

D 06.01 Basic principles

(a) General

Measurement and payment for all work executed in terms of this contract shall be measured and paid for in accordance with Standard Specifications for Road and Bridge Works for State Road Authorities (COLTO) and the principles set out in Clause D 06.02 of the project specifications, irrespective of whether the work is executed as an integral part of the provision of training in terms of this specification.

(b) Training

The Contractor shall only be reimbursed for the amounts actually paid by the Contractor to the selected subcontractors appointed as directed by the Employer, in execution of the Engineer's written instruction, plus a percentage as tendered to cover all his charges and profits.

D 06.02 Scheduled items

Payment items are included in the Schedule of Quantities under Section 1200 for the provision of the specified training by selected subcontractors only. Any additional training as viewed by the Contractor to be necessary shall be viewed to be included under Section 1300 and shall not be paid for separately.

Terms of Payment

Payment under this Contract shall be on the following basis:

- a) 90% (ninety percent) of the contract price after written acceptance by the Engineer of delivery of goods.
- b) 10% (ten percent) of the contract plus or minus any adjustment due under the Contract at the expiry of the Period of Upholding of six months from the certified date.

Item	Unit
D 07.01 Training:	
(a) Technical skills	Provisional Sum
(b) Generic and Management skills	Provisional Sum
(c) Training venue	lump sum
(d) Remuneration of workers undergoing technical skills training	Provisional Sum
(e) Contractor's handling costs, profit and all other charges in respect of Sub items D 07.01(a) and (b):	
(i) Technical skills	percentage (%)
(ii) Generic and Management skills	percentage (%)

Payment under sub items D 07.01(a) and (b) shall be the amounts actually paid to the training institutions and shall be made in accordance with the provisions of the General Conditions of Contract.

The lump sum tendered for sub item D 07.01 (c) shall include full compensation for the provision of a suitable training venue, for all necessary lighting, furniture, stationery, consumables and study material, and for transportation of the workers to and from the training venue. Payment of the lump sum will be made in two instalments as follows:

- (i) The first instalment, 75% of the lump sum, will be paid after the Contractor has met all his obligations regarding the provision of the training venue as specified.
- (ii) The second and final instalment, 25% of the lump sum, will be paid after the Contractor has met all his obligations regarding the provision of all the training programmes specified in the document.

Payment under sub item D 07.01 (d) shall be the actual sum paid to workers undergoing technical skills training. The Contractor will not be reimbursed directly for his administrative costs, which will be deemed to be included in the rates tendered for item B13.01.

The percentages tendered for sub item D 07.01 (e) shall be the percentages of the amounts actually reimbursed to the Contractor under sub items D 07.01 (a) and (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."

PROJECT SPECIFICATIONS

PART E : HEALTH AND SAFETY SPECIFICATION

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E 01 SCOPE

This specification covers the requirements, notwithstanding the provisions of all other appropriate legislation and regulations in this regard, for ensuring the continued health and safety of all personnel having access to the construction site, and in ensuring that persons not having such access may not enter the site for the duration of all construction works undertaken on the site.

E 02 INTERPRETATIONS

E 02.01 Supporting documents

The tender rules, conditions of contract, standard, supplementary and specific specifications and project specifications and drawings shall *inter alia* be read in conjunction with this specification, together with the Occupational Health and Safety Amendment Act (Act 85 of 1993) and the Construction Regulations issued in pursuance of this Act in Government Gazette no. 25207 dated 18 July 2003.

E 02.02 Application

The provisions of this specification shall apply in respect of all Contractors appointed by the Employer for work on the site, as well as to all sub-contractors appointed by Contractors, their personnel and assigned agents expected to work on the site.

E 03 FALL PROTECTION

E 03.1 The complete contents of Paragraph 8, and all of its sub-paragraphs, of the Construction Regulations published in Government Gazette no. 25207 dated 18 July 2003, read verbatim, and with all meanings assigned thereto by the definitions included in the said Construction Regulations, shall be deemed to constitute the contents of this specification.

E 04 STRUCTURES

E 04.1 The complete contents of Paragraphs 9(1) and 9(3), and all of their sub-paragraphs, of the Construction Regulations published in Government Gazette no. 25207 dated 18 July 2003, read verbatim, and with all meanings assigned thereto by the definitions included in the said Construction Regulations, shall be deemed to constitute the contents of this specification.

E 05 FORMWORK AND SUPPORT WORK

E 05.1 The complete contents of Paragraph 10, and all of its sub-paragraphs, of the Construction Regulations published in Government Gazette no. 25207 dated 18 July 2003, read verbatim, and with all meanings assigned thereto by the definitions included in the said Construction Regulations, shall be deemed to constitute the contents of this specification.

E 06 EXCAVATION WORK

E 06.1 The complete contents of Paragraph 11, and all of its sub-paragraphs, of the Construction Regulations published in Government Gazette no. 25207 dated 18 July 2003, read verbatim, and with all meanings assigned thereto by the definitions included in the said Construction Regulations, shall be deemed to constitute the contents of this specification.

E 07 DEMOLITION WORK

E 07.1 The complete contents of Paragraph 12, and all of its sub-paragraphs, of the Construction Regulations published in Government Gazette no. 25207 dated 18 July 2003, read verbatim, and with all meanings assigned thereto by the definitions included in the said Construction Regulations, shall be deemed to constitute the contents of this specification.

E 09 BOATSWAIN'S CHAIRS

- E 09.1** The complete contents of Paragraph 16, and all of its sub-paragraphs, of the Construction Regulations published in Government Gazette no. 25207 dated 18 July 2003, read verbatim, and with all meanings assigned thereto by the definitions included in the said Construction Regulations, shall be deemed to constitute the contents of this specification.

E 10 MATERIAL HOISTS

- E 10.1** The complete contents of Paragraph 17, and all of its sub-paragraphs, of the Construction Regulations published in Government Gazette no. 25207 dated 18 July 2003, read verbatim, and with all meanings assigned thereto by the definitions included in the said Construction Regulations, shall be deemed to constitute the contents of this specification.

E 11 BATCH PLANTS

- E 11.1** The complete contents of Paragraph 18, and all of its sub-paragraphs, of the Construction Regulations published in Government Gazette no. 25207 dated 18 July 2003, read verbatim, and with all meanings assigned thereto by the definitions included in the said Construction Regulations, shall be deemed to constitute the contents of this specification.

E 12 EXPLOSIVE POWERED TOOLS

- E 12.1** The complete contents of Paragraph 19, and all of its sub-paragraphs, of the Construction Regulations published in Government Gazette no. 25207 dated 18 July 2003, read verbatim, and with all meanings assigned thereto by the definitions included in the said Construction Regulations, shall be deemed to constitute the contents of this specification.

E 13 CRANES

- E 13.1** The complete contents of Paragraph 20, and all of its sub-paragraphs, of the Construction Regulations published in Government Gazette no. 25207 dated 18 July 2003, read verbatim, and with all meanings assigned thereto by the definitions included in the said Construction Regulations, shall be deemed to constitute the contents of this specification.

E 14 CONSTRUCTION VEHICLES AND MOBILE PLANT

- E 14.1** The complete contents of Paragraph 21, and all of its sub-paragraphs, of the Construction Regulations published in Government Gazette no. 25207 dated 18 July 2003, read verbatim, and with all meanings assigned thereto by the definitions included in the said Construction Regulations, shall be deemed to constitute the contents of this specification.

E 15 ELECTRICAL INSTALLATIONS AND MACHINERY ON CONSTRUCTION SITES

- E 15.1** The complete contents of Paragraph 22, and all of its sub-paragraphs, of the Construction Regulations published in Government Gazette no. 25207 dated 18 July 2003, read verbatim, and with all meanings assigned thereto by the definitions included in the said Construction Regulations, shall be deemed to constitute the contents of this specification.

E 16 USE AND TEMPORARY STORAGE OF FLAMMABLE LIQUIDS ON CONSTRUCTION SITES

- E 16.1** The complete contents of Paragraph 23, and all of its sub-paragraphs, of the Construction Regulations published in Government Gazette no. 25207 dated 18 July 2003, read verbatim, and with all meanings assigned thereto by the definitions included in the said Construction Regulations, shall be deemed to constitute the contents of this specification.

E 17 WATER ENVIRONMENTS

- E 17.1** The complete contents of Paragraph 24, and all of its sub-paragraphs, of the Construction Regulations published in Government Gazette no. 25207 dated 18 July 2003, read verbatim, and with all meanings assigned thereto by the definitions included in the said Construction Regulations, shall be deemed to constitute the contents of this specification.

E 18 HOUSEKEEPING ON CONSTRUCTION SITES

- E 18.1** The complete contents of Paragraph 25, and all of its sub-paragraphs, of the Construction Regulations published in Government Gazette no. 25207 dated 18 July 2003, read verbatim, and with all meanings assigned thereto by the definitions included in the said Construction Regulations, shall be deemed to constitute the contents of this specification.

E 19 STACKING AND STORAGE ON CONSTRUCTION SITES

- E 19.1** The complete contents of Paragraph 26, and all of its sub-paragraphs, of the Construction Regulations published in Government Gazette no. 25207 dated 18 July 2003, read verbatim, and with all meanings assigned thereto by the definitions included in the said Construction Regulations, shall be deemed to constitute the contents of this specification.

E 20 FIRE PRECAUTIONS ON CONSTRUCTION SITES

- E 20.1** The complete contents of Paragraph 27, and all of its sub-paragraphs, of the Construction Regulations published in Government Gazette no. 25207 dated 18 July 2003, read verbatim, and with all meanings assigned thereto by the definitions included in the said Construction Regulations, shall be deemed to constitute the contents of this specification.

E 21 CONSTRUCTION WELFARE FACILITIES

- E 21.1** The complete contents of Paragraph 28, and all of its sub-paragraphs, of the Construction Regulations published in Government Gazette no. 25207 dated 18 July 2003, read verbatim, and with all meanings assigned thereto by the definitions included in the said Construction Regulations, shall be deemed to constitute the contents of this specification.

E 22 MEASUREMENT AND PAYMENT

- E 22.1** Payment for the contractor's obligations in respect of the Occupational Health and Safety act and Construction Regulations shall be made through three payment items described below. The three payment items together shall include full compensation for all personnel (including a dedicated full time Construction Safety Officer), cost and incidentals in respect of compliance with the enforcement of the Health and Safety Specifications, which shall include for the compilation, presentation, implementation and maintenance of the Health and Safety Plan as contemplated. In tendering rates for the three items the contractor shall ensure that the sum of the amounts for the three items shall not be less than one percent (1%) of the Tender Amount.

All of the Contractor's costs associated with compliance with the provisions of this part of the Project Specifications shall be deemed to be included in the rates tendered for the items of work listed below.

Item	Unit
E 23.01 Contractor's initial obligations in respect of the Occupational Health and Safety Act and Construction Regulations	Lump Sum

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
E 23.02 Contractor's time related obligations in respect of the Occupational Health and Safety Act and Construction Regulations	Month

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 that 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 E 23.01 has been made.

Item	Unit
E 23.03 Submission of the Health and Safety File	Lump Sum

The tendered lump sum shall represent full compensation for the contractor meeting all his obligations in respect of the Occupational Health and Safety Act and the Construction Regulations and for the preparation and submission of his Health and Safety File complete as envisaged on this specification to the Client's satisfaction.

This amount will be paid only once the contractor has met all his obligations in respect of the Occupational Health and Safety Act and the Construction Regulations and has submitted his Health and Safety File complete as envisaged on this specification to the Client's satisfaction.

PROJECT SPECIFICATIONS

PART F: HIV/AIDS SPECIFICATION

CONTENTS

F 01	SCOPE
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F 03	BASIC METHOD REQUIREMENT
F 04	HIV/AIDS AWARENESS EDUCATION AND TRAINING
F 05	PROVIDING WORKERS WITH ACCESS TO CONDOMS
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F 07	APPOINTMENT OF AN HIV/AIDS AWARENESS CHAMPION
F 08	MONITORING
F 09	MEASUREMENT AND PAYMENTS

F 01 SCOPE

- F 01.1** This specification contains all requirements applicable to the Contractor for creating HIV/AIDS awareness amongst all of the Workers involved in this project for the duration of the construction period, through the following strategies:
- F 01.2** Raising awareness about HIV/AIDS through education and information on the nature of the disease, how it is transmitted, safe sexual behavior, attitudes towards people affected and people living with HIV/AIDS, how to live a healthy lifestyle with HIV/AIDS, the importance of voluntary testing and counseling, the diagnosis and treatment of Sexually Transmitted Infections, and the closest health service providers
- F 01.3** Informing Workers of their rights with regard to HIV/AIDS in the workplace
- F 01.4** Providing Workers with access to condoms and other awareness material that will enable construction Workers to make informed decisions about sexual practices

F 02 DEFINITIONS AND ABBREVIATIONS

F 02.1 Definitions

Service Provider: The natural or juristic person recognised and approved by the Department of public works as a specialist in conducting HIV/AIDS awareness programmes

Service Provider Workshop Plan: A plan outlining the content, process and schedule of the training and education workshops presented by a Service Provider, which has been approved by the Representative/Agent

Worker: Persons in the employ of the Contractor or under the direction or supervision of the Contractor or any of his sub-contractors, who are on site for a minimum period of 30 days in all

F 02.2 Abbreviations

HIV : Human Immunodeficiency Virus
AIDS : Acquired Immune Deficiency Syndrome
STI : Sexually Transmitted Infection

F 03 BASIC METHOD REQUIREMENT

F 03.1 The Contractor shall, through a Service Provider, conduct onsite workshops with the Workers

F 03.2 The Service Provider shall develop and compile a Service Provider Workshop Plan to be presented at the workshops and which will be best suited for this project to achieve the specified objectives with regards to HIV/AIDS awareness. The Contractor shall submit the Service Provider Workshop Plan for approval within 21 days after the tender acceptance date. After approval by the Department's Tender Committee, the Contractor shall make available an appropriate venue that will be conducive to education and training.

F 03.3 The Service Provider Workshop Plan shall address, but will not be limited to the following:

- (a) The nature of the disease;**
- (b) How it is transmitted;**
- (c) Safe sexual behaviour;**
- (d) Post exposure services such as voluntary counselling and testing (VCT) and nutritional plans for people living with HIV/AIDS;**
- (e) Attitudes towards other people with HIV/AIDS;**
- (f) Rights of the Worker in the workplace;**
- (g) How the awareness champion will be equipped prior to commencement of the HIV/AIDS awareness programme with basic HIV/AIDS information and the necessary skills to handle questions regarding the HIV/AIDS awareness programme on site sensitively;**
- (h) How the Service Provider will support the awareness champion;**
- (i) Location and contact numbers of the closest clinics, VCT facilities, counselling services and referral systems;**
- (j) How the workshops will be presented, including frequency and duration;**
- (k) How the workshops will fit in with the construction programme;**
- (l) How the Service Provider will assess the knowledge and attitude levels of attendees to structure workshops accordingly;**
- (m) How the video will be used;**
- (n) How the Service Provider will elicit maximum participation from the Workers;**
- (o) A questions and answers slot (interactive session)**

The Service Provider Workshop Plan shall encompass the Specific Learning Outcomes (SLO) as stipulated

F 04 HIV/AIDS AWARENESS EDUCATION AND TRAINING

F 04.1 Workshops

The Contractor shall ensure that all the Workers attend the workshops.

The workshops shall adequately deal with all the aspects contained in the Service Provider Workshop Plan. In order to enhance the learning experience, groups of not exceeding 25 people shall attend the interactive sessions of the workshops.

F 04.2 Recommended practice

Workshop Schedule

Presenting information contained in the Service Provider Workshop Plan can be divided in as many workshop sessions as deemed practicable by the Contractor, provided that all Workers are exposed to all aspects of the workshops as outlined in the Service Provider Workshop Plan.

Breaking down the content of information to be presented to Workers into more than one workshop session however, has the added advantage that messages are reinforced over time while providing opportunity between workshop sessions for Workers to reflect and test information. Workers will also have an opportunity to ask questions at a next session.

An attendance register should be kept by the Service Provider at every workshop and should be handed to the Department's Project Manager on a monthly basis together with Process Indicator Forms.

Service Providers

A data base of recommended Service Providers is available from the Department of Public Works, Private Bag X65, Pretoria, 0001, located at the Central Government Offices, corner of Bosman and Vermeulen Streets, Pretoria and at all Public Works Regional Offices

HIV/AIDS Specific Learning Outcomes and Assessment Criteria

Workers shall be exposed to workshops for a minimum duration of two-and-a-half hours. In order to set a minimum standard requirement, the following specific learning outcomes and assessment criteria shall be met

(a) UNIT 1: The nature of HIV/AIDS

After studying and understanding this unit the Worker will be able to differentiate between HIV and AIDS and comprehend whether or not it is curable. The Worker will also be able to explain how the HI virus operates once a person is infected and identify the symptoms associated with the progression of HIV/AIDS.

Assessment Criteria:

1. Define and describe HIV and AIDS
2. List and describe the progression of HIV/AIDS

(b) UNIT 2: Transmission of the HI virus

After studying and understanding this unit the Worker will be able to identify bodily fluids that carry the HI virus. The Worker will be able to recognise how HIV/AIDS is transmitted and how it is not transmitted.

Assessment Criteria:

1. Record in what bodily fluids you will find the HI virus.
2. Describe how HIV/AIDS can be transmitted.
3. Demonstrate your ability to distinguish between how HIV/AIDS is transmitted and misconceptions around transmittance of HIV/AIDS.

(c) UNIT 3: HIV/AIDS preventative measures

After studying and understanding this unit the Worker will comprehend how to act in a way that would minimise the risk of HIV/AIDS infection and to use measures to prevent the HI virus to enter the blood stream.

Assessment Criteria:

1. Report on how you could minimise your risk of HIV/AIDS infection.
2. Report on precautions that can be taken to prevent HIV/AIDS infection.
3. Explain or demonstrate how to use a male and female condom.
4. List of factors that could jeopardize the safety condoms provide against HIV/AIDS transmission.

(d) UNIT 4: Voluntary HIV/AIDS counseling and testing

After studying and understanding this unit the Worker will be able to recognise methods of testing for HIV/AIDS infection. The Worker will be able to understand the purpose of voluntary HIV/AIDS testing and pre- and post-test counseling.

Assessment Criteria:

1. Describe kinds of testing for HIV/AIDS infection.
2. Report on why voluntary testing is important.
3. Report on why pre- and post-test counseling is important.

(e) UNIT 5: Living with HIV/AIDS

After studying and understanding this unit the Worker will be able to recognise the importance of caring for people living with HIV/AIDS and be able to manage HIV/AIDS.

Assessment Criteria:

1. List and describe ways to manage HIV/AIDS.
2. Describe nutritional needs of people living with HIV/AIDS.
3. Describe ways to embrace a healthy lifestyle as a person living with HIV/AIDS.
4. Explain the need of counseling and support to people living with HIV/AIDS.

(f) UNIT 6: Treatment options for people with HIV/AIDS

After studying and understanding this unit the Worker will be familiar with the various treatments available to HIV/AIDS infected or potentially HIV/AIDS infected people.

Assessment Criteria:

1. Discuss anti-retroviral therapy
2. List methods of treatment to prevent HIV/AIDS transmission from mother-to-child.
3. Describe the need for treatment of opportunistic diseases for people living with HIV/AIDS.
4. Describe post exposure prophylactics.

(g) UNIT 7: The rights and responsibilities of Workers in the workplace with regards to HIV/AIDS

After studying and understanding this unit the Worker will be able to identify the rights and responsibilities of the Worker living with HIV/AIDS in the workplace. The Worker will recognise the importance of accepting colleagues living with HIV/AIDS and treating them in a non-discriminative way.

Assessment Criteria:

1. Discuss the rights of a person living with HIV/AIDS in the workplace.
2. Discuss the responsibilities of a person living with HIV/AIDS in the workplace.
3. Report on why acceptance and non-discrimination of colleagues living with HIV/AIDS is important.

F04.3 Displaying of plastic laminated posters and distribution of information booklets

- (a) The Contractor shall obtain a set of four posters conveying different key messages, and information booklets from the Construction Industry Development Programme Unit (CIDP), Room A520 located in the Central Government Offices, corner of Bosman and Vermeulen Streets, Pretoria or at all Regional Offices of the Department of Public Works. The postal address is the Department of Public Works, Private Bag X65, Pretoria, 0001.
- (b) The above-mentioned posters and information booklets have been prepared to raise awareness and to share information about HIV/AIDS and STI's.
- (c) Posters or display stands shall be displayed on site as soon as possible but not later than 14 days after the date of site hand over.
- (d) Posters shall be displayed in areas highly trafficked by Workers, including toilets, rest areas, the site office and compounds.

- (e) The posters on display should always be intact, clear and readable.
- (f) Information booklets must be distributed to all Workers as soon as possible but not later than 14 days after site hand over, or as soon as the Worker joins the site.

F05 PROVIDING WORKERS WITH ACCESS TO CONDOMS

F05.1 The Contractor shall provide and maintain condom dispensers and make both male and female condoms complying with the requirements of SABS ISO 4074 available at all times to all Workers at readily accessible points on site, for the duration of the contract. The Contractor may obtain condom dispensers from the Department of Health and condoms may be obtained from the local clinic or the Department of Health.

F05.2 At least one male and one female condom dispenser and a sufficient supply of condoms, all to the approval of the Representative/Agent, shall be on site within 14 days of site hand over. Contractors should note that arrangements to obtain condoms from the Department of Health Clinics prior to site hand over may be necessary to ensure that condoms are available within 14 days of site hand over.

F05.3 Condoms shall be made available in areas highly trafficked by Workers, including toilets, the site office and compounds.

F06 ENSURING ACCESS TO HIV/AIDS TESTING AND COUNSELLING FACILITIES AND TREATMENT OF SEXUALLY TRANSMITTED INFECTIONS (STI)

F06.1 The Contractor shall provide the Workers with the names of the closest Service Providers that provide HIV/AIDS testing and counseling and Clinics providing Sexually Transmitted Infection (STI) diagnosis and treatment. Information on these Service Providers and Clinics should be displayed on a poster of a size not smaller than A1 in an area highly trafficked by Workers.

F07 APPOINTMENT OF AN HIV/AIDS AWARENESS CHAMPION

F07.1 Within 14 days of site hand over the Contractor shall appoint an Awareness Champion, from, amongst the Workers, who speaks and understands all the languages spoken by the Workers and he/she shall be on site during all stages of the construction period. The Contractor shall ensure that the Awareness Champion has been trained by the Service Provider on basic HIV/AIDS information, the support services available and the necessary skills to handle questions regarding the HIV/AIDS programme in a sensitive way.

The Awareness Champion shall be responsible for:

- (a) Liaising with the Service Provider on organising awareness workshops;
- (b) Filling condom dispensers and monitoring condom distribution;
- (c) Handing out information booklets;
- (d) Placing and maintaining posters

F08 MONITORING

F08.1 The Contractor shall grant to the Representative/Agent reasonable access to the construction site in order to conduct unannounced site visits in order to establish that

the Contractor complies with his obligations regarding HIV/AIDS awareness under this contract.

F08.2 The Representative/Agent shall conduct the site visits with the least possible disruption to the Contractor's daily routine.

F08.3 Contractors must report problems that they experience in implementing the HIV/AIDS requirements to the Representative/Agent.

F08.4 The attached SITE CHECKLIST (SCHEDULE A) shall be completed and submitted at every construction progress inspection to the Representative/Agent.

F08.5 The attached SERVICE PROVIDER REPORT (SCHEDULE B) shall be completed and submitted on a monthly basis to the Department's Project Manager through the Representative/Agent

F08.6 The Contractor shall, at the end of the contract, complete and submit a close out programme report CONTRACTOR HIV/AIDS PROGRAMME REPORT (SCHEDULE C)

F09 MEASUREMENT AND PAYMENTS

F09.1 It is required of tenderers to thoroughly study the HIV/AIDS Specifications of the Department that must be read together with and is deemed to be incorporated in the Schedule of Quantities. Provision for pricing of HIV/AIDS awareness must be made under Item F10.01 hereafter and it is explicitly pointed out that all requirements of the aforementioned specifications are deemed to be priced hereunder as the said item represents the only method of measurement and no additional items or extras to the contract in this regard shall be entertained.

F09.2 Contractor should take note that compliance with the HIV/AIDS Specification is compulsory. In the event of partial or total non-compliance, the Representative /Agent, notwithstanding the provisions of any other clause to the contrary, reserves the right to delay issuing any progress payment certificate until the Contractor provides satisfactory proof of compliance. The Contractor shall not be entitled to any compensation of whatsoever nature, including interest, due to such delay of payment

Item	Unit
F 10.01	Lump Sum

HIV AIDS Awareness obligations

The tendered lump sum shall be in full compensation for the contractor providing an approved selected service provider to comply with the requirements and conditions of the Department's HIV AIDS Specifications, including the workshop education and training within an HIV AIDS Awareness programme and the Contractor's handling costs, profit, record keeping, reporting and all other charges in connection with providing the HIV AIDS Awareness programme.

Payment under item F10.01 will be made as follows:

80% of the amount will be paid once the service provider has complied with the requirements and conditions of the Department's HIV AIDS Specifications, including the workshop education and training within an HIV AIDS Awareness programme.

The outstanding 20% will be paid on completion of the contract, subject to the contractor's compliance in all respects with the requirements and conditions of the Department's HIV AIDS Specifications.

PROJECT SPECIFICATIONS

PART G : GENERIC LABOUR-INTENSIVE SPECIFICATION

CONTENTS

- G 01 SCOPE
- G 02 PRECEDENCE
- G 03 HAND EXCAVATEABLE MATERIAL
- G 04 LABOUR INTENSIVE WORKS

G1 SCOPE

This specification establishes general requirements for activities, which are to be, executed by hand involving the following:

- a) trenches having a depth of less than 1.5 metres
- b) storm water drainage
- c) low-volume roads and sidewalks

G2 PRECEDENCE

Where this specification is in conflict with any other standard or specification referred to in the Scope of Works to this Contract, the requirements of this specification shall prevail.

G3 HAND EXCAVATEABLE MATERIAL

Hand excavateable material is material:

a) Granular materials:

- i) Whose consistency when profiled may in terms of table 1 be classified as very loose, loose, medium dense, or dense; or
- ii) Where the material is gravel having a maximum particle size of 10mm and contains no cobbles or isolated boulders, no more than 15 blows of a dynamic cone penetrometer is required to penetrate 100mm;

b) cohesive materials:

- i) whose consistency when profiled may in terms of table 1 be classified as very soft, soft, firm, stiff and stiff / very stiff; or
- ii) where the material is gravel having a maximum particle size of 10mm and contains no cobbles or isolated boulders, no more than 8 blows of a dynamic cone penetrometer is required to penetrate 100mm;

Note: 1) A boulder, a cobble and gravel is material with a particle size greater than 200mm, between 60 and 200mm.

- 2) A dynamic cone penetrometer is an instrument used to measure the insitu shear resistance of a soil comprising a drop weight of approximately 10 kg, which falls through a height of 400mm and drives a cone having a maximum diameter of 20mm (cone angle of 60° with respect to the horizontal) into the material being used.

Table 1: Consistency of materials when profiled

GRANULAR MATERIALS		COHESIVE MATERIALS	
CONSISTENCY	DESCRIPTION	CONSISTENCY	DESCRIPTION
Very loose	Crumbles very easily when scraped with a geological pick.	Very soft	Geological pick head can easily be pushed in as far as the shaft of the handle.
Loose	Small resistance to penetration by sharp end of a geological pick.	Soft	Easily dented by thumb; sharp end of a geological pick can be pushed in 30-40 mm; can be moulded by fingers with some pressure.
Medium dense	Considerable resistance to penetration by sharp end of a geological pick.	Firm	Indented by thumb with effort; sharp end of geological pick can be pushed in up to 10 mm; very difficult to mould with fingers; can just be penetrated with an ordinary hand spade.
Dense	Very high resistance to penetration by the sharp end of geological pick; requires many blows for excavation.	Stiff	Can be indented by thumbnail; slight indentation produced by pushing geological picks point into soil; cannot be moulded by fingers.
Very dense	High resistance to repeated blows of a geological pick.	Very stiff	Indented by thumbnail with difficulty; slight indentation produced by blow of a geological pick point.

G4 LABOUR INTENSIVE WORKS

Trench excavation

All hand excavateable material in trenches having a depth of less than 1,5 metres shall be excavated by hand.

Compaction of backfilling to trenches (areas not subject to traffic)

Backfilling to trenches shall be placed in layers of thickness (before compaction) not exceeding 100mm. Each layer shall be compacted using hand tampers

- a) To 90% Proctor density;
- b) Such that in excess of 5 blows of a dynamic cone penetrometer (DCP) is required to penetrate 100 mm of the backfill, provided that backfill does not comprise more than 10% gravel of size less than 10mm and contains no isolated boulders, or
- c) Such that the density of the compacted trench backfill is not less than that of the surrounding undisturbed soil when tested comparatively with a DCP.

Excavation

All hand excavateable material including topsoil classified, as hand excavateable shall be excavated by hand. Harder material may be loosened by mechanical means prior to excavation by hand.

The excavation of any material, which presents the possibility of danger or injury to workers, shall not be excavated by hand.

Clearing and grubbing

Grass and small bushes shall be cleared by hand.

Shaping

All shaping shall be undertaken by hand.

Loading

All loading shall be done by hand, regardless of the method of haulage.

Haul

Excavation material shall be hauled to its point of placement by means of wheelbarrows where the haul distance is not greater than 150 m.

Offloading

All material, however transported, is to be off-loaded by hand, unless tipper-trucks are utilised for haulage

Spreading

All material shall be spread by hand.

Compaction

Small areas may be compacted by hand provided that the specified compaction is achieved.

Grassing

All grassing shall be undertaken by sprigging, sodding, or seeding by hand.

Stone pitching and rubble concrete masonry

All stone required for stone pitching and rubble concrete masonry, whether grouted or dry, must be collected, loaded, off loaded and placed by hand.

Sand and stone shall be hauled to its point of placement by means of wheelbarrows where the haul distance is not greater than 150m.

Grout shall be mixed and placed by hand.

Manufactured Elements

Elements manufactured or designed by the Contractor, such as manhole rings and cover slabs, pre-cast concrete planks and pipes, masonry units and edge beams shall not individually, have a mass of more than 320kg. In addition the items shall be large enough so that four workers can conveniently and simultaneously acquire a proper handhold on them.

PROJECT SPECIFICATIONS

PART H : ENVIRONMENTAL MANAGEMENT PLAN

CONTENTS

H 01	SCOPE
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H 05	ADMINISTRATION OF ENVIRONMENTAL OBLIGATIONS
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H 09	RECORD KEEPING
H 10	COMPLIANCE AND PENALTIES
H 11	MEASUREMENT AND PAYMENT

H 01 SCOPE

This environmental management programme (EMP) sets out the methods by which proper environmental controls are to be implemented by the contractor. The duration over which the contractor's controls shall be in place cover the construction period of the project as well as the limited time after contract completion defined by the General Conditions of Contract, and the project specifications, as the defects notification period (maintenance period).

The provisions of this EMP are binding on the contractor during the life of the contract. They are to be read in conjunction with all the documents that comprise the suite of documents for this contract. In the event that any conflict occurs between the terms of the EMP and the project specifications or Record of Decision, the terms herein shall be subordinate.

The EMP is a dynamic document subject to similar influences and changes as are brought by variations to the provisions of the project specification. Any substantial changes shall be submitted to the Elias Motsoaledi Local Municipality in writing for approval.

The EMP identifies the following:

Construction activities that will impact on the environment.

Specifications with which the contractor shall comply in order to protect the environment from the identified impacts.

Actions that shall be taken in the event of non-compliance.

H 02 DEFINITIONS

Alien Vegetation: alien vegetation is defined as undesirable plant growth which shall include, but not be limited to, all declared category 1 and 2 listed invader species as set out in the Conservation of Agricultural Resources Act (CARA) regulations. Other vegetation deemed to be alien shall be those plant species that show the potential to occupy in number, any area within the defined construction area and which are declared to be undesirable.

Construction Activity: a construction activity is any action taken by the contractor, his subcontractors, suppliers or personnel during the construction process as defined in the South African National Roads Agency Limited and National Roads Act, 1998 (Act No. 7, 1998)

Environment: environment means the surroundings within which humans exist and that could be made up of -

- the land, water and atmosphere of the earth;
- micro-organisms, plant and animal life;
- any part or combination of (i) and (ii) and the interrelationships among and between them; and
- the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being.

Environmental Aspect: an environmental aspect is any component of a contractor's construction activity that is likely to interact with the environment.

Environmental Impact: an impact or environmental impact is the change to the environment, whether desirable or undesirable, that will result from the effect of a construction activity. An impact may be the direct or indirect consequence of a construction activity.

Record of Decision: a record of decision is a written statement from the National Department of Environmental Affairs and Tourism, (N.DEAT), that records its approval of a planned undertaking to improve, upgrade or rehabilitate a section of road and the mitigating measures required to prevent or reduce the effects of environmental impacts during the life of a contract.

Road Reserve: the road reserve is a corridor of land, defined by co-ordinates and proclamation, within which the road, including access intersections or interchanges, is situated. A road reserve may, or may not, be bounded by a fence.

Road Width: for the purposes of the EMP, the road width is defined as the area within the road reserve i.e. fence line to fence line, but also includes all areas beyond the road reserve that are affected by the continuous presence of the road, e.g. a reach of a water course.

Listed in the table below are some of the references in the COLTO Standard Specifications to environmental related issues.

Description	Reference
Establishment of site offices	1302 (a), 1402 (e).
Vegetation	5801(b), 5802(b), (c), (d), and (e), 5804, 5805, 5806 and 5807.
Rehabilitation	1302 (a)and Sections 5800 and 5900.of the Standard and Project Specifications
Sewage treatment	1402 (g) and 1404 (a) and Part B of the Project Specifications, clause B1302 (a).
Litter	1302 (b).
Removal of solid waste	1404 (a).

Description	Reference
Soil management	3104 (a), 5802 (a), (g), 5804 (a), (b), and (c).
Borrow material	3100. (The cost of complying with the requirements shall be deemed to be included in existing rates in the Bill of Quantities.)

H 03 IDENTIFICATION OF ENVIRONMENTAL ASPECTS AND IMPACTS

The contractor shall identify likely aspects before commencing with any construction activity. Examples of environment aspects include:

- waste generation
- stormwater discharge
- emission of pollutants into the atmosphere
- chemical use operations
- energy use operations
- water use operations
- use of natural resources
- noise generation

Thereafter the contractor shall programme his work in such a way that each cause and effect of a construction activity is also identified and the activity planned so as to prevent any impact from happening. If prevention is not practicable, or in the event of mishap or misapplication, the contractor shall provide plans and measures for the engineer's approval, which will limit and contain the magnitude, duration and intensity of the impact. The contractor shall demonstrate that he/she is capable of carrying out any repair and reinstatement of the damaged environment. These requirements shall be concurrent with the time constraints to produce an approved construction programme according to subclause 8.3 as amended by Particular Condition of the general conditions of contract and clause B1204 of these project specifications.

Listed below are some environmental impacts that could adversely alter an aspect of the environment through usual construction activities:

Pollution of atmosphere, soil or water
 Destruction or removal of fauna and flora and effect on biological diversity
 Deformation of the landscape
 Soil erosion
 Destruction of historical/heritage sites
 Effect on the built environment
 Effect on agricultural land and wetlands

General good construction practice will play an important role in avoiding the occurrence of an Impact. The contractor's attention is drawn, in this regard, to C1008. Environmental Management of Construction Activities

H 04 LEGAL REQUIREMENTS

H04.01 General

Construction will be according to the best industry practices, as identified in the project documents. This EMP, which forms an integral part of the contract documents, informs the contractor as to his duties in the fulfilment of the project objectives, with particular reference to the prevention and mitigation of environmental impacts caused by construction activities associated with the project. The contractor should note that obligations imposed by the EMP are legally binding in terms of environmental statutory legislation and in terms of the additional conditions to the general conditions of contract that pertain to this project. In the event that any rights and obligations contained in this document contradict those specified in the standard or project specifications then the latter shall prevail.

H04.02 Statutory and other applicable legislation

The contractor is deemed to have made himself conversant with all legislation pertaining to the environment, including provincial and local government ordinances, which may be applicable to the contract.

H 05 ADMINISTRATION OF ENVIRONMENTAL OBLIGATIONS

H05.01 Appointment of a Designated Environmental Officer (DEO)

For the purposes of implementing the conditions contained herein, the contractor shall submit to the engineer for approval the appointment of a nominated representative of the contractor as the DEO for the contract. The request shall be given, in writing, at least fourteen days before the start of any work clearly setting out reasons for the nomination, and with sufficient detail to enable the engineer to make a decision. The engineer will, within seven days of receiving the request, approve, reject or call for more information on the nomination. Once a nominated representative of the contractor has been approved he/she shall be the DEO and shall be the responsible person for ensuring that the provisions of the EMP are complied with during the life of the contract. The engineer will be responsible for issuing instructions to the contractor where environmental considerations call for action to be taken. The DEO shall submit regular written reports to the engineer, but not less frequently than once a month.

The engineer shall have the authority to instruct the contractor to replace the DEO if, in the engineer's opinion, the appointed officer is not fulfilling his/her duties in terms of the requirements of the EMP or this specification. Such instruction will be in writing and shall clearly set out the reasons why a replacement is required.

There shall be an approved DEO on the site at all times.

H05.02 Administration

Before the contractor begins each construction activity the DEO shall give to the engineer a written statement setting out the following:

The type of construction activity.

Locality where the activity will take place.

Identification of the environmental aspects and impacts that might result from the activity.

Methodology for impact prevention for each activity or aspect.

Methodology for impact containment for each activity or aspect.

Emergency/disaster incident and reaction procedures.

Treatment and continued maintenance of impacted environment.

The contractor may provide such information in advance of any or all construction activities provided that new submissions shall be given to the engineer whenever there is a change or variation to the original.

The engineer may provide comment on the methodology and procedures proposed by the DEO, but he shall not be responsible for the contractor's chosen measures of impact mitigation and emergency/disaster management systems. However, the contractor shall demonstrate at inception and at least once during the contract that the approved measures and procedures function properly.

H05.03 Good Housekeeping

Contractor shall undertake "good housekeeping" practices during construction as stated in clause 1217 of the COLTO Standard Specifications for Roads and Bridges and subclauses 4.18 and 11.11 of the General Conditions of Contract. This will help avoid disputes on responsibility and allow for the smooth running of the contract as a whole. Good housekeeping extends beyond the wise practice of construction methods that leaves production in a safe state from the ravages of weather to include the care for and preservation of the environment within which the site is situated.

H06 TRAINING

The designated environmental officer (DEO) must be conversant with all legislation pertaining to the environment applicable to this contract and must be appropriately trained in environmental management and must possess the skills necessary to impart environmental management skills to all personnel involved in the contract.

The contractor shall ensure that adequate environmental training takes place. All employees shall have been given an induction presentation on environmental awareness. Where possible, the presentation needs to be conducted in the language of the employees. The environmental training should, as a minimum, include the following:

The importance of conformance with all environmental policies

The environmental impacts, actual or potential, of their work activities

The environmental benefits of improved personal performance;

Their roles and responsibilities in achieving conformance with the environmental policy and procedures and with the requirement of the Agency's environmental management systems, including emergency preparedness and response requirements;

The potential consequences of departure from specified operating procedures;

The mitigation measures required to be implemented when carrying out their work activities.

In the case of permanent staff the contractor shall provide evidence that such induction courses have been presented. In the case of new staff (including contract labour) the

contractor shall inform the engineer when and how he/she intends concluding his environmental training obligations.

H 07 ACTIVITIES/ASPECTS CAUSING IMPACTS

A list of possible causes of environmental impacts that occur during construction activities is given in Table 7/1: Aspects or Activities that Cause Environmental Impacts during Construction Activities, which is to be found at the end of this part. This list is not exhaustive, and shall be used for guideline purposes only.

H 08 ENVIRONMENTAL MANAGEMENT OF CONSTRUCTION ACTIVITIES

H 08.01 Site Establishment

H 08.01.01 Site Plan

The contractor shall establish his construction camps, offices, workshops, staff accommodation and testing facilities on the site in a manner that does not adversely affect the environment. However, before construction can begin, the contractor shall submit to the engineer for his approval, plans of the exact location, extent and construction details of these facilities and the impact mitigation measures the contractor proposes to put in place.

The plans shall detail the locality as well as the layout of the waste treatment facilities for litter, kitchen refuse, sewage and workshop-derived effluents. The site offices should not be sited in close proximity to steep areas, as this will increase soil erosion. Preferred locations would be flat areas along the route. If the route traverses water courses, streams and rivers, it is recommended that the offices, and in particular the ablution facilities, aggregate stockpiles, spoil areas and hazardous material stockpiles are located as far away as possible from any water course as possible. Regardless of the chosen site, the contractor's intended mitigation measures shall be indicated on the plan. The site plan shall be submitted not later than the first site meeting. Detailed, electronic colour photographs shall be taken of the proposed site before any clearing may commence. These records are to be kept by the engineer for consultation during rehabilitation of the site. Read with COLTO Specification 1302(a), 1402 (e).

H 08.01.02 Vegetation

The contractor has a responsibility to inform his staff of the need to be vigilant against any practice that will have a harmful effect on vegetation.

The natural vegetation encountered on the site is to be conserved and left as intact as possible. Vegetation planted at the site shall be indigenous and in accordance with instructions issued by the engineer. Only trees and shrubs directly affected by the works, and such others as may be indicated by the engineer in writing, may be felled or cleared. In wooded areas where natural vegetation has been cleared out of necessity, the same species of indigenous trees as were occurring, shall be re-established.

The project specification for the rehabilitation of the grass cover shall be strictly adhered to. Any proclaimed weed or alien species that propagates during the contract period shall be cleared by hand before seeding. (Read in conjunction with COLTO Specification 5801(b),

5802(b), (c), (d) and (e), 5804, 5805, 5806 and 5807). Fires shall only be allowed in facilities or equipment specially constructed for this purpose. A firebreak shall be cleared and maintained around the perimeter of the camp and office sites.

H 08.01.03 Rehabilitation

The area where the site offices were erected will require rehabilitation at the end of the contract. All construction material, including concrete slabs and braai areas shall be removed from the site on completion of the contract.

H 08.01.04 Water for human consumption

Water for human consumption shall be available at the site offices and at other convenient locations on site.

All effluent water from the camp / office sites shall be disposed of in a properly designed and constructed system, situated so as not to adversely affect water sources (streams, rivers, pans dams etc). Only domestic type wastewater shall be allowed to enter this drain.

H 08.01.05 Heating and Cooking fuel

The contractor shall provide adequate facilities for his staff so that they are not encouraged to supplement their comforts on site by accessing what can be taken from the natural surroundings. The contractor shall ensure that energy sources are available at all times for construction and supervision personnel for heating and cooking purposes.

H 08.02 Sewage treatment

Particular reference in the site establishment plan shall be given to the treatment of sewage generated at the site offices, site laboratory and staff accommodation and at all localities on the site where there will be a concentration of labour. Sanitary arrangements should be to the satisfaction of project management, the local authorities and legal requirements.

Safe and effective sewage treatment will require one of the following sewage handling methods: septic tanks and soak-aways, dry-composting toilets such as “enviro loos”, or the use of chemical toilets which are supplied and maintained by a subcontractor. The type of sewage treatment will depend on the geology of the area selected, the duration of the contract and proximity (availability) of providers of chemical toilets. Should a soak-away system be used, it shall not be closer than 800 metres from any natural water course or water retention system. The waste material generated from these facilities shall be serviced on a regular basis. The positioning of the chemical toilets shall be done in consultation with the engineer. Read with COLTO Specifications 1402(g) and 1404(a).

Toilets and latrines shall be easily accessible and shall be positioned within walking distance from wherever employees are employed on the works. Use of the veld for this purpose shall not, under any circumstances, be allowed.

Outside toilets shall be provided with locks and doors and shall be secured to prevent them from blowing over. The toilets shall also be placed outside areas susceptible to flooding. The contractor shall arrange for regular emptying of toilets and shall be entirely responsible for enforcing their use and for maintaining such latrines in a clean, orderly and sanitary condition to the satisfaction of the engineer.

H 08.03 Waste Management

The contractor's intended methods for waste management and waste minimisation shall be implemented at the outset of the contract. All personnel shall be instructed to dispose of all waste in the proper manner.

H 08.03.01 Solid Waste

Solid waste shall be stored in an appointed area in covered, tip proof metal drums for collection and disposal. A refuse control system shall be established for the collection and removal of refuse to the satisfaction of the engineer. Disposal of solid waste shall be at a Department of Water Affairs and Forestry (DWAF) licensed landfill site or at a site approved by DWAF in the event that an existing operating landfill site is not within reasonable distance from the site offices and staff accommodation. No waste shall be burned or buried at or near the site offices, nor anywhere else on the site, including the approved solid waste disposal site. Read with COLTO Specification 1404(a).

H 08.03.02 Litter

No littering by construction workers shall be allowed. During the construction period, the facilities shall be maintained in a neat and tidy condition and the site shall be kept free of litter.

Measures shall be taken to reduce the potential for litter and negligent behaviour with regard to the disposal of all refuse. At all places of work the contractor shall provide litter collection facilities for later safe disposal at approved sites. (Read with COLTO Specification 1302(b)).

H 08.03.03 Hazardous waste

Hazardous waste such as bitumen, tar, oils etc. shall be disposed of in a Department of Water Affairs and Forestry approved landfill site. Special care shall be taken to avoid spillage of tar or bitumen products such as binders or pre-coating fluid to avoid water-soluble phenols from entering the ground or contaminating water.

Under no circumstances shall the spoiling of tar or bituminous products on the site, over embankments, in borrow pits or any burying, be allowed. Unused or rejected tar or bituminous products shall be returned to the supplier's production plant. Any spillage of tar or bituminous products shall be attended to immediately and affected areas shall be promptly reinstated to the satisfaction of the engineer.

H 08.04 Control at the workshop

The contractor's management and maintenance of his plant and machinery will be strictly monitored according to the criteria given below, regardless whether it is serviced on the site (i.e. at the place of construction activity or at a formalised workshop)

H 08.04.01 Safety

All the necessary handling and safety equipment required for the safe use of petrochemicals and oils shall be provided by the contractor to, and used or worn by, the staff whose duty it is

to manage and maintain the contractor's and his subcontractor's and supplier's plant, machinery and equipment.

H 08.04.02 Hazardous Material Storage

Petrochemicals, oils and identified hazardous substances shall only be stored under controlled conditions. All hazardous materials e.g. tar or bitumen binders shall be stored in a secured, appointed area that is fenced and has restricted entry. Storage of tar or bituminous products shall only take place using suitable containers to the approval of the engineer.

The contractor shall provide proof to the engineer that relevant authorisation to store such substances has been obtained from the relevant authority. In addition, hazard signs indicating the nature of the stored materials shall be displayed on the storage facility or containment structure. Before containment or storage facilities can be erected the contractor shall furnish the engineer with details of the preventative measures he proposes to install in order to mitigate against pollution of the surrounding environment from leaks or spillage. The preferred method shall be a concrete floor that is bunded. Any deviation from the method will require proof from the relevant authority that the alternative method proposed is acceptable to that authority. The proposals shall also indicate the emergency procedures in the event of misuse or spillage that will negatively affect an individual or the environment.

H 08.04.03 Fuel and Gas Storage

Fuel shall be stored in a secure area in a steel tank supplied and maintained by the fuel suppliers.. An adequate bund wall, 110% of volume, shall be provided for fuel and diesel areas to accommodate any leakage spillage or overflow of these substances. The area inside the bund wall shall be lined with an impervious lining to prevent infiltration of the fuel into the soil. Any leakage, spillage or overflow of fuel shall be attended to without delay.

Gas welding cylinders and LPG cylinders shall be stored in a secure, well-ventilated area.

H 08.04.04 Oil and Lubricant Waste

Used oil, lubricants and cleaning materials from the maintenance of vehicles and machinery shall be collected in a holding tank and sent back to the supplier. Water and oil should be separated in an oil trap. Oils collected in this manner, shall be retained in a safe holding tank and removed from site by a specialist oil recycling company for disposal at approved waste disposal sites for toxic/hazardous materials. Oil collected by a mobile servicing unit shall be stored in the service unit's sludge tank and discharged into the safe holding tank for collection by the specialist oil recycling company.

All used filter materials shall be stored in a secure bin for disposal off site. Any contaminated soil shall be removed and replaced. Soils contaminated by oils and lubricants shall be collected and disposed of at a facility designated by the local authority to accept contaminated materials.

H 08.05 Clearing the Site

In all areas where the contractor intends to, or is required to clear the natural vegetation and soil, either within the road reserve, or at designated or instructed areas outside the road reserve, a plan of action shall first be submitted to the engineer for his approval.

The plan shall contain a photographic record and chainage/land reference of the areas to be disturbed. This shall be submitted to the engineer for his records before any disturbance/stockpiling may occur. The record shall be comprehensive and clear, allowing for easy identification during subsequent inspections.

The contractor shall be responsible for the re-establishment of grass within the road reserve boundaries for all areas disturbed during road construction. This includes, for example, service roads, stockpile areas, stop/go facilities, windrows and wherever material generated for, or from, road construction has to be stored temporarily or otherwise within the road reserve, or at designated or instructed areas outside the road reserve. This responsibility shall extend until expiry of the defects notification period.

H 08.06 Soil Management

H 08.06.01 Topsoil

Topsoil shall be removed from all areas where physical disturbance of the surface will occur and shall be stored and adequately protected. The contract will provide for the stripping and stockpiling of topsoil from the site for later re-use. Topsoil is considered to be the natural soil covering, including all the vegetation and organic matter. Depth may vary at each site. The areas to be cleared of topsoil shall include the storage areas. All topsoil stockpiles and windrows shall be maintained throughout the contract period in a weed-free condition. Weeds appearing on the stockpiled or windrowed topsoil shall be removed by hand. Soils contaminated by hazardous substances shall be disposed of at an approved Department of Water Affairs and Forestry waste disposal site. (Read with COLTO Specifications 3104(a), 5802(a), (g), 5804(a), (b) and (c)). The topsoil stockpiles shall be stored, shaped and sited in such a way that they do not interfere with the flow of water to cause damming or erosion, or itself be eroded by the action of water. Stockpiles of topsoil shall not exceed a height of 2m, and if they are to be left for longer than 3 months, shall be analysed, and if necessary, upgraded before replacement. Stockpiles shall be protected against infestation by weeds.

The contractor shall ensure that no topsoil is lost due to erosion – either by wind or water. Areas to be topsoiled and grassed shall be done so systematically to allow for quick cover and reduction in the chance of heavy topsoil losses due to unusual weather patterns. The contractor's programme shall clearly show the proposed rate of progress of the application of topsoil and grassing. The contractor shall be held responsible for the replacement, at his own cost, for any unnecessary loss of topsoil due to his failure to work according to the progress plan approved by the engineer. The contractor's responsibility shall also extend to the clearing of drainage or water systems within and beyond the boundaries of the road reserve that may have been affected by such negligence.

H 08.06.02 Subsoil

The subsoil is the layer of soil immediately beneath the topsoil. It shall be removed, to a depth instructed by the engineer, and stored separately from the topsoil if not used for road building. This soil shall be replaced in the excavation in the original order it was removed for rehabilitation purposes.

H 08.07 Drainage

The quality, quantity and flow direction of any surface water runoff shall be established prior to disturbing any area for construction purposes. Cognisance shall be taken of these aspects and incorporated into the planning of all construction activities. Before a site is developed or expanded, it shall be established how this development or expansion will affect the drainage pattern. Recognised water users / receivers shall not be adversely affected by the expansion or re-development. No water source shall be polluted in any way due to proposed changes.

Streams, rivers, pans, wetlands, dams, and their catchments shall be protected from erosion and from direct or indirect spillage of pollutants such as refuse, garbage, cement, concrete, sewage, chemicals, fuels, oils, aggregate, tailings, wash water, organic materials and bituminous or tar products.

The contractor shall submit to the engineer his proposals for prevention, containment and rehabilitation measures against environmental damage of the identified water and drainage systems that occur on the site. Consideration shall be given to the placement of sedimentation ponds or barriers where the soils are of a dispersive nature or where toxic fluids are used in the construction process. The sedimentation ponds must be large enough to contain runoff so that they function properly under heavy rain conditions.

H 08.08 Earthworks and Layerworks

This section includes all construction activities that involve the mining of all materials, and their subsequent placement, stockpile, spoil, treatment or batching, for use in the permanent works, or temporary works in the case of deviations. Before any stripping prior to the commencement of construction, the contractor shall have complied with the requirements of sections C1008 (e) and C1008 (g). In addition, the contractor shall take cognisance of the requirements set out below.

H 08.08.01 Quarries and borrow pits

The contractor's attention is drawn to the requirement of the Department of Minerals and Energy, that before entry into any quarry or borrow pit, an EMP for the establishment, operation and closure of the quarry or borrow pit shall have been approved by the Department. It is the responsibility of the contractor to ensure that he is in possession of the approved EMP or a copy thereof, prior to entry into the quarry or borrow pit. The conditions imposed by the relevant EMP are legally binding on the contractor and may be more extensive and explicit than the requirements of this specification. In the event of any conflict occurring between the requirements of the specific EMP and these specifications the former shall apply. The cost of complying with the requirements shall be deemed to be included in existing rates in the Bill of Quantities. (Read with COLTO Specification 3100 and 3200).

H 08.08.02 Excavation, hauling and placement

The contractor shall provide the engineer with detailed plans of his intended construction processes prior to starting any cut or fill or layer. The plans shall detail the number of personnel and plant to be used and the measures by which the impacts of pollution (noise, dust, litter, fuel, oil, sewage), erosion, vegetation destruction and deformation of landscape will be prevented, contained and rehabilitated. Particular attention shall also be given to the impact that such activities will have on the adjacent built environment. The contractor shall demonstrate his "good housekeeping", particularly with respect to closure at the end of every day so that the site is left in a safe condition from rainfall overnight or over periods when

there is no construction activity. (Read with COLTO Standard Specification clauses 1217 and 3309)

H 08.08.03 Spoil sites

The contractor shall be responsible for the safe siting, operation, maintenance and closure of any spoil site he uses during the contract period, including the defects notification period. This shall include existing spoil sites that are being re-entered. Before spoil sites may be used proposals for their locality, intended method of operation, maintenance and rehabilitation shall be given to the engineer for his approval. The location of these spoil sites shall have signed approval from the affected landowner before submission to the engineer. No spoil site shall be located within 500m of any watercourse. A photographic record shall be kept of all spoil sites for monitoring purposes. This includes before the site is used and after re-vegetation.

The use of approved spoil sites for the disposal of hazardous or toxic wastes shall be prohibited unless special measures are taken to prevent leaching of the toxins into the surrounding environment. Such special measures shall require the approval of the relevant provincial or national authority. The same shall apply for the disposal of solid waste generated from the various camp establishments. The engineer will assist the contractor in obtaining the necessary approval if requested by the contractor.

Spoil sites will be shaped to fit the natural topography. These sites shall receive a minimum of 75mm topsoil and be grassed with the recommended seed mixture. Slopes shall not exceed a vertical: horizontal ratio of 1:3. Only under exceptional circumstances will approval be given to exceed this ratio. Appropriate grassing measures to minimise soil erosion shall be undertaken by the contractor. This will include both strip and full sodding. The contractor may motivate to the engineer for other acceptable stabilising methods. The engineer may only approve a completed spoil site at the end of the defects notification period upon receipt from the contractor of a landowner's clearance notice and an engineer's certificate certifying slope stability (Read with COLTO standard Specifications clause 1214). The contractor's costs incurred in obtaining the necessary certification for opening and closing of spoil sites shall be deemed to be included in the tendered rates for spoiling.

H 08.08.04 Stockpiles

The contractor shall plan his activities so that materials excavated from borrow pits and cuttings, in so far as possible, can be transported direct to and placed at the point where it is to be used. However, should temporary stockpiling become necessary, the areas for the stockpiling of excavated and imported material shall be indicated and demarcated on the site plan submitted in writing to the engineer for his approval, together with the contractor's proposed measures for prevention, containment and rehabilitation against environmental damage.

The areas chosen shall have no naturally occurring indigenous trees and shrubs present that may be damaged during operations. Care shall be taken to preserve all vegetation in the immediate area of these temporary stockpiles. During the life of the stockpiles the contractor shall at all times ensure that they are:

- Positioned and sloped to create the least visual impact;

- Constructed and maintained so as to avoid erosion of the material and contamination of surrounding environment; and
- Kept free from all alien/undesirable vegetation.

After the stockpiled material has been removed, the site shall be re-instated to its original condition. No foreign material generated / deposited during construction shall remain on site. Areas affected by stockpiling shall be landscaped, top soiled, grassed and maintained at the contractor's cost until clearance from the engineer and the relevant Authority is received.

Material milled from the existing road surface that is temporarily stockpiled in areas approved by the engineer within the road reserve, shall be subject to the same condition as other stockpiled materials. Excess materials from windrows, in-situ milling or any detritus of material from road construction activities may not be swept off the road and left unless specifically instructed to do so in the contract drawing or under instruction from the engineer

In all cases, the engineer shall approve the areas for stockpiling and disposal of construction rubble before any operation commences and shall approve their clause only when they have been satisfactorily rehabilitated. (Read with COLTO Specification 3203 and 4306).

H 08.08.05 Blasting activities

Wherever blasting activity is required on the site (including quarries and/or borrow pits) the contractor shall rigorously adhere to the relevant statutes and regulations that control the use of explosives. In addition, the contractor shall, prior to any drilling of holes in preparation for blasting, supply the engineer with a locality plan of the blast site on which shall be shown the zones of influence of the ground and air shock-waves and expected limits of fly-rock. The plan shall show each dwelling, structure and service within the zones of influence and record all details of the dwellings/structures/services including existing positions, lengths and widths of cracks, as well as the condition of doors, windows, roofing, wells, boreholes etc. The contractor, alone, shall be responsible for any costs that can be attributed to blasting activities, including the collection of fly-rock from adjacent lands and fields. The submission of such a plan shall not in any way absolve the contractor from his responsibilities in this regard. The contractor shall also indicate to the engineer the manner in which he intends to advertise to the adjacent communities and/or road users the times and delays to be expected for each individual blast.

H 08.09 Batching sites

Asphalt plants are considered scheduled processes listed in the second schedule to the Atmospheric Pollution Prevention Act, 1965 (Act No. 45 of 1965). Should the use of an asphalt plant be considered on site, the contractor shall be responsible to obtain the necessary permit from the Department of Environmental Affairs and Tourism, regardless of where they are sited.

Crushing plants and concrete batching plants, whether sited inside or outside of defined quarry or borrow pit areas, shall be subject to the requirements of the Department of Minerals and Energy legislation as well as the applicable industrial legislation that governs gas and dust emissions into the atmosphere. Such sites will be the subject of regular inspections by the relative authorities during the life of the project. In addition, the selection, entry onto, operation, maintenance, closure and rehabilitation of such sites shall be the same as for those under section C1008(h)(iii), with the exception that the contractor shall provide additional

measures to prevent, contain and rehabilitate against environmental damage from toxic/hazardous substances. In this regard the contractor shall provide plans that take into account such additional measures as concrete floors, bunded storage facilities, linings to drainage channels and settlement dams. Ultimate approval of these measures shall be from the relevant national authority, as shall approval of closure. The engineer will assist the contractor in his submissions to the relevant authority.

Effluent from concrete batch plants and crusher plants shall be treated in a suitable designated sedimentation dam to the legally required standards to prevent surface and groundwater pollution. The designs of such a facility should be submitted to the engineer for approval.

The contractor shall invite the relevant department to inspect the site within 2 months after any plant is commissioned and at regular intervals thereafter, not exceeding 12 months apart

H 08.10 Spillages

Streams, rivers and dams shall be protected from direct or indirect spillage of pollutants such as refuse, garbage, cement, concrete, sewage, chemicals, fuels, oils, aggregate, tailings, wash water, organic materials and tar or bituminous products. In the event of a spillage, the contractor shall be liable to arrange for professional service providers to clear the affected area.

Responsibility for spill treatment lies with the contractor. The individual responsible for, or who discovers a hazardous waste spill must report the incident to his/her DEO or to the engineer. The Designated Environmental Officer will assess the situation in consultation with the engineer and act as required. In all cases, the immediate response shall be to contain the spill. The exact treatment of polluted soil / water shall be determined by the contractor in consultation with the DEO and the engineer. Areas cleared of hazardous waste shall be re-vegetated according to the engineer's instructions

Should water downstream of the spill be polluted, and fauna and flora show signs of deterioration or death, specialist hydrological or ecological advice will be sought for appropriate treatment and remedial procedures to be followed. The requirement for such input shall be agreed with the engineer. The costs of containment and rehabilitation shall be for the contractor's account, including the costs of specialist input.

H 08.11 Areas of Specific Importance

Any area, as determined and identified within the project document as sensitive or of special interest within the site shall be treated according to the express instructions contained in these specifications or the approved EMP. The contractor may offer alternative solutions to the engineer in writing should he consider that construction will be affected in any way by the hindrance of the designated sensitive area or feature. However, the overriding principle is that such defined areas requiring protection shall not be changed. Every effort to identify such areas within the site will have been made prior to the project going out to tender. The discovery of other sites with archaeological or historical interest that have not been identified shall require ad hoc treatment.

H 08.11.01 Archaeological Sites

If an artefact on site is uncovered, work in the immediate vicinity shall be stopped immediately. The contractor shall take reasonable precautions to prevent any person from

removing or damaging any such article and shall immediately upon discovery thereof inform the engineer of such discovery. The National Monuments Council is to be contacted who will appoint an archaeological consultant. Work may only resume once clearance is given in writing by the archaeologist. (Read with COLTO General Condition of Contract Subclause 4.24 as amended by Particular Condition).

H 08.11.02 Graves and middens

If a grave or midden is uncovered on site, or discovered before the commencement of work, then all work in the immediate vicinity of the graves/middens shall be stopped and the engineer informed of the discovery. The National Monuments Council should be contacted and in the case of graves, arrangements made for an undertaker to carry out exhumation and reburial. The undertaker will, together with the National Monuments Council, be responsible for attempts to contact family of the deceased and for the site where the exhumed remains can be re-interred. (Read with COLTO General Conditions of Contract Subclause 4.24 as amended by Particular Condition).

H 08.12 Noise Control

The contractor shall endeavour to keep noise generating activities to a minimum. Noises that could cause a major disturbance, for instance blasting and crushing activities, should only be carried out during daylight hours. Compliance with the appropriate legislation with respect to noise, shall be mandatory.

Should noise generating activities have to occur at night the people in the vicinity of the drilling shall be warned about the noise well in advance and the activities kept to a minimum.

H 08.13 Dust Control

Dust caused by strong winds shall be controlled by means of water spray vehicles. Dust omission from batching plants shall be subject to the relevant legislation and shall be the subject of inspection by the relevant office of the Department of Minerals and Energy.

H 08.14 Alien Vegetation

The contractor shall be held responsible for the removal of alien vegetation within the road reserve disturbed during road construction. This includes, for example, service roads, stockpile areas, stop/go facilities, windrows and wherever material generated for or from road construction has been stored temporarily or otherwise within the road reserve. This responsibility shall extend for the duration of the defects notification period.

H 09 RECORD KEEPING

The engineer and the DEO will continuously monitor the contractor's adherence to the approved impact prevention procedures and the engineer shall issue to the contractor a notice of non-compliance whenever transgressions are observed. The DEO should document the nature and magnitude of the non-compliance in a designated register, the action taken to discontinue the non-compliance, the action taken to mitigate its effects and the results of the actions. The non-compliance shall be documented and reported to the engineer in the monthly report.

Copies of any record of decision or EMP's for specific borrow pits or quarries used on the project shall be kept on site and made available for inspection by visiting officials from the employer or relevant environmental departments.

H 10 COMPLIANCE AND PENALTIES

The contractor shall act immediately when such notice of non-compliance is received and correct whatever is the cause for the issuing of the notice. Complaints received regarding activities on the construction site pertaining to the environment shall be recorded in a dedicated register and the response noted with the date and action taken. This record shall be submitted with the monthly reports and a verbal report given at the monthly site meetings.

Any avoidable non-compliance with the above-mentioned measures shall be considered sufficient ground for the imposition of a penalty

The following penalties shall apply for environmental violations:

H 10.01 Unnecessary removal or damage to trees

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| • 2600mm girth or less | : | R 5 000 per tree |
| • Greater than 2600mm, but less than 6180mm girth | : | R10 000 per tree |
| • Greater than 6180mm girth | : | R30 000 per tree |

H10.02 Serious violations:

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|--|---|-------------------------------|
| • Hazardous chemical/oil spill and/or dumping in non-approved sites. | : | R10 000 per incident |
| • General damage to sensitive environments. | : | R 5 000 per incident |
| • Damage to cultural and historical sites. | : | R 5 000 per incident |
| • Uncontrolled/unmanaged erosion (plus rehabilitation at contractor's cost). | : | R1 000 to R5 000 per incident |
| • Unauthorised blasting activities. | : | R 5 000 per incident |
| • Pollution of water sources. | : | R 10 000 per incident |

The engineer's decision with regard to what is considered a violation, its seriousness and the penalty imposed shall be final.

H10.03 Less serious violations:

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|---|---|---------------------|
| Littering on site. | : | R1 000 per incident |
| Lighting of illegal fires on site. | : | R1 000 per incident |
| Persistent or un-repaired fuel and oil leaks. | : | R1 000 per incident |
| • Excess dust or excess noise emanating from site.: | | R1 000 per incident |
| • Dumping of milled material in side drains or on grassed areas: | | R1 000 per incident |
| • Possession or use of intoxicating substances on site.: | | R 500 per incident |
| • Any vehicles being driven in excess of designated speed limits. | : | R 500 per incident |
| • Removal and/or damage to flora or cultural or | | |

	heritage objects on site, and/or killing of wildlife:	R2 000 per incident
•	Illegal hunting.	: R2 000 per incident
•	Urination and defecation anywhere except in designated areas.	: R 500 per incident

The engineer's decision with regard to what is considered a violation, its seriousness and the penalty imposed shall be final. The imposition of such a penalty shall not preclude the relevant provincial or national authority from applying an additional penalty in accordance with its statutory powers. Any non-compliance with the agreed procedures of the EMP is a transgression of the various statutes and laws that define the manner by which the environment is managed.

Failure to redress the cause shall be reported to the relevant authority for them to deal with the transgression, as it deems fit.

H 11 MEASUREMENT AND PAYMENT

Item	Unit
H 11.01 Penalty for unnecessary removal or damage to trees for the following diameter sizes:	
(a) 2600mm girth or less	number (No)
(b) Greater than 2600mm, but less than 6180mm girth	number (No)
(c) Greater than 6180mm girth	number (No)

The unit of measurement shall be the number of trees by diameter size removed unnecessary or damaged. The penalty rates applied shall be those stated in clause H 10.01

Item	Unit
H 11.02 Penalty for serious violations	
(a) Hazardous chemical/oil spill and/or dumping in non-approved sites	number (No)
(b) General damage to sensitive environments	
(c) Damage to cultural and historical sites	number (No)
(d) Pollution of water sources	number (No)
(e) Unauthorised blasting activities	number (No)
(f) Uncontrolled/unmanaged erosion per incident, depending on environment impacts, plus rehabilitation at contractor's cost)	number (No)

The unit of measurement for H 11.02 (a) to (f) shall be the number of serious violation incidents. The penalty rates to be applied shall be those stated in clause H 10.02.

Item	Unit
H 11.03 Penalty for less serious violations	
(a) Littering on site	number (No)
(b) Lighting of illegal fires on site	number (No)

(c)	Persistent or un-repaired fuel and oil leaks	number (No)
(d)	Excess dust or excess noise emanating from site	number (No)
(e)	Dumping of milled material in side drains or on grassed areas	number (No)
(f)	Possession or use of intoxicating substances on site	number (No)
(g)	Any vehicles being driven in excess of designated speed limits	number (No)
(h)	Removal and/or damage to flora or cultural or heritage objects on site, and/or killing of wildlife	number (No)
(i)	Illegal hunting	number (No)
(j)	Urination and defecation anywhere except in designated areas	number (No)

The unit of measurement shall be the number of less serious violation incidents. The penalty rates applied shall be those stated in clause H 10.03.

The engineer's decision with regard to what is considered a violation, its seriousness and the penalty imposed shall be final. The imposition of such a penalty shall not preclude the relevant provincial or national authority from applying an additional penalty in accordance with its statutory powers. Any non-compliance with the agreed procedures of the EMP is a transgression of the various statutes and laws that define the manner by which the environment is managed.

Failure to redress the cause shall be reported to the relevant authority for them to deal with the transgression, as it deems fit.

Item	Unit
H 11.04 Contractor's time related obligations in respect of Environmental management plans and specifications	month

The tendered monthly amount shall represent full compensation for that part of the contractor's general obligations in terms of the environmental management plans and specifications which are mainly a function of time. This includes inter alia payment of all costs of the approved designated environmental office (DEO) and other staff contemplated in the administration of the environmental obligations, including the transport of employees on site. Payment will be monthly.

Table 1: Mechanisms that Cause Environmental Impacts during Construction Activities

SECTION	CONTENTS	ENVIRONMENTAL IMPACTS				
		POLLUTION TYPE	DEFORMATION OF LANDSCAPE	SOIL EROSION	ALIEN VEGETATION	SENSITIVE AREAS (to be completed by compiler)
1300	Camp Establishment	Waste treatment Hazardous waste Water supply Spillage Storage	Selection of site Preserve indigenous vegetation Preserve topsoil	Selection of site Preserve indigenous vegetation Preserve topsoil	Preserve indigenous vegetation Preserve topsoil Management of weeds	
1400	Housing, Offices and laboratories	Waste treatment Hazardous waste Water supply Spillage Storage Noise/lights	Selection of site Preserve indigenous vegetation Preserve topsoil Demarcate sensitive areas	Selection of site Preserve indigenous vegetation Preserve topsoil	Preserve indigenous vegetation Preserve topsoil Management of weeds	
1500	Accommodation of Traffic	Waste treatment Hazardous waste Water supply Spillage Storage Noise/lights Dust control	Selection of site Preserve indigenous vegetation Preserve topsoil Demarcate sensitive areas Maintenance of windrows	Selection of site Preserve indigenous vegetation Preserve topsoil	Preserve indigenous vegetation Preserve topsoil Management of weeds	
1600	Overhaul	Spillage Storage	Turning circles	Restrict access to sensitive areas	Protection of indigenous vegetation	

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE
CONTRACT NO:24 of 2025
Section C3 – Scope of Work

SECTION	CONTENTS	ENVIRONMENTAL IMPACTS				
		POLLUTION TYPE	DEFORMATION OF LANDSCAPE	SOIL EROSION	ALIEN VEGETATION	SENSITIVE AREAS (to be completed by compiler)
		Noise/lights Dust control Exhaust fumes Washing waste	Parking areas		Preserve topsoil	
1700	Clearing and grubbing	Waste treatment Hazardous waste Water supply Noise /lights Dust control	Selection of site Preserve indigenous vegetation Preserve topsoil	Selection of site Preserve indigenous vegetation Preserve topsoil	Protection of indigenous vegetation Preserve topsoil	
2100 - 2400	Drainage	Waste treatment Hazardous waste Water supply Spillage Storage	Selection of site Preserve indigenous vegetation Preserve topsoil	Selection of site Preserve indigenous vegetation Preserve topsoil	Preserve indigenous vegetation Preserve topsoil Management of weeds	

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE
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3100	Borrow pits	Waste treatment Hazardous waste Water supply Spillage Storage	Selection of site Preserve indigenous vegetation Preserve topsoil	Selection of site Preserve indigenous vegetation Preserve topsoil	Preserve indigenous vegetation Preserve topsoil Management of weeds	
3200	Stockpiling	Waste treatment Hazardous waste Water supply Spillage Storage	Selection of site Preserve indigenous vegetation Preserve topsoil	Selection of site Preserve indigenous vegetation Preserve topsoil	Preserve indigenous vegetation Preserve topsoil Management of weeds	
3300	Mass Earthworks	Waste treatment Hazardous waste Water supply Spillage Storage	Selection of site Preserve indigenous vegetation Preserve topsoil	Selection of site Preserve indigenous vegetation Preserve topsoil	Preserve indigenous vegetation Preserve topsoil Management of weeds	
3400 – 3900	Pavement layers	Waste treatment Hazardous waste Water supply Spillage Storage Noise / lights Dust control	Selection of site Preserve indigenous vegetation Preserve topsoil Demarcate sensitive areas Maintenance of windrows	Selection of site Preserve indigenous vegetation Preserve topsoil	Preserve indigenous vegetation Preserve topsoil Management of weeds	

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE
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4100	Asphalt works / sealing operations	Waste treatment Hazardous waste Water supply Spillage Storage Noise / lights Dust control Smoke control Storage of materials	Selection of site Preserve indigenous vegetation Preserve topsoil Turning circles Parking areas	Selection of site Preserve indigenous vegetation Preserve topsoil	Preserve indigenous vegetation Preserve topsoil	
5000	Ancilliary roadworks	Waste treatment Hazardous waste Water supply Spillage Storage	Selection of site Preserve indigenous vegetation Preserve topsoil	Selection of site Preserve indigenous vegetation Preserve topsoil	Preserve indigenous vegetation Preserve topsoil Management of weeds	
6000	Structures	Waste treatment Hazardous waste Water supply Spillage Storage	Selection of site Preserve indigenous vegetation Preserve topsoil	Selection of site Preserve indigenous vegetation Preserve topsoil	Preserve indigenous vegetation Preserve topsoil Management of weeds	
7000	Concrete pavements etc	Waste treatment Hazardous waste Water supply Spillage Storage	Selection of site Preserve indigenous vegetation Preserve topsoil	Selection of site Preserve indigenous vegetation Preserve topsoil	Preserve indigenous vegetation Preserve topsoil Management of weeds	

I - STANDARD SPECIFICATION

(a) Definitions and Interpretation

Unless otherwise expressly stated or the contents otherwise requires, the words and expressions listed below shall, when used in this Agreement, bear the meanings ascribed to them.

- a) "Acceptance Criteria" means those criteria as predetermined by the Parties and recorded in writing, which establish the Department of Water Affairs and Forestry requirements regarding professional services and construction.
- b) "Agrément certificate" means any certificate issued by Agrément South Africa confirming compliance with normal Agrément criteria.
- c) "Closing time" means the date and hour specified in the tender documents for the receipt of tenders.
- d) "Contract" means the written agreement entered into between the Employer and the Contractor, as recorded in the contract form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.
- e) "The Contractor" means the Tender that has been awarded the Contract
- f) "Contract price" means the price payable to the Contractor under the contract for the full and proper performance of his contractual obligations.
- g) "Commencement Date" means the date of delivery, to the Contractor, of the Letter of Acceptance from the Employer.
- h) "Corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value to influence the action of a public official in the procurement process or in contract execution.
- i) "Day" means calendar day.
- j) "Delivery" means delivery in compliance of the conditions of the contract or order.
- k) "Delivery into consignees store or to his site" means delivered and unloaded in the specified store or depot or on the specified site in compliance with the conditions of the contract or order, the supplier bearing all risks and charges involved until the supplies are so delivered and a valid receipt is obtained.
- l) "Engineer" means "Any Professional Engineer"
- m) "Employer" means the Makhado Local Municipality.
- n) "Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of any tenderer, and includes collusive practice among tenderers (prior to or after tender submission) designed to establish tender prices at artificial non-competitive levels and to deprive the tenderer of the benefits of free and open competition.
- o) "Project site," where applicable, means the place indicated in tender documents.
- p) "Written" or "in writing" means handwritten in ink or any form of electronic or mechanical writing.

Works specifications shall comply with the following specifications:

Standard specifications for road abridge works for state road authorities

Plant and Materials

All plant and material shall be as per Standard Specifications for Road and Bridge Works for State Road Authorities (COLTO).

Treatment of Existing Services

COLTO SERIES: Protection of kerbs, channels, etc. shall apply.

Kerbs, channels, guttering, manholes, guard rails, bridge railings and any other structures that may be soiled by bituminous binders during spraying operations shall be covered with suitable plastic sheeting during spraying operations. The sheeting shall be kept firmly in position by soil, stones or adhesive tape in such a manner that it will not lift or be blown away during windy conditions but will keep the areas to be protected fully covered.

The use of paper bags, sand or other materials will not be permitted in lieu of plastic sheeting and the contractor shall replace at his own expense any items that have been soiled and cannot be cleaned entirely. The painting of soiled surfaces will not be accepted as a suitable remedy.

Damage to Services

The Contractor shall maintain the bituminous surface until the Employer finally accepts the work. Any damage occurring to the surface or any defects which may develop before the maintenance certificate is issued, fair wear and tear excepted shall be corrected by the Contractor at his own expense and to the requirements of the Engineer.

Reinstatement of Services and Structures Damaged During Construction

When any part of the Works or any equipment or material is found upon examination by the Engineer not to conform to the requirements or is at any stage before final acceptance damaged so that it no longer conforms to the requirements of the Specifications, the Engineer may order its complete removal and replacement, at the Contractor's expense, with satisfactory work, equipment or material or he may permit the Contractor to apply remedial measures in order to make good any such defects or damage. The actual remedial measures taken shall at all times be entirely at the Contractor's own initiative, risk and cost, but subject to the Engineer's approval regarding the details thereof.

In particular remedial measures must ensure full compliance with the specifications of the final product, shall not endanger or damage any other part of the Works and shall be carefully controlled and submitted to the Engineer for examination when completed or at any intermediate stage as may be required.

Site Establishment

Site establishment shall be in accordance with the Standard Specifications for Road and Bridge Works for State Road Authorities (COLTO), Series 1000: General

Services and Facilities Provided by the Employer

The Employer shall provide the following services and facilities:

- a) bulk water for construction
- b) secured site for plant and material

Services and Facilities Provided by the Contractor

The Contractor shall provide and be responsible for all items such as facilities, machines, plant, material, labour, and accommodation to fulfil the contract. He shall allow for all such items in his unit prices and no extra payment will be made for these. The quantities as described in the Schedule of Quantities are only an estimated value and may vary.

The Contractor shall furthermore take care of the traffic and take responsibility for the easy passage of all traffic during the construction period using his own barricades, road signs, flagmen, etc. The Chief Traffic Officer of the Municipality will be available to give advice, if required. No extra item will be allowed in the Bill of Quantities for this item and the Contractor will have to allow for this in his unit prices.

Storage and Laboratory Facilities

Storage and Laboratory facilities shall be provide by the Contractor according the Standard Specifications for Road and Bridge Works for State Road Authorities (COLTO), Series 4000:

Permits and Way Leaves

Permits for road closure and way leaves must be obtain by the Contractor from the Employer.

Alterations, Additions, Extensions and Modifications to Existing Works

Alterations, additions, extensions and modifications to existing works shall be in accordance with the Standard Specifications for Road and Bridge Works for State Road Authorities (COLTO), Series 1000: General.

Inspection of adjoining properties

The Contractor shall be responsible to make a video recording of any adjoining properties, structures and facilities, including trees and scrubs aligning the street or parking area before sealing or re-sealing are commenced.

Survey Control and Setting out of the Works

Survey control and setting out of the works shall be according to the Standard Specifications for Road and Bridge Works for State Road Authorities (COLTO).

Management of the Works

Particular Specifications

The engineer will indicate the exact limits of the contract on site. A site inspection can be held on request. Single bituminous treatment for resealing of existing road surfaces will be done at any time as is requested by the Engineer and co-ordinated with the Contractor.

Planning and Programming

The responsibilities of the Employer shall be as follows:

- a) construct the network of tasks and the project cash flow budget with the input from the Contractor.
- b) update the project schedule and cash flow budget on a weekly basis.
- c) keep the Contractor informed on task start dates.
- d) update the project risk register on a continual basis.
- e) administer the agreement Requirements Register
- f) prepare and distribute Project Status Reports bi-weekly to the Technical Committee
- g) prepare and distribute Project Status Reports monthly to the Local Municipality of Greater LM

Sequence of the works

The sequence of works shall be according to the project schedule as agreed by both parties.

Software application for programming

The Software Application used for programming shall be Microsoft Projects 2010.

METHODS AND PROCEDURES

All Methods and procedures shall be in accordance with Standard Specifications for Road and Bridge Works for State Road Authorities (COLTO).

Quality plans and control

Quality Control shall be in accordance with Standard Specifications for Road and Bridge Works for State Road Authorities (COLTO), Section 8300: Quality Control (Scheme 2).

Testing

The minimum testing frequency that will be required from the contractor shall be as given in the following table:

Test	Minimum testing frequency
Materials Aggregate for chips:	One test every 250 m ³
Grade ACV Flakiness	One test every 1 000 m ³
Aggregate for slurry:	One test every 250 m ³
Grading Sand equivalent Bituminous binders	One test every 50 m ³
Application rates	One test every type of sand
Construction tolerances	No testing required but Contractor shall produce certificates from all suppliers to the effect that all materials applied comply with relevant specifications.
Width	Complete records to be kept of actual measurements made of quantities of materials applied and rates of application.
Cross section)	One test each and every spray run
Smoothness)	All rough areas to be checked
Binder content of slurry	One extraction test every 100 m ³ of aggregate used
Bulking of aggregate for slummy	One test every 50 m ³ of aggregate used

Routine Inspection and Testing

Routine inspection will be carried out by the Engineer to test the materials and workmanship provided, for compliance with the requirements specified in this section.

Any materials or workmanship that do not comply with the requirements specified, shall be removed and replaced with materials and workmanship complying with the Specifications or, if the engineer permits, be repaired as specified in Clause 16, so that after being repaired it shall comply with the requirements specified.

When any part of the Works or any equipment or material is found upon examination by the Engineer not to conform to the requirements or is at any stage before final acceptance damaged so that it no longer conforms to the requirements of the Specifications, the Engineer may order its complete removal and replacement, at the Contractor's expense, with satisfactory work, equipment or material or he may permit the Contractor to apply remedial measures in order to make good any such defects or damage. The actual remedial measures taken shall at all times be entirely at the Contractor's own initiative, risk and cost, but subject to the Engineer's approval regarding the details thereof.

In particular remedial measures must ensure full compliance with the specifications of the final product, shall not endanger or damage any other part of the Works and shall be carefully controlled and submitted to the Engineer for examination when completed or at any intermediate stage as may be required.

FORMAT OF COMMUNICATIONS

Key Personnel

The Contractor shall provide a schedule of key personnel and their contact details at the commencement of contract

Management Meetings

Management meetings will be conducted on a weekly basis at the site. The Contractor shall keep minutes of the meetings.

Records

The Contractor shall keep the following record:

- Daily Site Diary
- Safety Record

Payment Certificates

Payment certificates shall be issued on a monthly basis, subject to the certification by the inspecting Engineer.

Insurance Provided by the Contractor

Insurance to be provided shall be in accordance with Standard Specifications for Road and Bridge Works for State Road Authorities (COLTO).

Health and Safety Requirements and Procedures

The Occupational Health and Safety Act, 53 of 1993. The Occupational Health and Safety Requirements and Standards are as per Construction Regulations, 2003.

The Contractor shall within five working days from the commencement date provide the Employer with a Risk Report for each Occupational Health and Safety risk identified.

Abnormal Rainfall

The extension of time to be allowed for due to abnormal rainfall shall be calculated by the formula :

$$V = (N_W - N_N) + (R_W - R_N) / 20$$

Where

V = Extension of time in calendar days for the calendar month under consideration.

N_W = Actual number of days during the calendar month on which a rainfall of 10mm or more has been recorded.

R_W = Actual total rainfall in mm recorded during the calendar month under consideration.

N_N = Average number of days for the calendar month on which a rainfall of 10mm or more has been recorded, as derived from existing rainfall records.

R_N = Average total rainfall for the calendar month, as derived from existing rainfall records.

Where the extension of time due to abnormal rainfall has to be calculated for portion of a calendar month, pro rata values shall be used.

Should V be negative for any particular month and should its absolute value exceed the corresponding value of N_N then V shall be taken as being equal to minus N_N .

The total extension of time to be granted shall be the algebraic sum of all the monthly extensions provided that if this total is negative then the extension of time to be granted for abnormal rainfall shall be taken as zero.

The rainfall records applicable in respect of these Contracts are those recorded at Tzaneen and shall be those used for calculating the extension of the Time for Completion on account of abnormal rainfall. The following values of N_n and R_n are to apply.

Month	(R_n) (mm)	(N_n) (Days)
January	103,8	4
February	93,0	3
March	78,1	3
April	43,1	1
May	18,1	1
June	7,6	0
July	7,0	0
August	8,3	0
September	17,9	1
October	49,4	2
November	80,7	3
December	99,8	3
TOTAL	607,0	21

The Contractor shall be permitted to take his own rainfall measurements on site subject to the Engineer's approval, but access to the measuring gauge(s) shall be under the Engineer's control. The Contractor is to provide and install all the necessary equipment for accurately measuring the rainfall as well as to provide, erect and maintain a security fence plus gate, padlock and keys at each measuring station, all at his own cost.

Forms to be used for Contract Administration or SIMILAR:

Annexure A	Deliverable Acceptance Certificate
Annexure B	Deliverables Register
Annexure C	Notification of Construction Work
Annexure D	Recording and Investigation of Incidents
Annexure E	Risk Register
Annexure F	Risk Report
Annexure G	Seal Work Quantity Control
Annexure H	Tally
Annexure I	Variation Order

Annexure J	Variation Order Register
Annexure K	Weekly Site Report

Annexure A: Deliverable Acceptance Certificate

Bituminous Treatment for Sealing of Road Surfaces PROJECT		REF NO.
DELIVERABLE DETAILS: The following Project Deliverables has been delivered, reviewed and formally accepted by the Department of Water affairs and Forestry:		
VARIATIONS AND CONDITIONS: The above mentioned project deliverables are accepted under these conditions:		
<div style="border-bottom: 1px solid black; margin-bottom: 10px;"></div> Engineer signature	<div style="border-bottom: 1px solid black; margin-bottom: 10px;"></div> Contractor Signature	
<div style="border-bottom: 1px solid black; margin-bottom: 10px;"></div> Name	<div style="border-bottom: 1px solid black; margin-bottom: 10px;"></div> Name	
<div style="border-bottom: 1px solid black; margin-bottom: 10px;"></div> Date of acceptance	<div style="border-bottom: 1px solid black; margin-bottom: 10px;"></div> Date of delivery	

Annexure B: Deliverables Register

Deliverables Register
CONTRACT NO: 24 of 2025

Delivery Register Purpose: Identifies the status of all project deliverables.

[illegible]

Annexure C: Notification of Construction Work

OCCUPATIONAL HEALTH AND SAFETY ACT, 1993
Regulation 3 of the Construction Regulations, 2003

1. Principle Contractor Details

Name of Principle Contractor:	
Postal Address of Principle Contractor:	
Contact Person Name:	
Telephone number:	
Cell phone number:	
Contractor's Compensation Registration Number:	
Name of Principal Contractor's Construction Supervisor on site appointed in terms of regulation 6.(1).	
Supervisor Telephone number:	
Supervisor Cell phone number:	
Name of Principal Contractor's Sub-ordinate Supervisors on site appointed in terms of regulation 6.(2).	

2. Client Details

Name of Client:	
Postal Address of Client:	
Contact Person Name:	
Telephone number:	
Cell phone number:	

3. Designer(s) Details

Name of Designer(s) for the project	
Postal Address of Designer:	
Contact Person Name:	
Telephone number:	
Cell phone number:	

1. Project Details

Physical address of the construction site or site office:	
Nature of the construction work:	
Expected commencement date:	
Expected completion date:	
Estimated maximum number of persons on the construction site	
Planned number of contractors on the construction site accountable to principal contractor:	
Name(s) of contractors already chosen.	

Principal Contractor

Date

Employer

Date

- THIS DOCUMENT IS TO BE FORWARDED TO THE OFFICE OF THE DEPARTMENT OF LABOUR **PRIOR TO COMMENCEMENT** OF WORK ON SITE.
- **ALL PRINCIPAL CONTRACTORS** THAT QUALIFY TO NOTIFY MUST DO SO EVEN IF ANOTHER PRINCIPAL CONTRACTOR ON THE SAME SITE HAD DONE SO PRIOR TO THE COMMENCEMENT OF WORK.

Annexure D: Recording and Investigation of Incidents

OCCUPATIONAL HEALTH AND SAFETY ACT, 1993
(ACT NO 85 OF 1993)
REGULATION 9 OF THE GENERAL ADMINISTRATIVE REGULATIONS

A. RECORDING OF INCIDENT

Name of Employer	Department of Water affairs and Forestry
Name of affected person	
Identity number of affected person	
Date of incident	
Time of incident	

Part of body affected	Head or Neck	<input type="checkbox"/>	Eye	<input type="checkbox"/>	Trunk	<input type="checkbox"/>	Finger	<input type="checkbox"/>	Hand	<input type="checkbox"/>
	Arm	<input type="checkbox"/>	Foot	<input type="checkbox"/>	Leg	<input type="checkbox"/>	Internal	<input type="checkbox"/>	Multiple	<input type="checkbox"/>

Effect on person	Sprains or strains	<input type="checkbox"/>	Contusion or wounds	<input type="checkbox"/>	Fractures	<input type="checkbox"/>	Burns	<input type="checkbox"/>	Amputation	<input type="checkbox"/>
	Electric shock	<input type="checkbox"/>	Asphyxiation	<input type="checkbox"/>	Unconsciousness	<input type="checkbox"/>	Poisoning	<input type="checkbox"/>	Occupational Disease	

Expected period of disablement	0-13 days	<input type="checkbox"/>	2-4 weeks	<input type="checkbox"/>	>4-16 weeks	<input type="checkbox"/>	>52 weeks or permanent disablement	<input type="checkbox"/>	Killed	<input type="checkbox"/>
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Description of occupational disease	
Machine/process involved/type of work performed/exposure**	
Was the incident reported to the Compensation Commissioner and Provincial Director?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Was the incident reported to the police?*	<input type="checkbox"/> Yes <input type="checkbox"/> No
SAPS office and reference	

* to be completed in case of a fatal incident.

** in case of a hazardous chemical substance, indicate substance exposed to

B. INVESTIGATION OF THE ABOVE INCIDENT BY A PERSON DESIGNATED THERETO

Name of investigator	
Date of investigation	
Designation of Investigator	

Short description of incident	

Suspected cause of incident	

Recommended steps to prevent a recurrence	

Signature of Investigator: _____

Name: _____

Date: _____

C. ACTION TAKEN BY EMPLOYER TO PREVENT THE RECURRENCE OF A SIMILAR INCIDENT

Signature of Employer: _____

Name: _____

Date: _____

D. REMARKS BY HEALTH AND SAFETY COMMITTEE

Signature of the Chairperson
Of Health and Safety Committee: _____

Name: _____

Date:

Annexure E: Risk Register

I. Contract No: 24 of 2025 Treatment for Sealing of Road Surfaces									Date:
Risk ID	Risk Title	Status	Cost Impact (000)	Prob. %	Risk Exp. (000)	Sched. Impact (wks)	Perf. Impact (Y/N)	Owner	Comment
	Totals (000)								

Annexure F: Risk Report

CONTRACT NO: 24 of 2025

Project name: UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

Risk Title:	Risk Probability (%):
Risk ID:	Cost Impact (000):
Risk Type: <input type="checkbox"/> Safety and Health <input type="checkbox"/> Schedule <input type="checkbox"/> Cost <input type="checkbox"/> Quality	Risk Exposure (000):
Date Identified:	Schedule Impact (weeks):
Risk Owner:	Risk Status (open, active, closed):
Critical Outputs(s) Impacted:	

Risk Description

[Describe the risk in terms of a condition and the consequences that the condition will bring about

Risk Mitigation Actions	Assigned To	Scheduled Complete Date	Actual Complete Date

Risk Contingency Actions	Assigned To	Start Trigger	Stop Trigger

Risk Status Description

Annexure G: Seal Work Quantity Control

Contract No: UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE												Job No:								
Binder Type:					A.L.D.:							Height Of Bar:								
Date:					% Cutter:							Precoting Agent:								
Weather:					Road No:															
Remarks Bar Nozzles:					Stone Size:															
Section	Lane	Length m	Width m	Area m²	Time Spray	Temperature°C			Binder Quantity Litres			Rate l/M²		Stone Rate M³/ M²		Pump R.P.M.	Road Speed	Actual Time	Actual Road Speed	
						Air	Road	Binder	Before	After	User	Spray	Spec	Spread	Spec					
TOTAL AREA m²					TOTAL BINDER LITRES:					TOTAL STONE m²:										

Annexure H: Tally Sheet

[illegible]

Signature: _____

Annexure I: Variation Order

VO Title:		VO No.	
Raised By:	Contact Tel No:	Date Raised:	Priority: H / M / L
Description of the Variation Required:			
Proposed Solution:			
Cost Impact:			
Schedule Impact:			
Authorized By:		Date:	
Signature			
Name			

Annexure J: Variation Order Register

CONTRACT NO: 24 of 2025

Change Control Register Purpose: Identifies and tracks requests to change the project scope.

[illegible]

Annexure K: Weekly Site Report

1. Contract Details

Contract Name:	
Contract Number:	
Contractor Name:	
Site Agent Name:	
Week starting on:	
Week ending on:	

2. Labour Details

Labour	Day 1 Number on Site	Day 2 Number on Site	Day 3 Number on Site	Day 4 Number on Site	Day 5 Number on Site
Foreman					
Surveyor					
Artisans					
Operators					
Drivers					
Skilled					
Semi-skilled					
Unskilled					
Other [<i>Specify</i>]					

3. Equipment Details

Equipment	Day 1 Number on Site	Day 2 Number on Site	Day 3 Number on Site	Day 4 Number on Site	Day 5 Number on Site
Compactors					
Compressors					
Dozers					
Excavators					
Graders					
Loaders					
Mixers					
Tippers					
TLB's					
Tractors					
Trailers					
Water carts					
Others [<i>Specify</i>]					

4. Weather Details

		Day 2	Day 3	Day 4	Day 5
Recorded rainfall					
From					
To					

5. Deliveries

Date	Item	Quantity

6. Task Progress

Current Active Tasks	Elapsed Duration	Estimated Remaining Duration	Delays [Specify]

7. Information and Drawings

Date	Description	Action	Person Responsible
		<input type="checkbox"/> Required <input type="checkbox"/> Issued	
		<input type="checkbox"/> Required <input type="checkbox"/> Issued	
		<input type="checkbox"/> Required <input type="checkbox"/> Issued	
		<input type="checkbox"/> Required <input type="checkbox"/> Issued	
		<input type="checkbox"/> Required <input type="checkbox"/> Issued	

8. Existing Services Encountered

Date	Description	Location	Condition
			<input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Damaged
			<input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Damaged
			<input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Damaged

9. General

SIGNED: _____

CONTRACTOR SITE AGENT _____

MAKHADO LOCAL MUNICIPALITY



CONTRACT NO: 24 of 2025

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

C4 SITE INFORMATION

Site Inspection

The bidder shall inform him/herself on the nature of the site and inspect the site.

The Engineer will consider a bid only if the site inspection and/or bidder's meeting arranged by the Engineer has been attended by a representative who must;

- Be suitably qualified to comprehend the implications of the work involved and
- Be the bidder him/herself or a person in the direct employ of the bidder.

Site Information

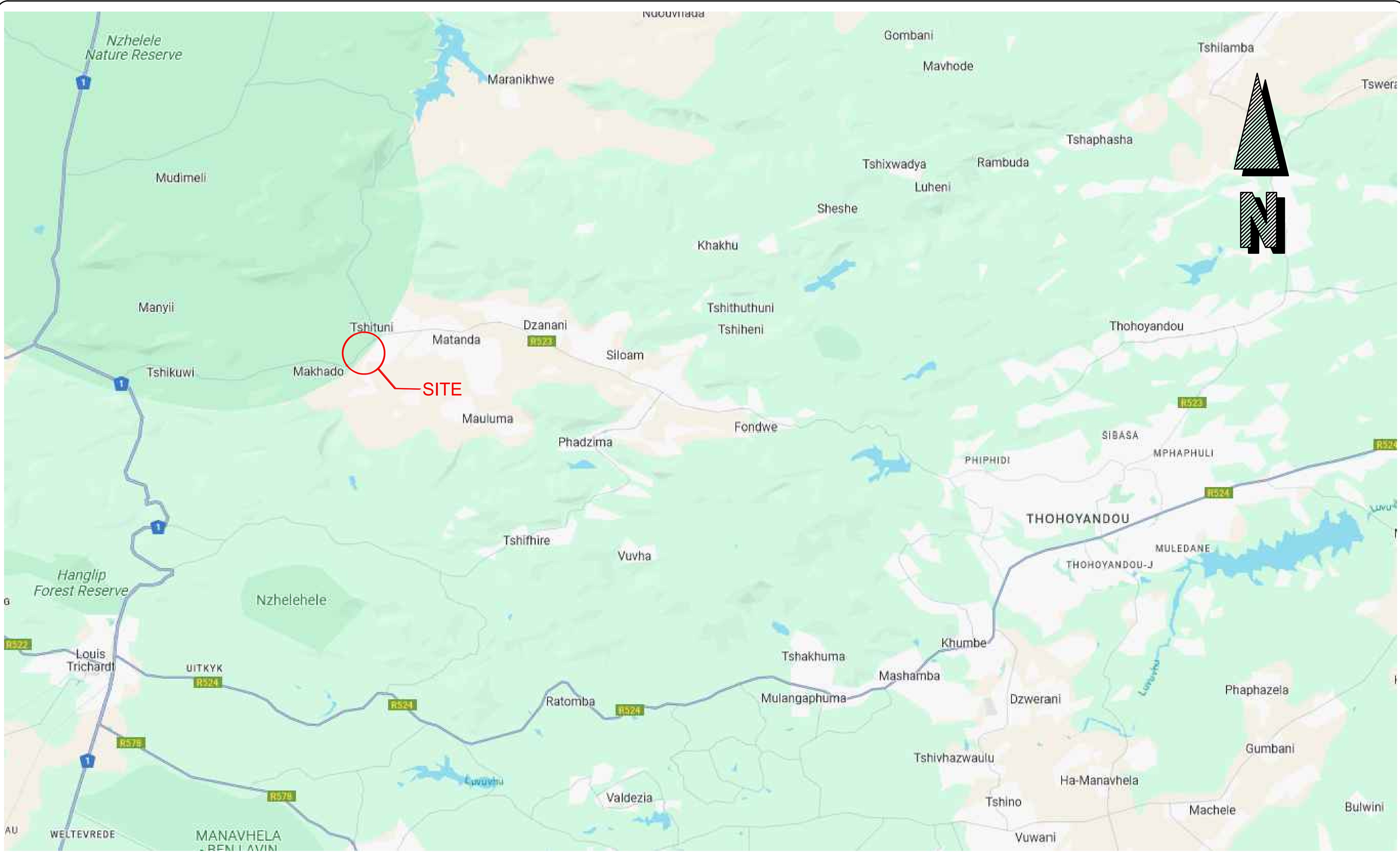
A geotechnical investigation is underway and the information will be provided when available.



Locality Plan

See attached.

C4.1

<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2



 <div><div>P.o.Box 2740 POLOKWANE 0007</div><div>Tel: (015)291-1161 Fax: (086) 558-6446</div></div>	 <div><div>MAKHADO LOCAL MUNICIPALITY</div><div>PRIVATE BAG X111 Louis Trichardt 1450</div><div>Tel: :(015) 519 3000 Tel: :(015) 515 1195</div></div>	AMENDMENTS		BY	APPROVED	DATE	APPROVED ON BEHALF OF THE CONSULTING ENGINEER	REFERENCE	BID NO: 24 of 2025		DESIGNED	
		A	ISSUED FOR APPROVAL				09/2022	ENGINEER : <u>HULISANI OSOODO TSANWANI</u>	<div><div>UPGRADING OF ROAD LEADING TO MAVHOYI COLLEGE</div><div>LOCALITY PLAN</div></div>	UPGRADING OF ROAD LEADING TO MAVHOYI COLLEGE		DRAWN
								REG. No. : <u>201370377</u>				REVIEWED
								DATE : <u>31 OCTOBER 2013</u>				PROJECT ENGINEER
							SIGNATURE : _____		CONTRACT: _____ DATE: January 2024	DRAWING ML/MKV/LAY-001	REVISION <div>▲</div>	

MAKHADO LOCAL MUNICIPALITY



CONTRACT NO: 24 of 2025

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

C5 RELEVANT DOCUMENTATION

The following documents are attached hereto and form part of the Contract:

- (i) Ministerial Determination No.3: Extended Public Works Programmes

C5.1

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Contractor

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Witness 1

--

Witness 2

--

Employer

--

Witness 1

--

Witness 2



Government Gazette Staatskoerant

REPUBLIC OF SOUTH AFRICA
REPUBLIEK VAN SUID-AFRIKA

Regulation Gazette

No. 9745

Regulasiekoerant

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Mei 2012

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No.**GOVERNMENT NOTICE****Labour, Department of**

Government Notice

R. 347 Basic Conditions of Employment Act, 1997: Ministerial Determination 4: Expanded Public Works Programmes 3 35310

GOVERNMENT NOTICE

DEPARTMENT OF LABOUR

No. R. 347

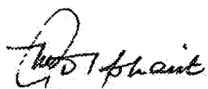
4 May 2012

BASIC CONDITIONS OF EMPLOYMENT ACT, 1997

MINISTERIAL DETERMINATION 4: EXPANDED PUBLIC WORKS PROGRAMMES

I, Nelisiwe Mildred Oliphant, Minister of Labour, hereby in terms of section 50 of the Basic Conditions of Employment Act, 1997, make a Ministerial Determination establishing conditions of employment for employees in Expanded Public Works Programmes, South Africa, in the Schedule hereto and determine the second Monday after the date of publication of this notice as the date from which the provisions of the said Ministerial Determination shall become binding.

All the provisions of the Ministerial Determination: Expanded Public Works Programmes published under Government Notice R949 in Government Gazette 33665 of 22 October 2010 will be superseded by this ministerial determination with effect from the date of implementation.


NM OLIPHANT, MP
Minister of Labour
10/04/2012

SCHEDULE

MINISTERIAL DETERMINATION NO: 3 : EXPANDED PUBLIC WORKS PROGRAMMES

Index

-
1. Definitions
 2. Application of this determination
 3. Sections not applicable to public works programmes
 4. Conditions
-

1. Definitions

1.1 In this determination -

"expanded public works programme" means a programme to provide public or community assets or services through a labour intensive programme initiated by government and funded from public resources .

1.2 Without limiting subsection (1), the following programmes constitute Expanded Public Works Programmes.:

- (a) Environment and Culture Sector Programmes including: Working for Water, Working on Fire, Working for wetlands, People and Parks, Working for Energy, Working for Woodlands, Working for the Coast, Landcare, Working on Waste/ Working for Tourism, Investing in Culture .Programmes
- (b) Infrastructure Sector Programme and Projects declared part of EPWP which may include the construction, rehabilitation and maintenance of: rural and low-volume roads, storm-water drains, water reticulation, basic sanitation, footpaths, sidewalks, bicycle paths, schools and clinics.
- (c) Social Sector Programmes including Early Childhood Development, Home, Community Based Care, Community Safety and other community based programmes
- (d) All projects and programmes accessing the EPWP wage incentive including those Implemented by Non Governmental organisations (NGO) and Community Based Organisations (CBO) and the Community Works Programme.
- (e) Any other programme deemed to be part of the EPWP as determined by the Department of Public Works

2. Application

This Determination applies to all employers and employees engaged in expanded public works programmes.

3. The following provisions of the Basic Conditions of Employment Act do not apply to public works programmes -

3.1 Section 10(2) [Overtime rate]

- 3.2 Section 14(3) (Remuneration required for meal intervals of longer than 75 minutes]
- 3.3 Section 29(h) to (p) [Written particulars of employment]
- 3.4 Section 30 [Display of employee's rights]
- 3.5 Section 41 [Severance pay]
- 3.6 Section 37 [Notice of termination]
- 3.7 Sections 51 - 58 [Sectoral Determinations]

4. **Conditions**

As set out in the ANNEXURE:

ANNEXURE

CONDITIONS OF EMPLOYMENT FOR EXPANDED PUBLIC WORKS PROGRAMMES

1. Introduction

1.1 This document contains the standard terms and conditions for workers employed in elementary occupations on an Expanded Public Works Programme (EPWP). These terms and conditions do NOT apply to persons employed in the supervision and management of a SPWP.

1.2 In this document -

- (a) "department" means any department of the State, implementing agent or contractor;
- (b) "employer" means any department, implementing agency or contractor that hires workers to work in elementary occupations on a EPWP;
- (c) "worker" means any person working in an elementary occupation on a EPWP;
- (d) "elementary occupation" means any occupation involving unskilled or semi-skilled work;
- (e) "management" means any person employed by a department or implementing agency to administer or execute an EPWP;
- (f) "task" means a fixed quantity of work;
- (g) "task-based work" means work in which a worker is paid a fixed rate for performing a task;
- (h) "task-rated worker" means a worker paid on the basis of the number of tasks completed;
- (i) "time-rated worker" means a worker paid on the basis of the length of time worked.

2. Terms of Work

2.1 Workers on an EPWP are employed on a temporary basis or contract basis.

3. Normal Hours of Work

- 3.1 An employer may not set tasks or hours of work that require a worker to work-
- (a) more than forty hours in any week;
 - (b) on more than five days in any week; and
 - (c) for more than eight hours on any day.
- 3.2 An employer and worker may agree that a worker will work four days per week. The worker may then work up to ten hours per day.
- 3.3 A task-rated worker may not work more than a total of 55 hours in any week to complete the tasks allocated (based on a 40-hour week) to that worker.

4. Meal Breaks

- 4.1 A worker may not work for more than five hours without taking a meal break of at least thirty minutes duration.
- 4.2 An employer and worker may agree on longer meal breaks.
- 4.3 A worker may not work during a meal break. However, an employer may require a worker to perform duties during a meal break if those duties cannot be left unattended and cannot be performed by another worker. An employer must take reasonable steps to ensure that a worker is relieved of his or her duties during the meal break.
- 4.4 A worker is not entitled to payment for the period of a meal break. However, a worker who is paid on the basis of time worked must be paid. If the worker is required to work or to be available for work during the meal break.

5. Special Conditions for Security Guards

- 5.1 A security guard may work up to 55 hours per week and up to eleven hours per day.
- 5.2 A security guard who works more than ten hours per day must have a meal break of at least one hour or two breaks of at least 30 minutes *each*.

6. Daily Rest Period

Every worker is entitled to a daily rest period of at least twelve consecutive hours. The daily rest period is measured from the time the worker ends work on one day until the time the worker starts work on the next day.

7. Weekly Rest Period

Every worker must have two days *off* every week. A worker may only work on their day off to perform work which must be done without delay and cannot be performed by workers during their ordinary hours of work. ("emergency work").

8. Sick Leave

8.1 Only workers who work more than 24 hours per month have the right to claim sick-pay in terms of this clause.

8.2 A worker who is unable to work on account of illness or injury is entitled to claim one day's paid sick leave for every full month that the worker has worked in terms of a contract.

8.3 A worker may accumulate a maximum of twelve days' sick leave in a year.

BA Accumulated sick-leave may not be transferred from one contract to another contract

8.5 An employer must pay a task-rated worker the worker's daily task rate for a day's sick leave.

8.6 An employer must pay a time-rated worker the worker's daily rate of pay for a day's sick leave.

8.7 An employer must pay a worker sick pay on the worker's usual payday.

as Before paying sick-pay, an employer may require a worker to produce a certificate stating that the worker was unable to work on account of sickness or injury if the worker is-

(a) absent from work for more than two consecutive days; or

(b) absent from work on more than two occasions in any eight-week period.

8.9 A medical certificate must be issued and signed by a medical practitioner; a qualified nurse or a clinic staff member authorised to issue medical certificates indicating the duration and reason for incapacity.

B.to A worker is not entitled to paid sick leave for a work-related injury or occupational disease for which the worker can claim compensation under the Compensation for Occupational Injuries and Diseases Act.

9. Maternity Leave

9.1 A worker may take up to four consecutive months' unpaid maternity leave.

9.2 A worker is not entitled to any payment or employment-related benefits during maternity leave.

9.3 A worker must give her employer reasonable notice of when she will start maternity leave and when she will return to work.

9.4 A worker is not required to take the full period of maternity leave. However, a worker may not work for four weeks before the expected date of birth of her child or for six weeks after the birth of her child, unless a medical practitioner, midwife or qualified nurse certifies that she is fit to do so.

9.5 A worker may begin maternity leave -

(a) four weeks before the expected date of birth; or

(b) on an earlier date -

(i) if a medical practitioner, midwife or certified nurse certifies that it is necessary for the health of the worker or that of her unborn child; or

(ii) if agreed to between employer and worker; or

(c) on a later date, if a medical practitioner, midwife or certified nurse has certified that the worker is able to continue to work without endangering her health.

9.6 A worker who has a miscarriage during the third trimester of pregnancy or bears a stillborn child may take maternity leave for up to six weeks after the miscarriage or stillbirth.

10. Family responsibility leave

10.1 Workers, who work for at least four days per week, are entitled to three days paid family responsibility leave each year in the following circumstances-

- (a) when the employee's child is born;
- (b) when the employee's child is sick;
- (c) in the event of a death of -
 - (i) the employee's spouse or life partner;
 - (ii) the employee's parent, adoptive parent, grandparent, child, adopted child, grandchild or sibling.

11. Statement of Conditions

11.1 An employer must give a worker a statement containing the following details at the start of employment -

- (a) the employer's name and address and the name of the EPWP;
- (b) the tasks or job that the worker is to perform; and
- (c) the period for which the worker is hired or, if this is not certain, the expected duration of the contract;
- (d) the worker's rate of pay and how this is to be calculated;
- (e) the training that the worker will receive during the EPWP.

11.2 An employer must ensure that these terms are explained in a suitable language to any employee who is unable to read the statement.

11.a An employer must supply each worker with a copy of these conditions of employment.

12. Keeping Records

12.1 Every employer must keep a written record of at least the following -

- (a) the worker's name and position;

- (b) copy of an acceptable worker identification
- (c) in the case of a task-rated worker, the number of tasks completed by the worker;
- (d) in the case of a time-rated worker, the time worked by the worker;
- (e) payments made to each worker.

12.2 The employer must keep this record for a period of at least three years after the completion of the EPWP.

13. Payment

- 13.1 An employer must pay all wages at least monthly in cash or by cheque or into a bank account
- 13.2 A worker may not be paid less than the minimum EPWP wage rate of R63.18 per day or per task. This will be adjusted annually on the 1st of November in line with inflation (available CPI as provided by StatsSA six {6} weeks before implementation).
- 13.3 A task-rated worker will only be paid for tasks that have been completed.
- 13A An employer must pay a task-rated worker within five weeks of the work being completed and the work having been approved by the manager or the contractor having submitted an invoice to the employer.
- 13.5 A time-rated worker will be paid at the end of each month.
- 13.6 Payment must be made in cash, by cheque or by direct deposit into a bank account designated by the worker.
- 13.7 Payment in cash or by cheque must take place -
 - (a) at the workplace or at a place agreed to by the worker;
 - (b) during the worker's working hours or within fifteen minutes of the start or finish of work;
 - (c) in a sealed envelope which becomes the property of the worker.
- 13.8 An employer must give a worker the following information in writing -

- (a) the period for which payment is made;
- (b) the numbers of tasks completed or hours worked;
- (c) the worker's earnings;
- (d) any money deducted from the payment;
- (e) the actual amount paid to the worker.

13.9 If the worker is paid in cash or by cheque, this information must be recorded on the envelope and the worker must acknowledge receipt of payment by signing for it.

13.10 If a worker's employment is terminated, the employer must pay all monies owing to that worker within one month of the termination of employment.

14. Deductions

14.1 An employer may not deduct money from a worker's payment unless the deduction is required in terms of a law.

14.2 An employer must deduct and pay to the SA Revenue Services any income tax that the worker is required to pay.

14.3 An employer who deducts money from a worker's pay for payment to another person must pay the money to that person within the time period and other requirements specified in the agreement, law, court order or arbitration award concerned.

14.4 An employer may not require or allow a worker to -

- (a) repay any payment except an overpayment previously made by the employer by mistake;
- (b) state that the worker received a greater amount of money than the employer actually paid to the worker; or
- (c) pay the employer or any other person for having been employed.

15. Health and Safety

15.1 Employers must take all reasonable steps to ensure that the working environment is healthy and safe.

15.2 A worker must -

- (a) work in a way that does not endanger his/her health and safety or that of any other person;
- (b) obey any health and safety instruction;
- (c) obey all health and safety rules of the EPWP;
- (d) use any personal protective equipment or clothing issued by the employer;
- (e) report any accident, near-miss incident or dangerous behaviour by another person to their employer or manager.

16. **Compensation for Injuries and Diseases**

- 16.1 It is the responsibility of the employers (other than a contractor) to arrange for all persons employed on a EPWP to be covered in terms of the Compensation for Occupational Injuries and Diseases Act, 130 of 1993.
- 16.2 A worker must report any work-related injury or occupational disease to their employer or manager.
- 16.3 The employer must report the accident or disease to the Compensation Commissioner.
- 16.4 An employer must pay a worker who is unable to work because of an injury caused by an accident at work 75% of their earnings for up to three months. The employer will be refunded this amount by the Compensation Commissioner. This does NOT apply to injuries caused by accidents outside the workplace such as road accident or accidents at home.

17. **Termination**

- 17.1 The employer may terminate the employment of a worker for good cause after following a fair procedure.
- 17.2 A worker will not receive severance pay on termination.
- 17.3 A worker is not required to give notice to terminate employment. However, a worker who wishes to resign should advise the employer in advance to allow the employer to find a replacement.

- 17.4 A worker who is absent for more than three consecutive days without informing the employer of an intention to return to work will have terminated the contract. However, the worker may be re-engaged if a position becomes available.
- 17.5 A worker who does not attend required training events, without good reason, will have terminated the contract. However, the worker may be re-engaged if a position becomes available.

Certificate of Service

- 18.1 On termination of employment, a worker is entitled to a certificate stating -
- (a) the worker's full name;
 - (b) the name and address of the employer;
 - (c) the EPWP on which the worker worked;
 - (d) the work performed by the worker;
 - (e) any training received by the worker as part of the EPWP;
 - (f) the period for which the worker worked on the EPWP;
 - (g) any other information agreed on by the employer and worker.

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MAKHADO LOCAL MUNICIPALITY



CONTRACT NO: 24 of 2025

UPGRADING OF ROAD LEADING TO MAVHOYI FET COLLEGE

<p>C6 DRAWINGS</p>

C4.1

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Contractor

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Witness 1

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Witness 2

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Employer

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Witness 1

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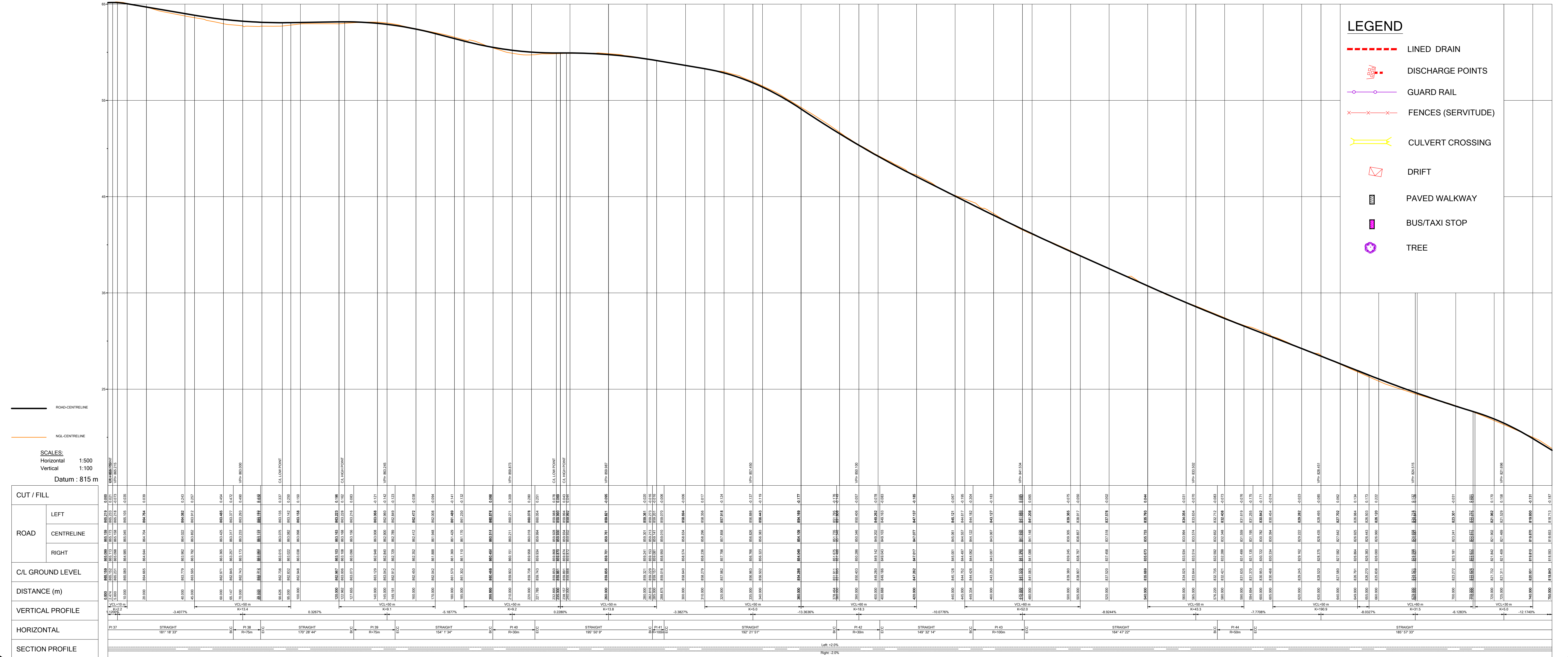
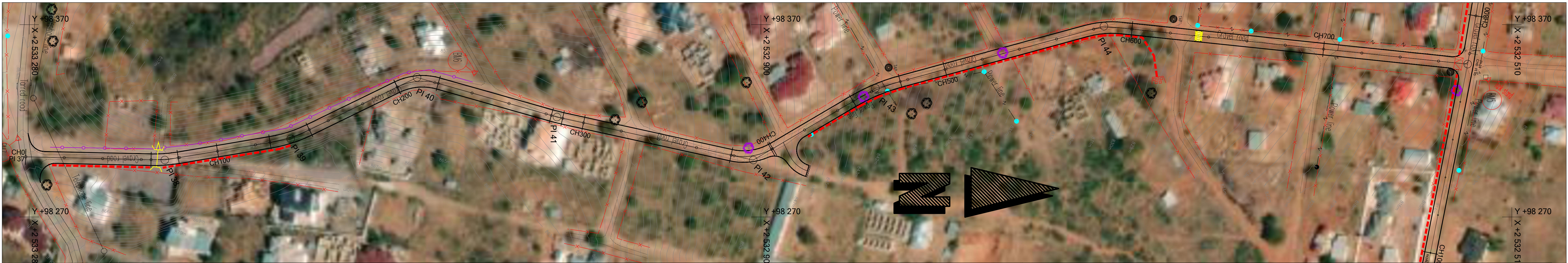
Witness 2



LEGEND

- LINED DRAIN
- DISCHARGE POINTS
- GUARD RAIL
- FENCES (SERVITUDE)
- CULVERT CROSSING
- BENCHMARK POSITION
- PAVED WALKWAY
- BUS/TAXI STOP
- TREE
- ESKOM POLE
- RELOCATE FENCE
- DRIFT

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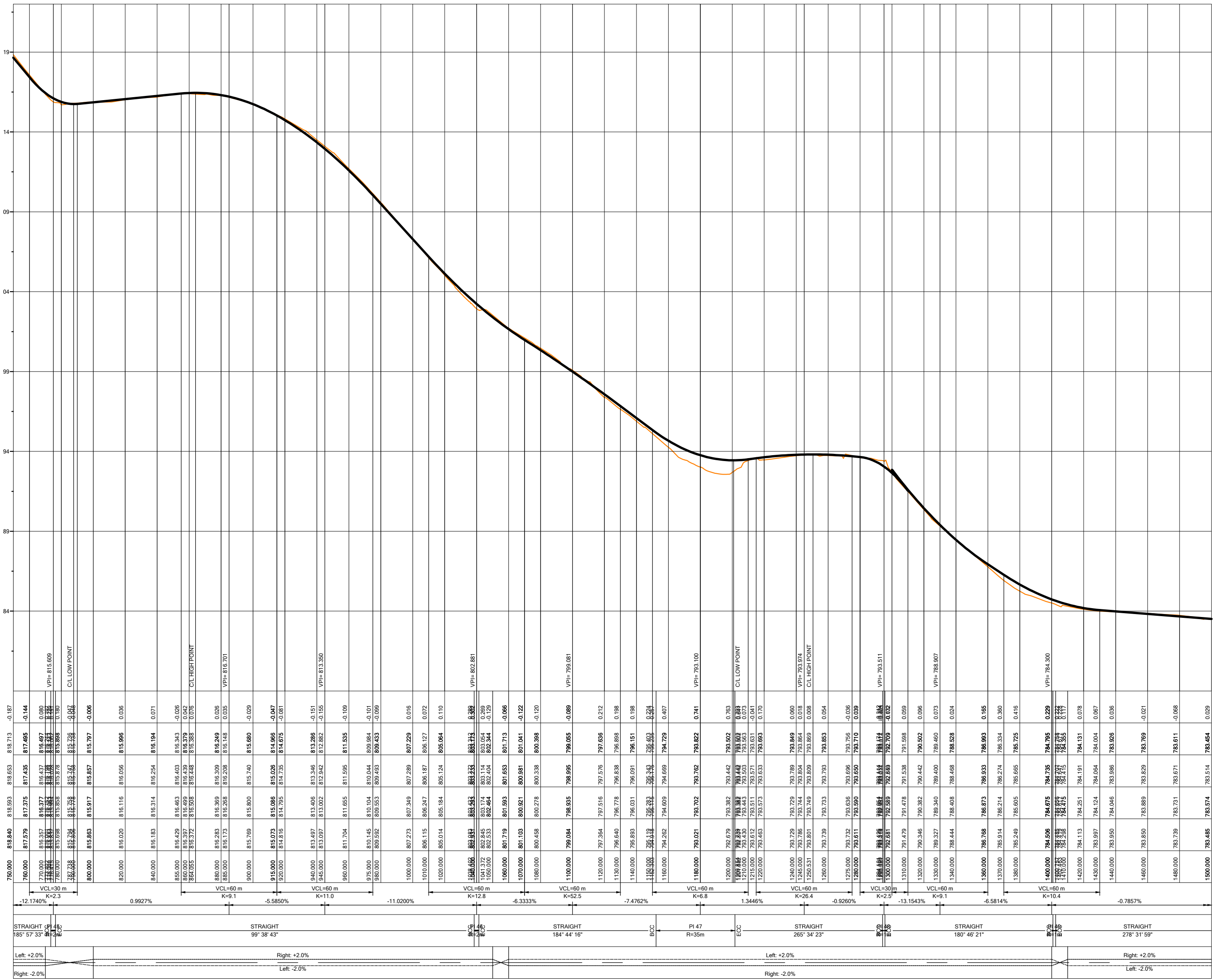


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	Tel: (015)291-1161 Fax: (086) 558-6446							CONTRACT: ML/MKV/LAY-003	REVIEWED	
								DATE: January 2024	PROJECT ENGINEER	



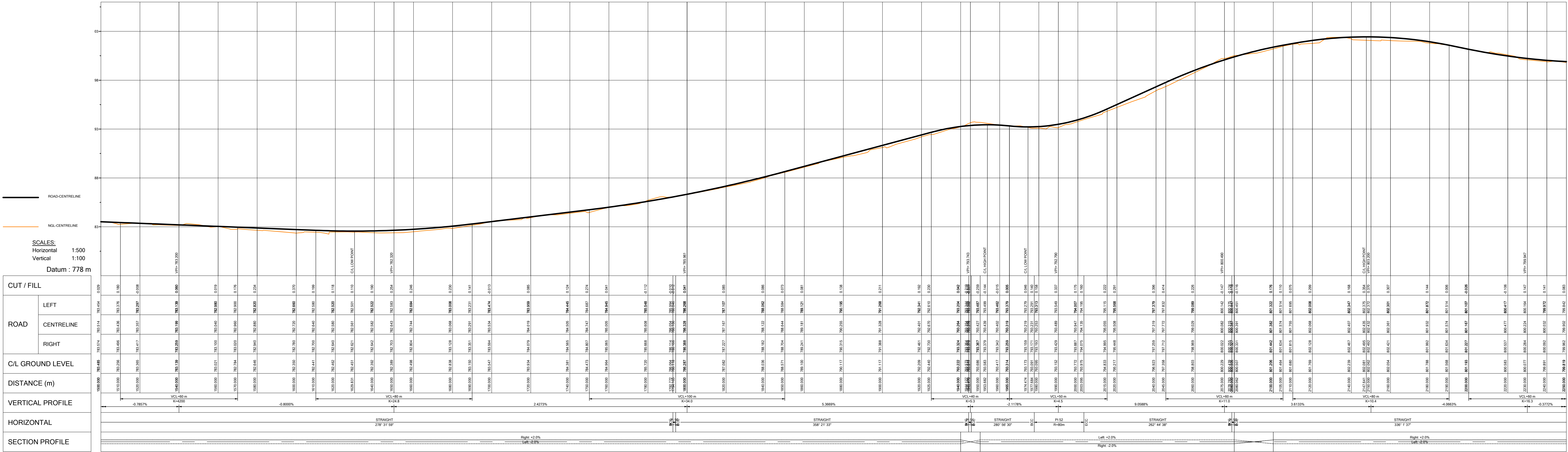
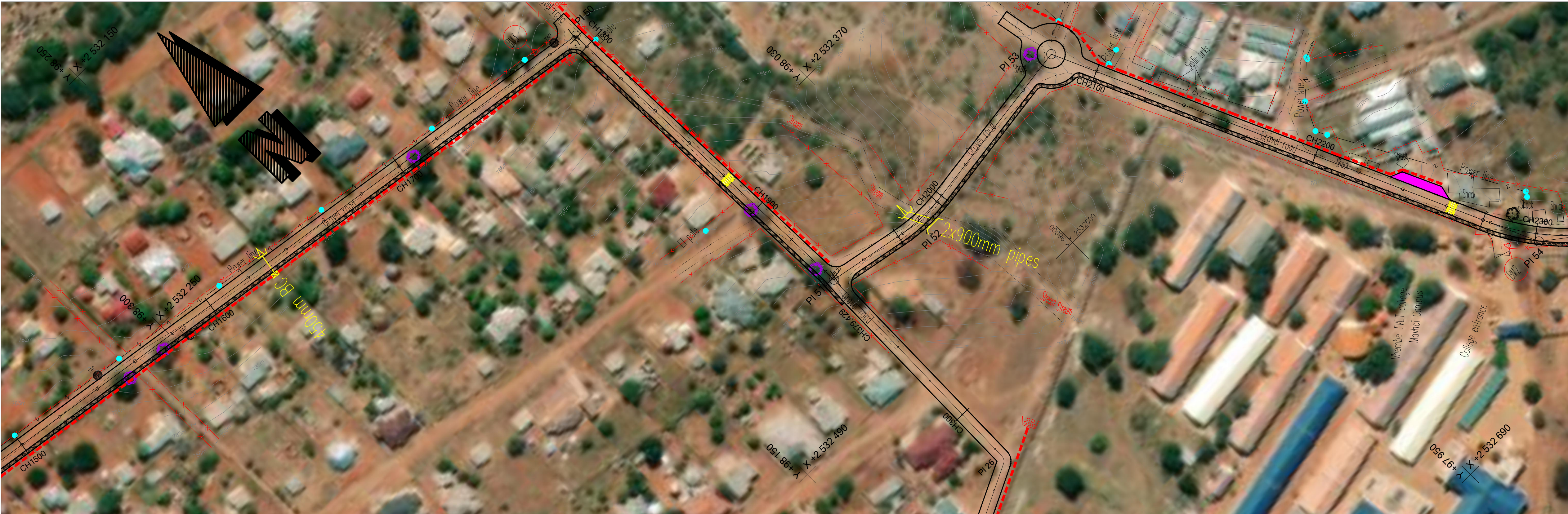
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LEGEND

- LINED DRAIN
- DISCHARGE POINTS
- GUARD RAIL
- FENCES (SERVITUDE)
- CULVERT CROSSING
- DRIFT
- PAVED WALKWAY
- BUS/TAXI STOP
- TREE




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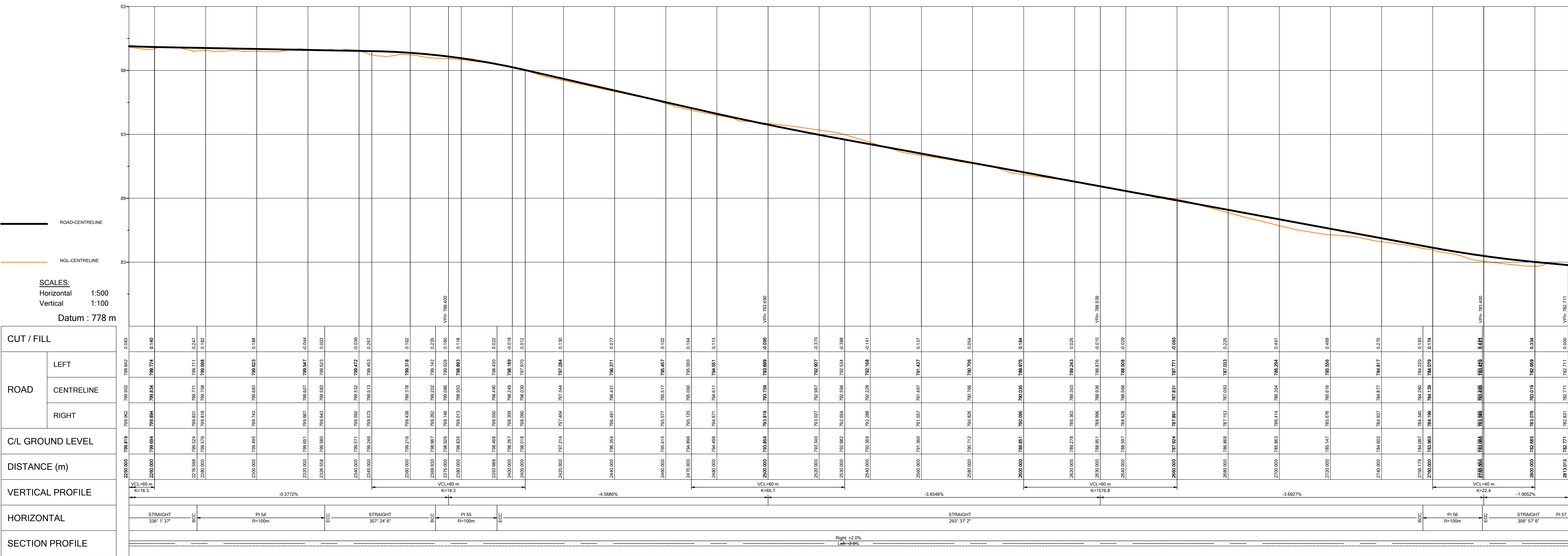
MAKHATO LOCAL MUNICIPALITY
PRIVATE BAG X111
Lous Trichardt
1450
Tel: (015) 519 3000
Tel: (015) 515 1195

No	AMENDMENTS	BY	APPROVED	DATE	APPROVED ON BEHALF OF THE CONSULTING ENGINEER	REFERENCE
A	ISSUED FOR APPROVAL			09/2022	ENGINEER : HULISANI OSOGODO TSANWANI REG. No. : 201370377 DATE : 31 OCTOBER 2013 SIGNATURE : _____	

BID NO: 24 of 2025		DESIGNED
UPGRADING OF ROAD LEADING TO MAVHOYI COLLEGE		DRAWN
LAYOUT AND LONGITUDINAL SECTION		REVIEWED
CONTRACT:	DRAWING	REVISION
DATE: January 2024	ML/MKV/LAY-005	
		PROJECT ENGINEER

LEGEND

- LINED DRAIN
- DISCHARGE POINTS
- GUARD RAIL
- FENCES (SERVITUDE)
- CULVERT CROSSING
- DRIFT
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Tel: (015) 519 3000
Tel: (015) 515 1195

AMENDMENTS
ISSUED FOR APPROVAL

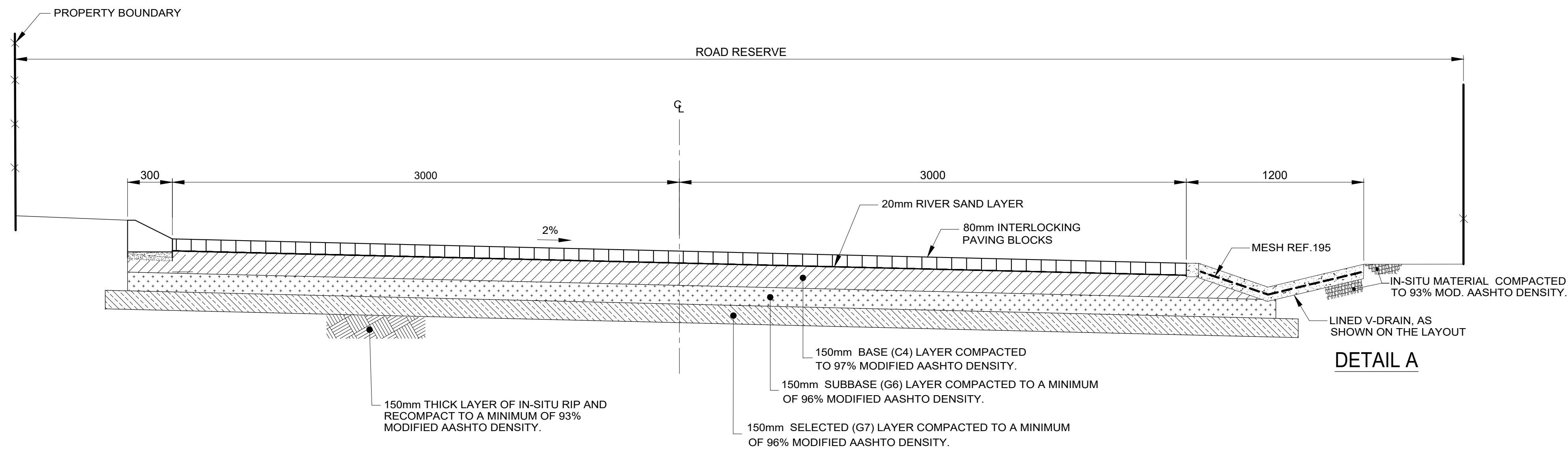
BY
APPROVED
DATE
09/2022

APPROVED ON BEHALF OF THE CONSULTING ENGINEER
ENGINEER : HULISANI OSOODO TSANWANI
REG. No. : 2013703977
DATE : 31 OCTOBER 2013
SIGNATURE : _____

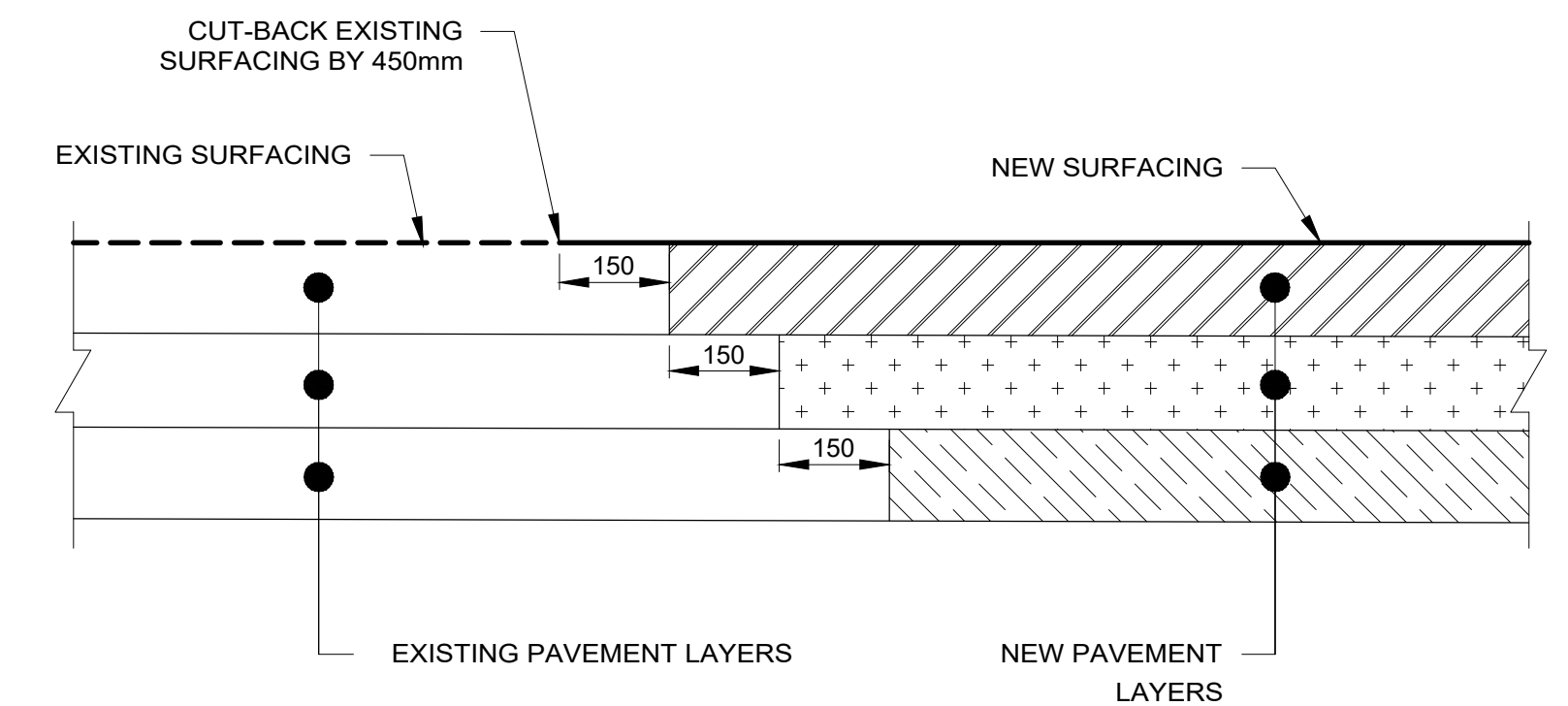
REFERENCE

BID NO: 24 of 2025
UPGRADING OF ROAD LEADING TO MAVHOYI COLLEGE
LAYOUT AND LONGITUDINAL SECTION
CONTRACT: ML/MKV/LAY-006
DATE: January 2024

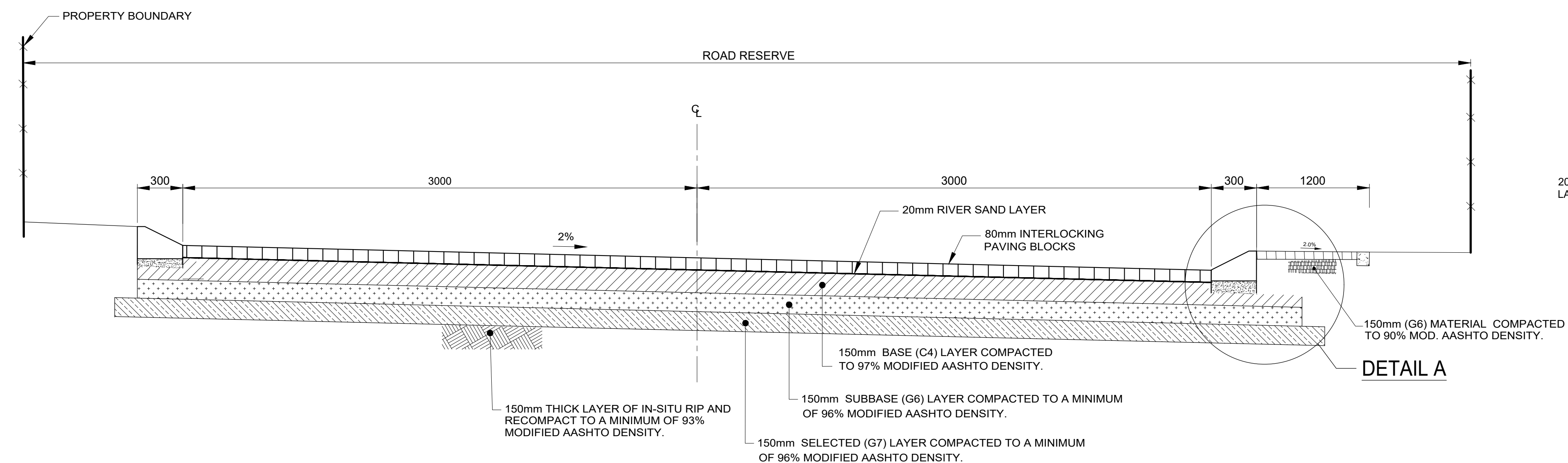
DESIGNED
DRAWN
REVIEWED
PROJECT ENGINEER



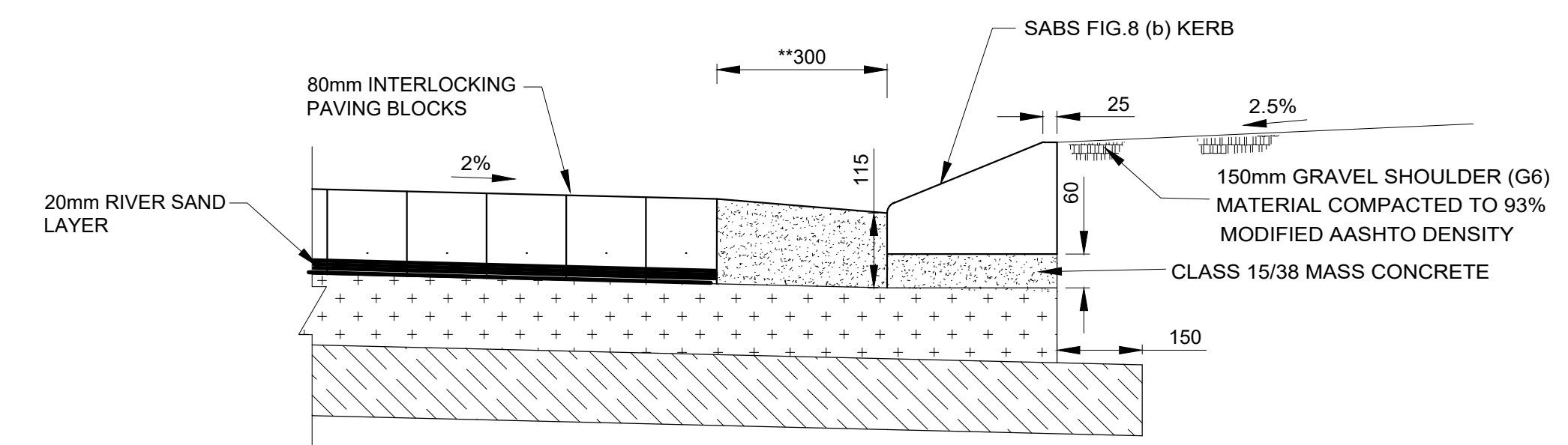
TYPICAL CROSS-SECTION & PAVEMENT WITH A LINED DRAIN



NEW CONSTRUCTION TO EXISTING PAVEMENT STRUCTURE JOINT DETAIL

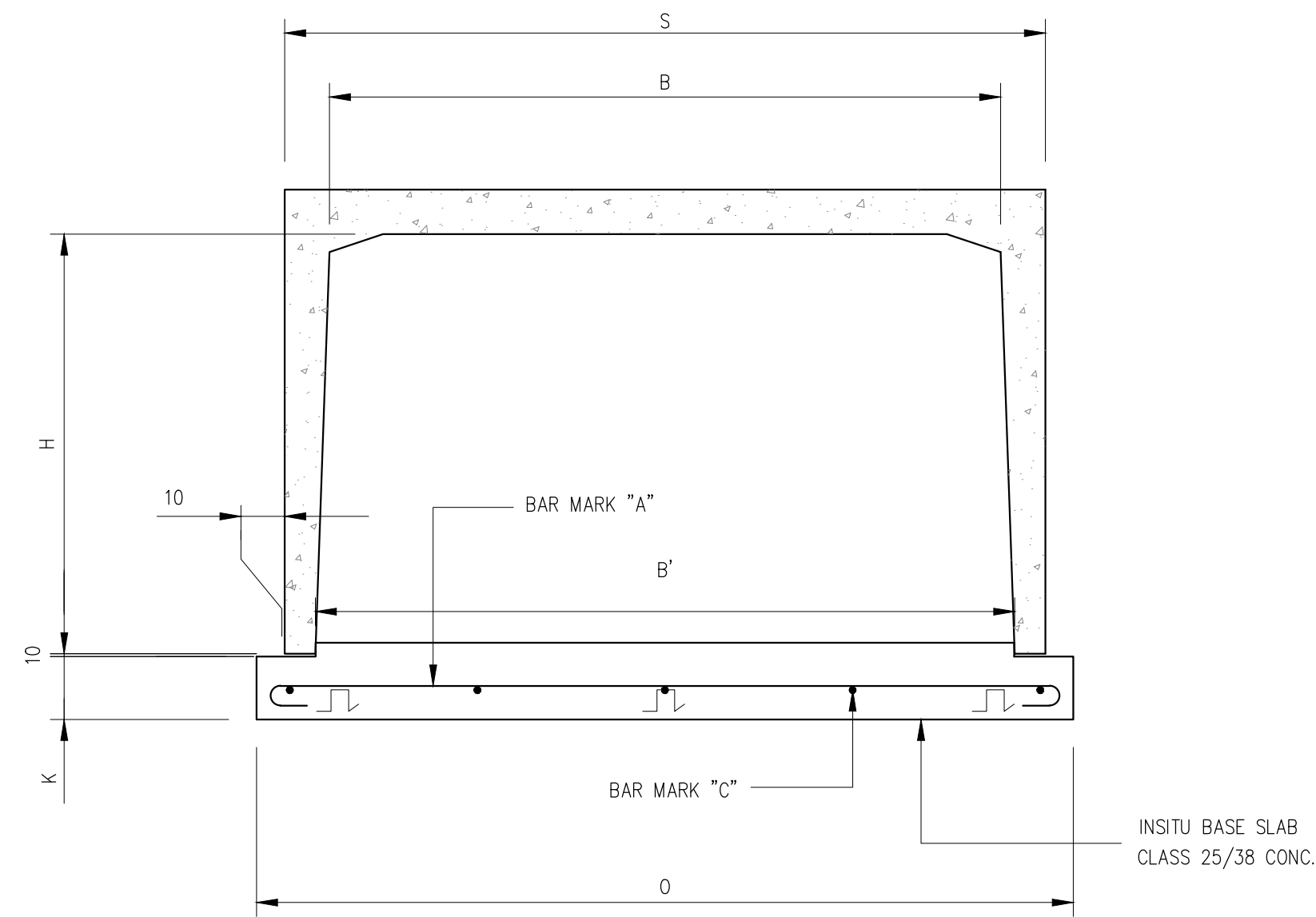


TYPICAL CROSS-SECTION & PAVEMENT WITH A KERB AND CHANNEL

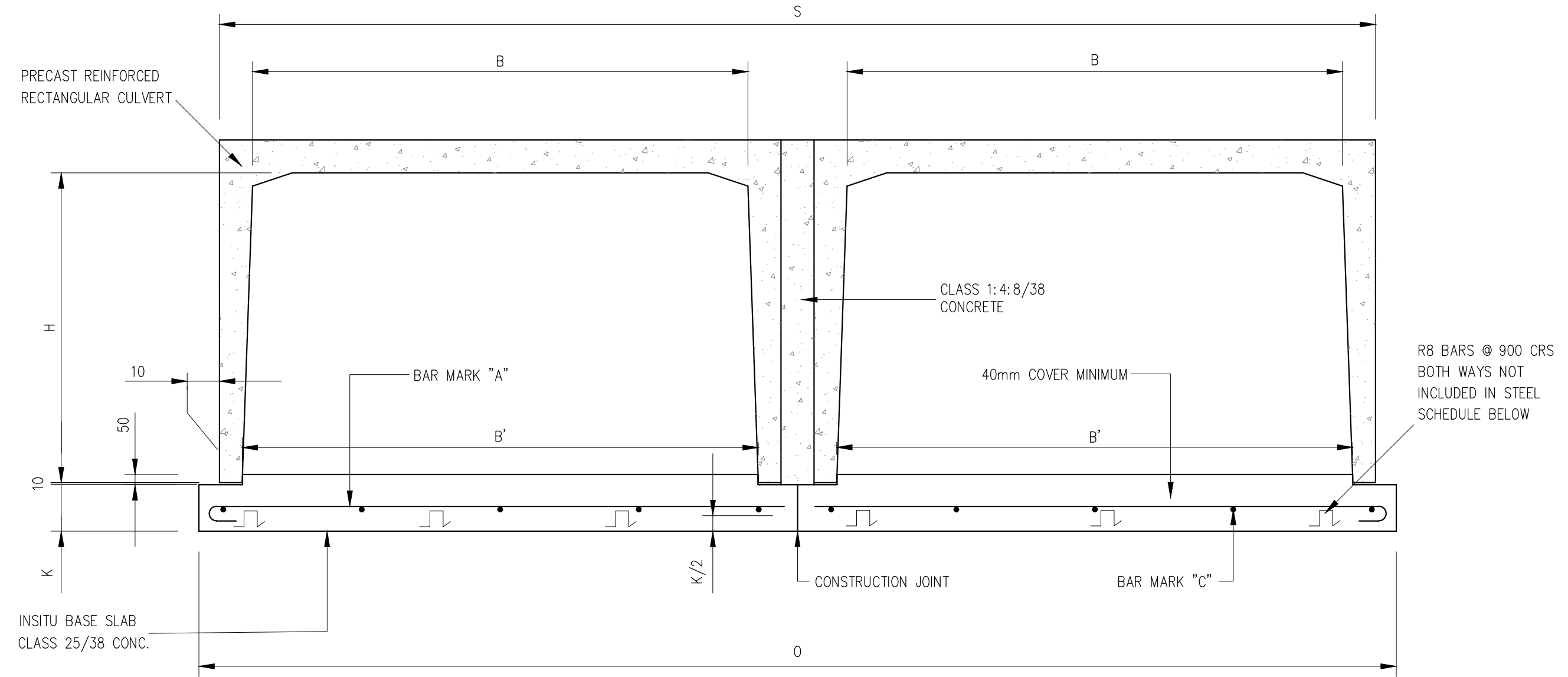


DETAIL A

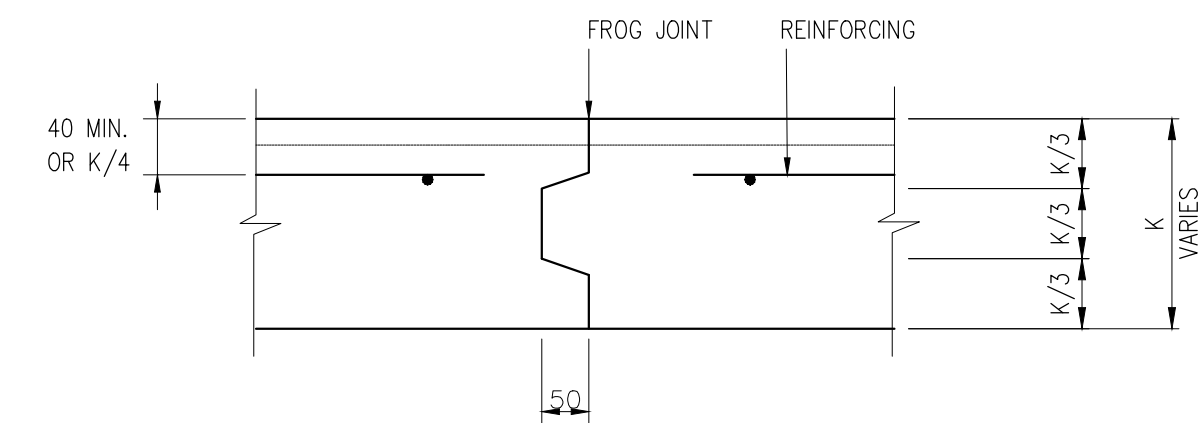
** 300mmmm CHANNEL TO BE ADDED WHERE THERE IS NO LINED DRAIN.



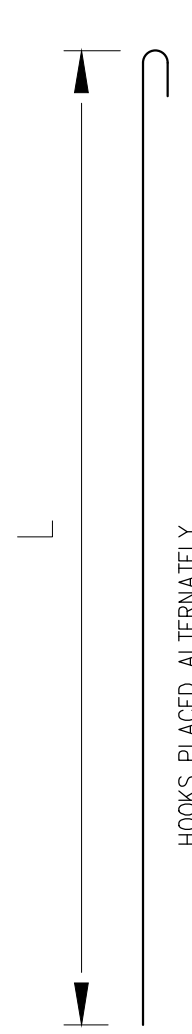

TYPICAL CROSS SECTION : SINGLE UNIT
SCALE 1:20



TYPICAL CROSS SECTION : MULTIPLE UNITS
SCALE 1:20



CONSTRUCTION JOINT
SCALE 1:5

D I M E N S I O N S					R E I N F O R C E M E N T					
B	H	S	O	K	BAR A	L	CUT LENGTH	BENDING	BAR C	BENDING
1 X 600	300	775	980	150	Y12-225	900	1100		4Y10-250	
2 X 600	450	1630	1840	150	Y12-225	1760	1950		8Y10-250	
3 X 600	600	2480	2690	150	Y12-225	2610	2800		11Y10-250	
1 X 750	300	940	1150	150	Y12-180	1060	1250		5Y10-250	
2 X 750	450	1960	2170	150	Y12-180	2090	2300		9Y10-250	
3 X 750	600	2980	3190	150	Y12-180	3110	3300		13Y10-250	
1 X 900	300	1100	1310	150	Y12-160	1230	1450		5Y10-250	
2 X 900	450	2280	2490	150	Y12-160	2410	2600		10Y10-250	
3 X 900	600	3460	3670	150	Y12-160	3590	3800		15Y10-250	
1 X 900	900	3460	3670	150	Y12-160	3590	3800		15Y10-250	
1 X 900	300	1100	1310	150	Y12-160	1230	1450		5Y10-250	
2 X 900	450	2280	2490	150	Y12-160	2410	2600		10Y10-250	
3 X 900	600	3460	3670	150	Y12-160	3590	3800		15Y10-250	
1 X 1200	450	1420	1630	175	Y12-160	1550	1750		8Y10-200	
2 X 1200	600	2920	3130	175	Y12-160	3050	3150		15Y10-200	
3 X 1200	900	4420	4630	175	Y12-160	4550	4750		22Y10-200	
1 X 1500	1200	4420	4630	175	Y12-160	4550	4750		22Y10-200	
1 X 1500	600	1770	1980	175	Y12-130	1900	2100		9Y10-200	
5 X 1500	900	3620	3830	175	Y12-130	3750	3950		18Y10-200	
3 X 1500	1200	5470	5680	175	Y12-130	5600	5800		22Y10-200	
1 X 1800	1500	5470	5680	175	Y12-130	5600	5800		22Y10-200	
2 X 1800	600-900	2080	2290	200	Y12-125	2210	2450		13Y10-180	
1 X 2400	1200	4230	4440	200	Y12-125	4360	4600		28Y10-150	
2 X 2400	1500-1800	2710	2920	225	Y16-170	2840	3200		19Y10-150	
1 X 3000	900-1200	5500	5710	225	Y16-170	5630	6000		37Y10-150	
2 X 3000	1200-1500	5500	5710	225	Y16-170	5630	6000		37Y10-150	
1 X 3000	1800-2400	3320	3530	250	Y16-150	3450	3800		23Y10-150	
1 X 3000	900-3000	3320	3530	250	Y16-150	3450	3800		23Y10-150	

SEE NOTE 10

- GENERAL NOTES:
- ALL CONCRETE TO BE CLASS 25/38 UNLESS OTHERWISE INDICATED.
 - REINFORCEMENT SHALL COMPLY TO THE REQUIREMENTS OF S.A.B.S. 920 TYPE C, CLASS 2, GRADE 1.
 - PITCHING ON INLET SIDE TO BE TO DESIGN HIGH FLOOD LEVEL. (SEE CULVERT SCHEDULE)
 - CONCRETE COVER TO STEEL 40mm MINIMUM OR K/4
 - DESIGN MASS OF FILL = 1900 kg/m³
 - LOAD FACTOR FOR PROOF LOAD OF S.A.B.S. 986 = 1.5.
 - HIGH TENSILE (Y) REINFORCEMENT WORKING STRESS : 3890 kPa.
 - PRECAST REINFORCED CULVERTS SHALL COMPLY WITH THE REQUIREMENTS OF S.A.B.S. 986 AND ADDITIONAL TEST LOADING AS SPECIFIED.
 - DIMENSIONS AND REINFORCEMENT DETAILS FOR IN-SITU BASE SLABS ARE VALID ONLY IF :
 - THE HEIGHT OF FILL ABOVE THE CULVERT IS LESS THAN SPECIFIED BELOW
- | DIMENSION B | HEIGHT OF FILL |
|-------------|----------------|
| 600mm | 6m |
| 750mm | 5m |
| 900mm | 4m |
| 1200mm | 3m |
| 1500mm | 2.5m |
| 1800mm | 2.0m |
| 2400mm | 1.5m |
| 3000mm | 0.9m |
- THE TYPE OF MATERIAL UNDER THE BASE SLAB IS NOT ROCK.
- THE DIMENSIONS IN THE TABLE MAY NOT CONFORM TO ALL MARKED UNITS; IT MAY BECOME NECESSARY TO REVISE TABULATED DIMENSIONS.



	WIDTH 'B'	
Ø	SINGLE PIPE	DOUBLE PIPE
600	1600	2500
750	1750	2875
900	1900	3250

PIPE BEDDING DETAILS



(FOR DIMENSIONS SEE TABLE 1)
(FOR REINFORCEMENT SEE TABLE 2)
SCALE 1:20



SCALE 1:20
(FOR DIMENSIONS SEE TABLE 1)
(FOR REINFORCEMENT SEE TABLE 2)

TABLE 1

NOMINAL DIAMETER	DIMENSIONS					
	B	C	D	E	F	G
450	660	270	790	1140	2050	1140
600	810	320	990	1300	2420	1300
750	970	390	1160	1470	2810	1470
900	1120	450	1340	1630	3180	1630
1050	1280	510	1540	1810	3570	1800
1200	1440	580	1730	1960	3960	1960



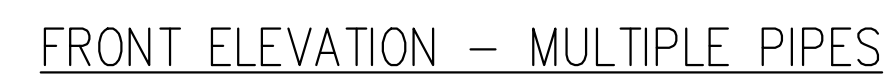
(FOR DIMENSIONS SEE TABLE 1)
SCALE 1:20



(FOR DIMENSIONS SEE TABLE 3)
SCALE 1:20



TABLE 3

NOMINAL DIAMETER	DIMENSIONS						
	A	B	C	D	E	F1	F2
450	660	270	790	1140	1025	1025	1140
600	810	320	990	1300	1210	1210	1300
750	970	390	1160	1470	1410	1410	1470
900	1120	450	1340	1630	1590	1590	1630
1050	1280	510	1540	1800	1800	1800	1800
1200	1440	580	1730	1960	980	980	1960



(FOR DIMENSIONS SEE TABLE 1)
SCALE 1:20

TABLE 2

ITEM	NUMBER	DIAMETER	CUT LENGTH	CODE	SHAPE
A1	VARIES	Y8	600	60	
A2	4	Y12	VARIES	20	STRAIGHT
A3	VARIES	Y12	500	32	

NOTES:

1. INLET/OUTLET APPROACHES IN FILL CONDITION TO BE STONE RIPPED WHERE EROSION IS LIKELY TO OCCUR.
2. SPLITTER BLOCK MAY BE OMITTED IF DISCHARGE VELOCITY IS LESS THAN 1.50m/s AND PROVIDED AT OUTLETS ONLY.
3. CUT OFF WALLS MAY BE OMITTED IF STRUCTURE IS FOUNDED ON ROCK.
4. FOR MULTIPLE PIPE CULVERTS INCREASE DIMENSIONS "E" AND "F" BY $(n-1)(A+450)$ mm
WHERE n = NUMBER OF PIPES
WHERE A = NOMINAL DIAMETER OF PIPES
5. FOR SKEW PIPE CULVERTS THE HEADWALL SHALL BE PARALLEL TO THE CENTER LINE OF THE ROAD.
6. IF CORRUGATED METAL PIPES ARE USED 4 x 20mm x 150mm LONG GALVANISED ANCHOR BOLTS IN THE HOLLOW OF THE CORRUGATIONS ARE TO BE USED.
7. ALL CONCRETE TO BE 20MPa. MIN COVER TO STEEL IS 40mm UNLESS OTHERWISE STATED.
8. SQUARE MESH FABRIC (REFERENCE S.M.F 311) TO BE PLACED CENTRALLY
9. DIMENSIONS IN TABLE 1 AND 3 ARE AS PER MANUFACTURING STANDARD OF ROCLA PIPE CULVERT TYPE SC TO SABS .




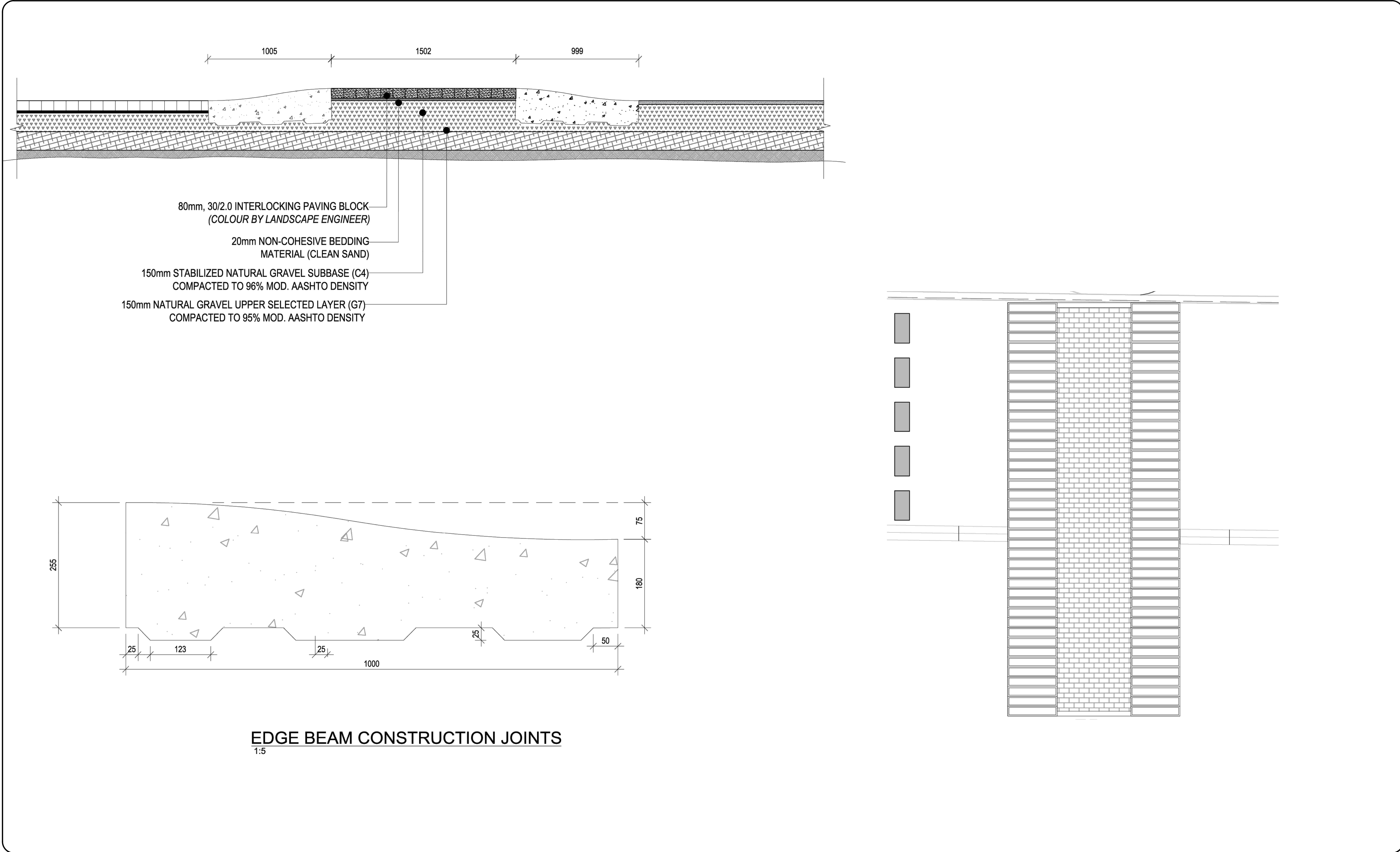
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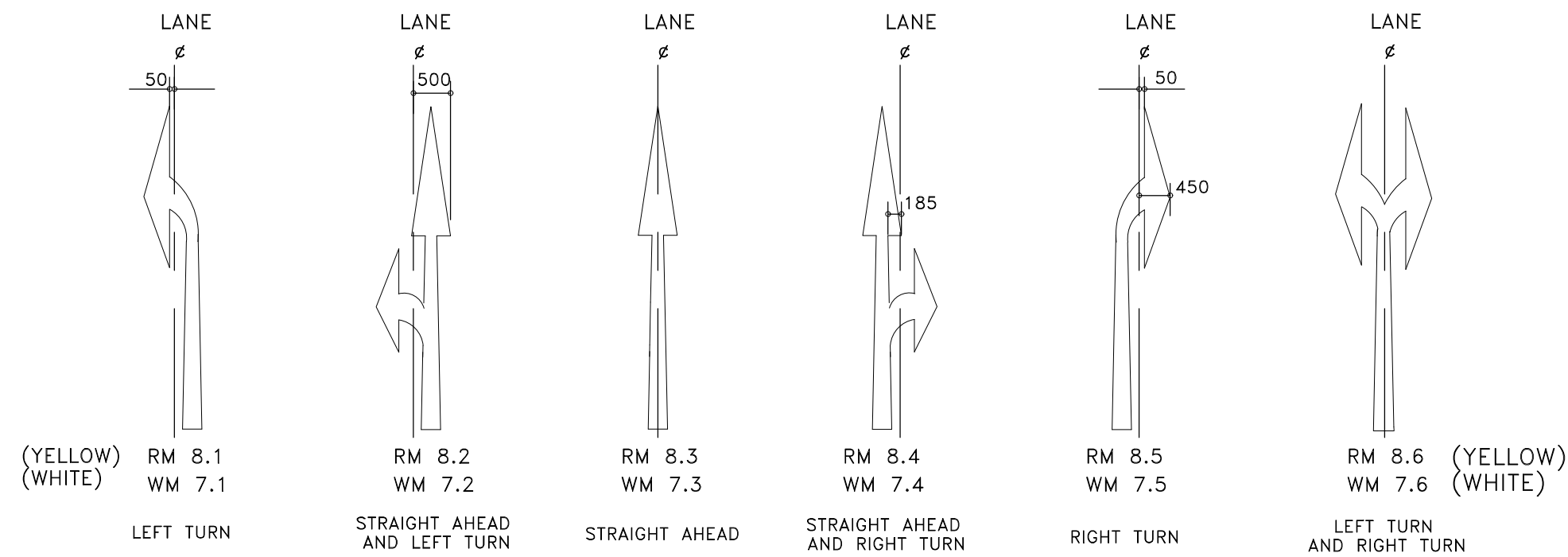
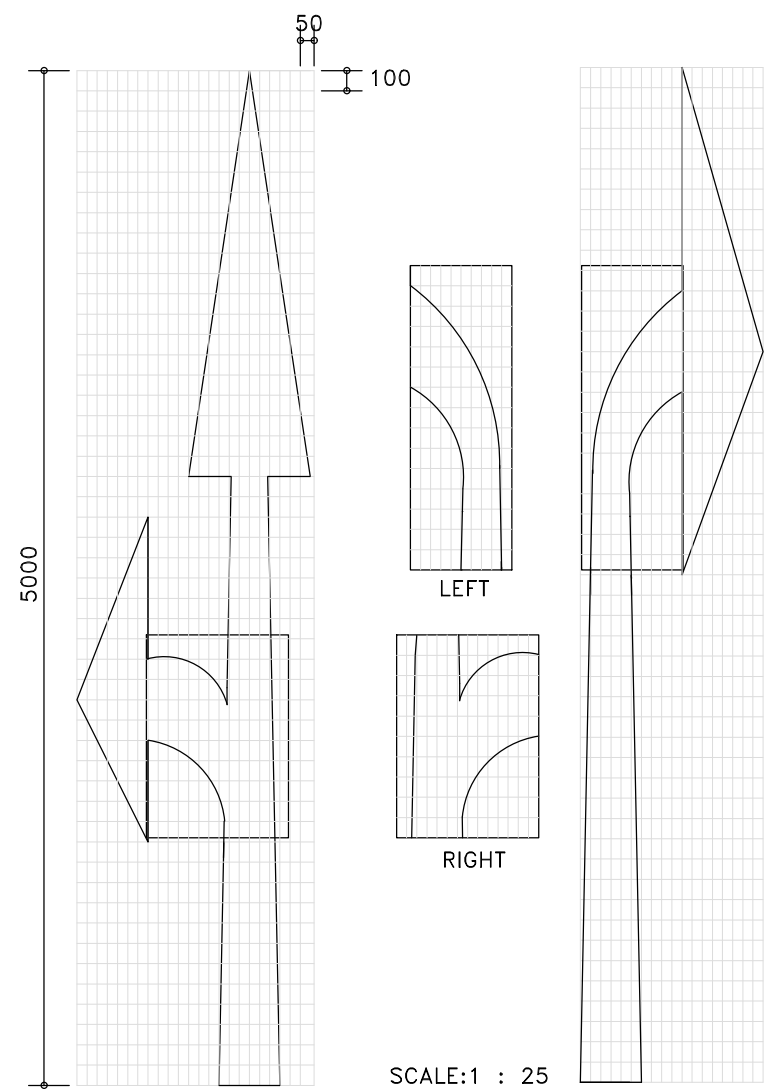


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A	AMENDMENTS		BY	APPROVED	DATE	APPROVED ON BEHALF OF THE CONSULTING ENGINEER	REFERENCE	BID NO: 24 of 2025		DESIGNED
	ISSUED FOR APPROVAL				09/2022	ENGINEER : <u>HULISANI OSOGOOD TSANWANI</u>		UPGRADING OF ROAD LEADING TO MAVHOYI COLLEGE		DRAWN
						REG. No. : <u>201370377</u>		HEADWALL AND BEDDING DETAILS		REVIEWED
						DATE : <u>31 OCTOBER 2013</u>		CONTRACT: _____ DATE: <u>January 2024</u>		DRAWING <u>ML/MK/STD-O6</u>
						SIGNATURE : _____		REVISION 		PROJECT ENGINEER



EDGE BEAM CONSTRUCTION JOINTS
1:5



APPLICATIONS
SCALE: 1:50

DIMENSIONS (mm)

Operating Speed km/h	Typical Applications	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r
30 – 40	City Centre	2500	600	350	450	884	200	417	1000	1700	250	550	1250	700	380	1450	58	30	29
50 – 90	Urban/Rural Expressways	4000	960	560	720	1406	320	666	1600	2720	400	880	2000	1120	608	2320	93	48	46
100 – 120	Rural and Freeways	5000	1200	700	900	1767	400	833	2000	3400	500	1100	2500	1400	760	2900	116	60	58
ALL	Special Applications	7500	1800	1050	1350	2651	600	1250	3000	5100	750	1650	3750	2100	1140	4350	174	90	87

All Operating Speeds and Applications	N	O	P	Q	R	S	T
	210	180	350	300	500	400	600

ARROW AREA / (m ²)				
a	RM8.1/RM8.3 WM7.1/WM7.2/WM7.3	RM8.2/RM8.4 WM7.2/WM7.3	RM8.5 WM7.3	RM8.6 WM7.6
2500	0.67	0.89	0.66	1.03
4000	1.14	1.43	1.06	1.68
5000	1.45	1.78	1.32	2.12
7500	2.23	2.66	1.98	3.20

NOTES: (MANDATORY DIRECTION ARROWS)

- THESE ARROWS MAY BE USED IN LANES TO INDICATE THAT DRIVERS SHALL PROCEED ONLY IN THE DIRECTION OR DIRECTIONS SHOWN. THEY SHOULD ONLY BE USED IF THE JUNCTION CONCERNED REQUIRED TURNING MOVEMENT CONTROL BY LANE.
- THE FINAL ARROW NEAREST THE POINT OF TURN OR STRAIGHT ON MOVEMENT SHALL BE YELLOW. ANY ARROWS MARKED IN ADVANCE OF THIS POINT TO WARN DRIVERS OF THE MANDATORY MOVEMENT AHEAD SHALL BE WHITE.
- A MANDATORY OR WARNING DIRECTION ARROW SHALL NOT BE USED IN ADVANCE OF A WIDENING OF THE ROADWAY TO A GREATER NUMBER OF LANES. THIS SHALL BE INDICATED IF NECESSARY, BY USING FURCATION ARROWS.

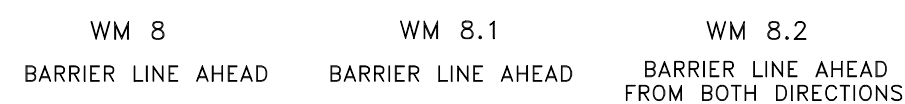
MANDATORY DIRECTION ARROWS

LEGEND:	
R = RED	
W = WHITE	
Y = YELLOW	

DIMENSIONS (mm)

Typical Applications	a	b	c	d	e	f	g	h	r	r*
Urban	3000	1941	83	976	1741	528	731	1206	5620	5820
Rural	4000	2588	111	1301	2321	704	975	1608	9900	10000

All Applications	H	I	J	K	L	M
	735	260	181	219	75	100 or 150



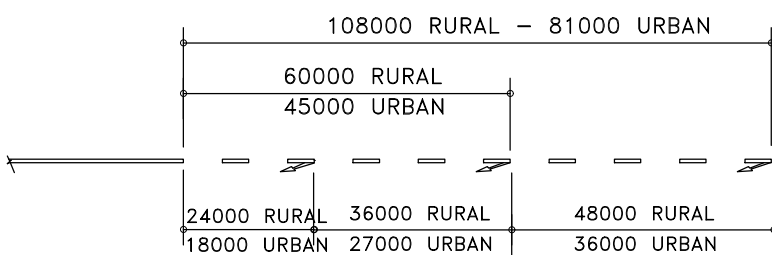
APPLICATIONS
SCALE 1 : 50

NOTES: (BARRIER LINE AHEAD ARROWS)

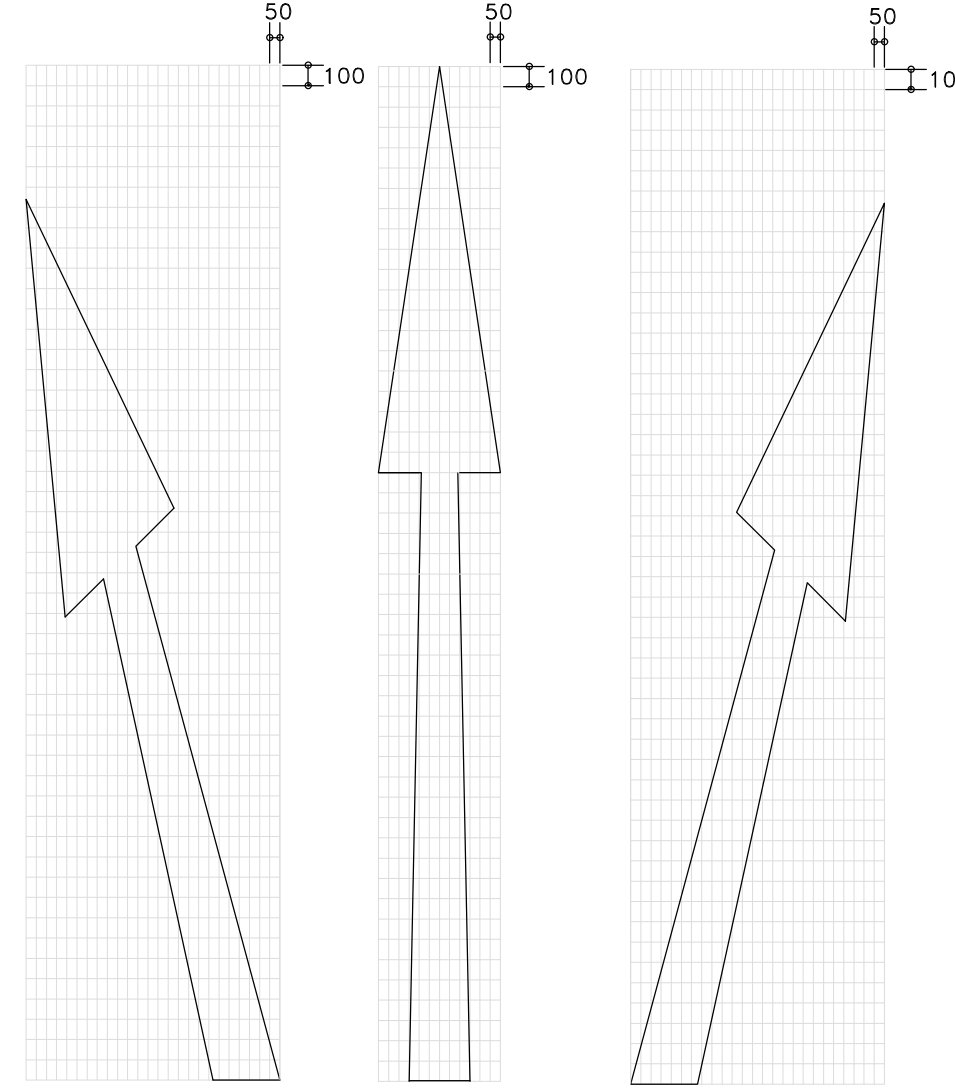
- THESE ARROWS SHOULD BE USED IN MULTIPLES OF THREE (AT LEAST) IN ADVANCE OF THE START OF A SECTION OF NO OVERTAKING LINE, NO CROSSING LINE OR PAINTED ISLAND WHEN SUCH BARRIER LINES REPLACE A DIVIDING LINE.
- THE ARROWS MAY BE MARKED ON TOP OF EXISTING DIVIDING LINE MARKINGS (IF THE EXISTING LINE IS A CENTRE LINE TO A 12m OR 7.2m MODULE THE POINT OF THE ARROW SHOULD BE LINED UP WITH THE FORWARD END OF THE LINE).
- WHEN OVERTAKING SECTIONS ARE REGULARLY INTERSPERSED WITH NO OVERTAKING SECTIONS AND ARE SHORT IN LENGTH MARKING WM 8.2 MAY BE USED AT THE CENTRE OF THE OVERTAKING SECTION.

ARROW AREA / (m ²)	
a	Per Arrow
3000	0.62
4000	0.82

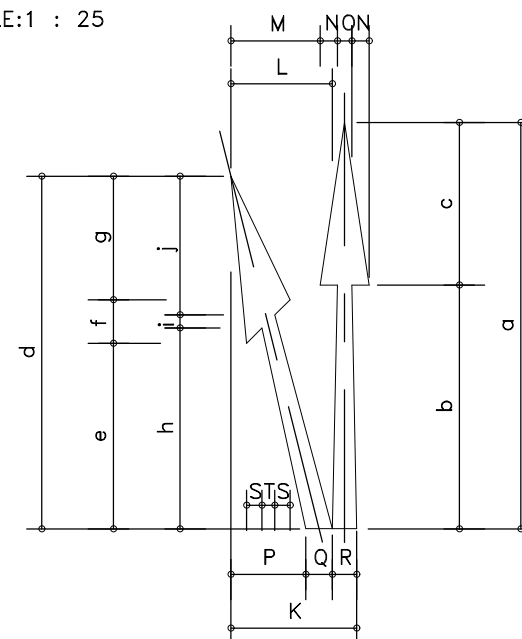
BARRIER LINE AHEAD ARROWS



MARKING SPACING



SCALE: 1 : 25

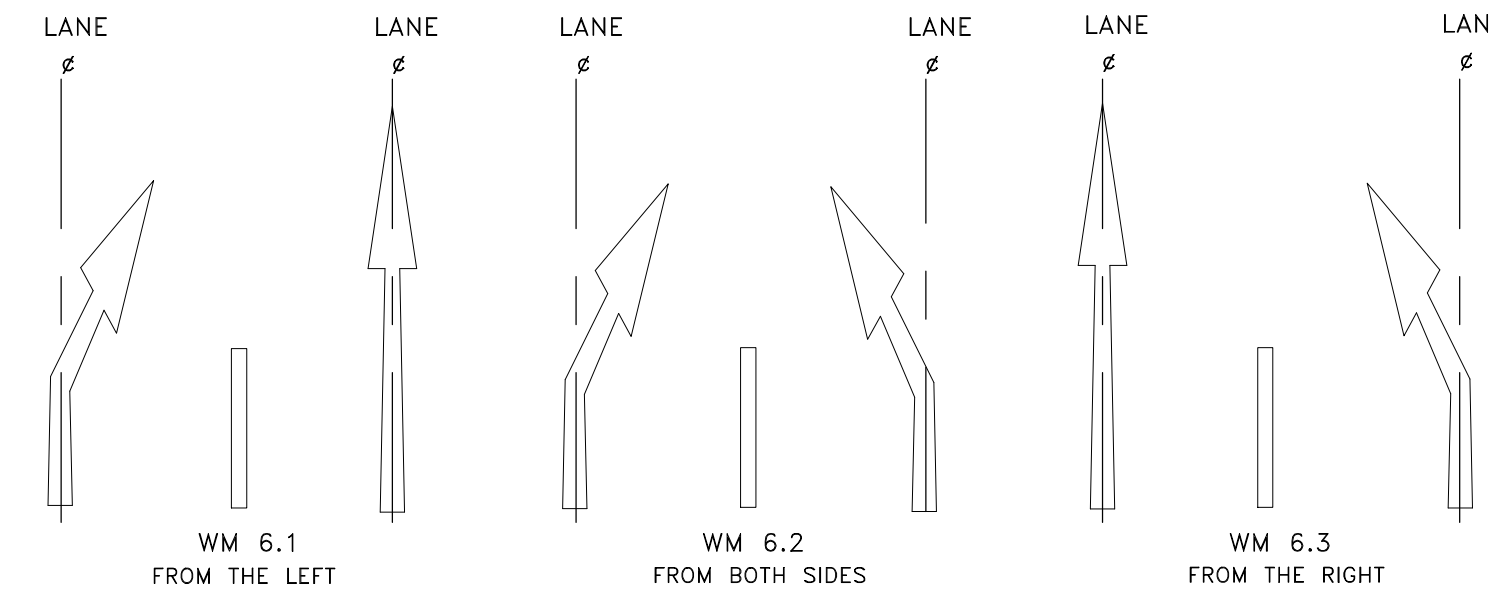


NOTES: (FURCATION ARROWS)

- THESE ARROWS MAY BE USED TO INDICATE THAT THE NUMBER OF LANES IS INCREASING AHEAD. ONLY ONE SET OF ARROWS SHOULD BE USED UNLESS A LEFT AND RIGHT TURN LANE ARE ADDED TO A MULTI-LANE ROADWAY AT THE SAME POINT WHERE TWO SETS MAY BE USED.
- DIRECTION ARROWS AHEAD SHALL NOT BE USED TO INDICATE THE ADDITION OF LANES AHEAD.
- AS A GENERAL RULE BIFURCATION ARROWS SHOULD BE LOCATED TWO TO THREE MARKING MODULES BEFORE THE START OF THE LANE GENERATING TAPER OR CURVE.

ARROW AREA / (m ²)			
a	GM3.1/GM3.3	GM3.2	GM3.4
2500	1.30	1.27	1.93
4000	2.07	2.04	3.09
5000	2.59	2.55	3.87
7500	3.89	3.82	5.80

FURCATION ARROWS



APPLICATIONS
SCALE 1 : 50

DIMENSIONS (mm)

Operating Speed km/h	Typical Applications	a	b	c	d	e	f	g	h	i	j	k
30 – 40	City Centre	4000	2400	1600	3200	1271	847	227	855	1696	1277	1126
50 – 60	Urban Roads	5000	3000	2000	4000	1589	1058	284	1069	2120	1596	1407
70 – 90	Urban Arterial Roads/ Rural Expressways	5000	4500	3000	6000	2384	1587	426	1603	3180	2394	2111
100 – 120	Rural Roads and Freeways	7500	6000	4000	8000	3814	2539	681	2566	5089	3830	3377

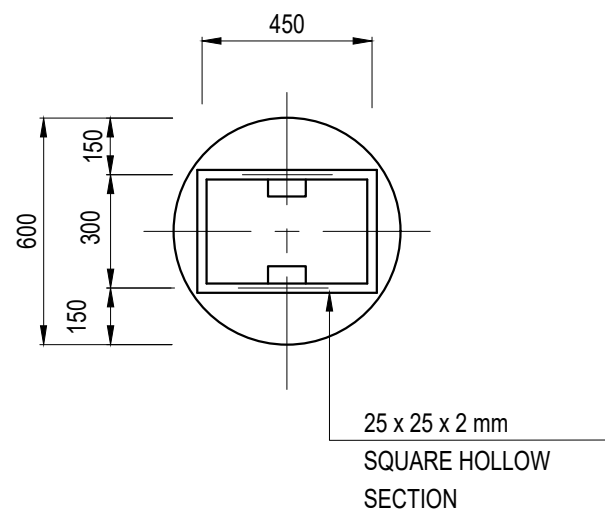
All Operating Speeds and Applications	M	N	O	P	Q	R	S	T	U	V
	300	210	180	1300	898	402	155	370	32	390

NOTES: (LANE REDUCTION ARROWS)

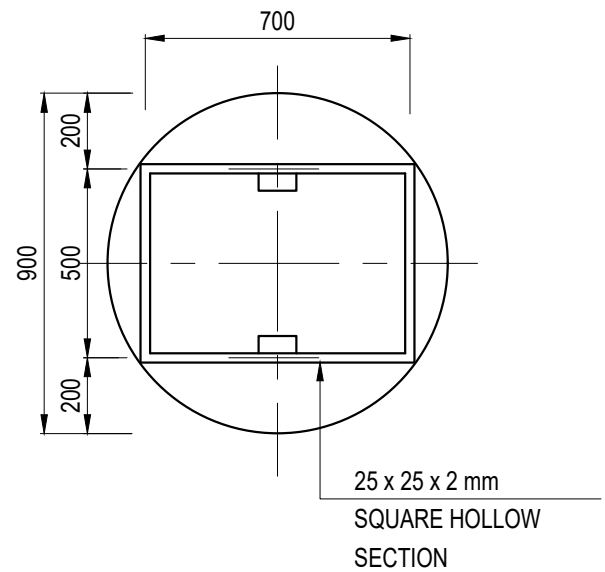
- IT IS RECOMMENDED THAT THREE SETS OF ARROWS BE USED ON HIGH SPEED ROADS, SPACED AT FOUR MODULE INTERVALS BEFORE THE END OF THE LANE LINE. SINGLE ARROWS SETS MAY BE USED ON LOWER SPEED ROADS.
- THE BENT ARROWS MAY BE USED IN ADDITION TO THE THREE-ARROW SETS ALONG THE LENGTH OF THE LANE REDUCTION TAPER.

ARROW AREA / (m ²)		
a	WM6.1/WM6.3	WM6.2
4000	2.08	2.06
5000	2.61	2.58
7500	3.92	3.88
12000	6.56	6.20

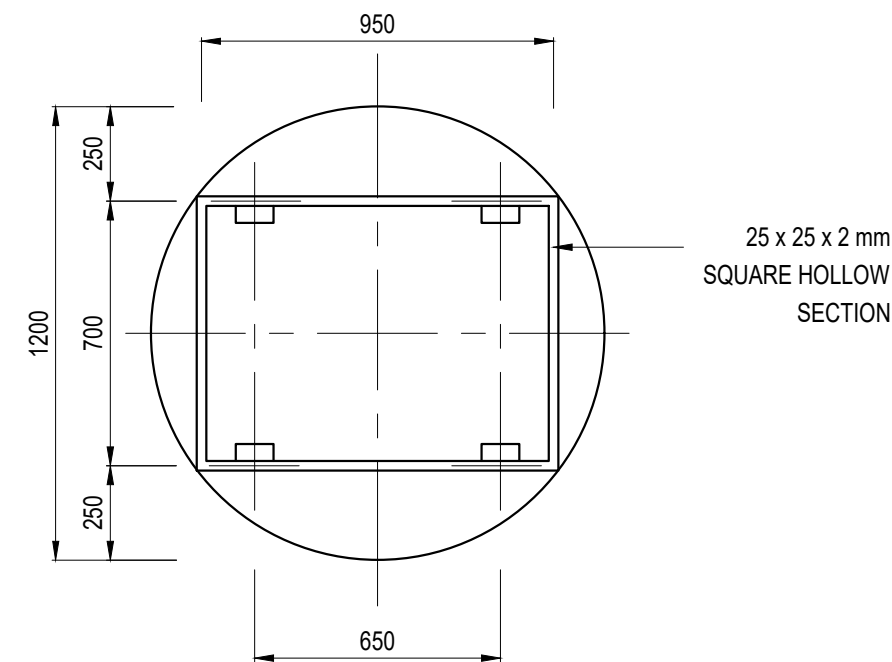
LANE REDUCTION ARROWS



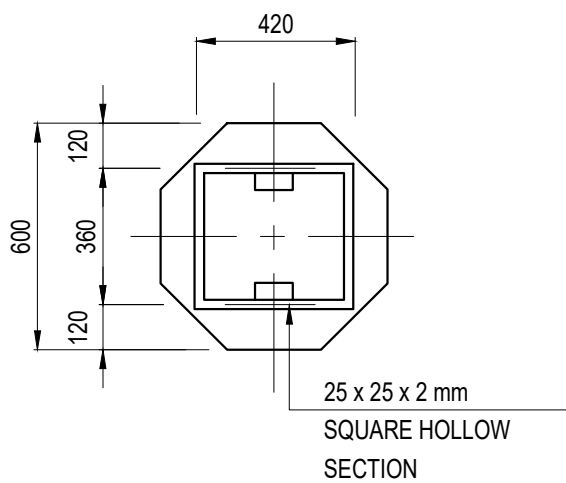
SINGLE SUPPORT



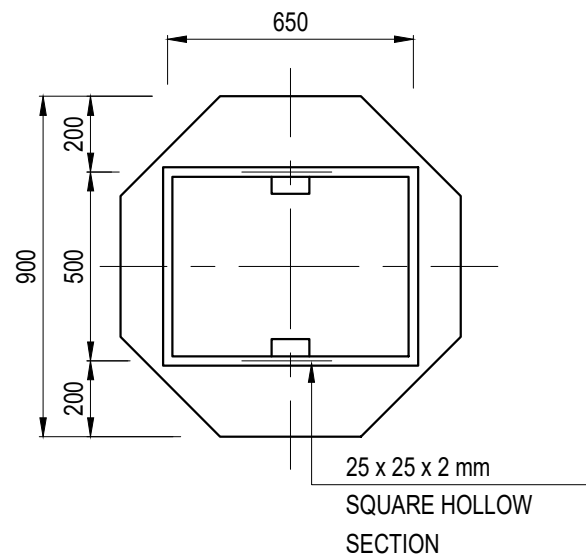
SINGLE SUPPORT
REINFORCEMENT FOR CIRCULAR ROAD SIGNS



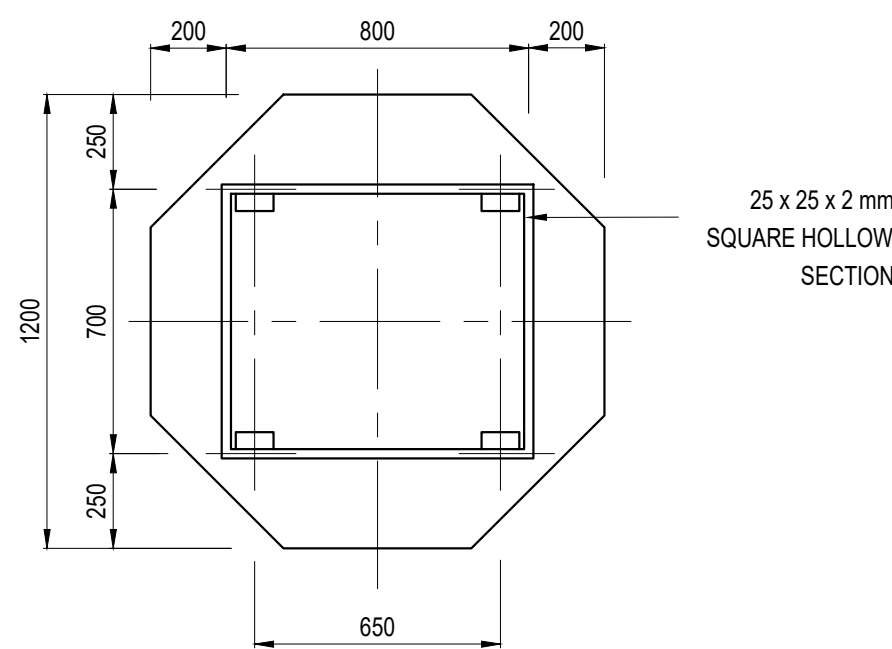
DOUBLE SUPPORT



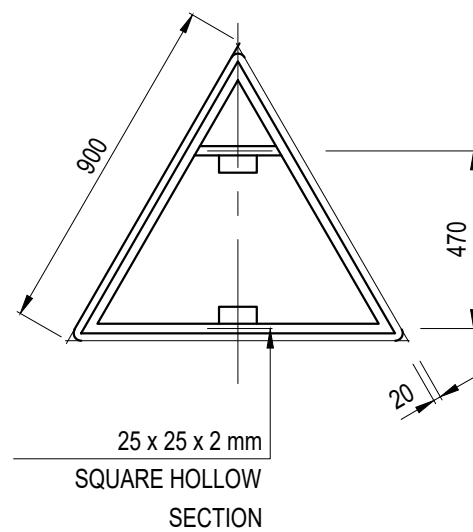
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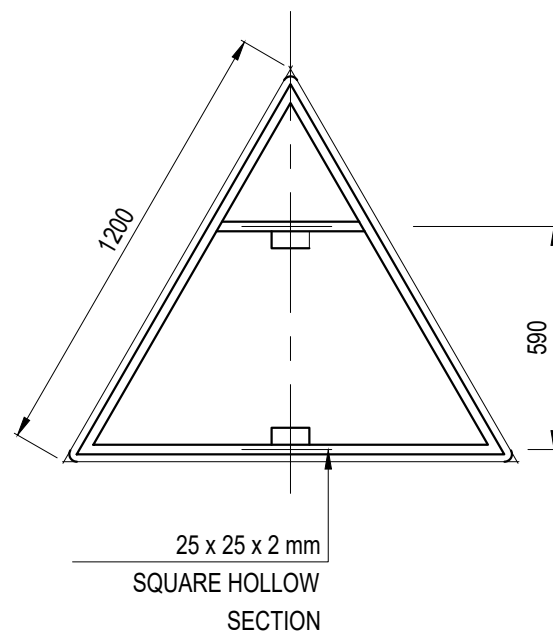
SINGLE SUPPORT
REINFORCEMENT FOR STOP SIGNS



DOUBLE SUPPORT

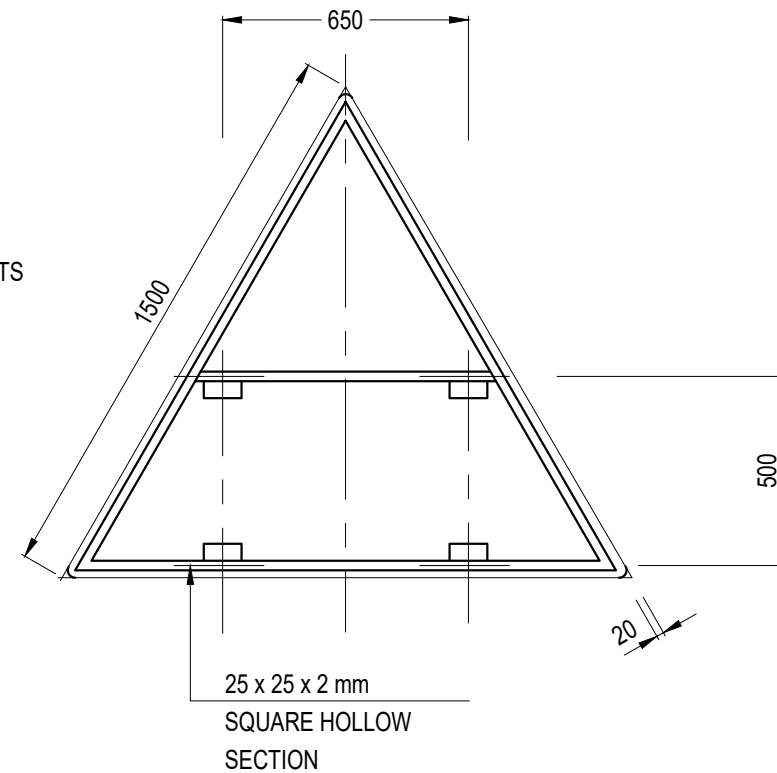


SINGLE SUPPORT



SINGLE SUPPORT

NOTE:
MINIMUM SIZE FOR
ERECTION BRACKETS
ON R/W SIGNS :
L 45 x 45 x 6
LENGTH : 100mm



DOUBLE SUPPORT

REINFORCEMENT FOR TRIANGULAR ROAD SIGNS

MINIMUM REGULATORY SIGN SIZES			
	OPERATING SPEED (km/h)		
	100 - 120	70 - 90	60
CIRCULAR SIGN DIAMETER (mm)	1200	900	600
RECTANGULAR SIGN WxH (mm)	1200 x 900	900 x 675	600 x 450
TRIANGULAR SIGN SIDE LENGTH (mm)	1500	1200	900

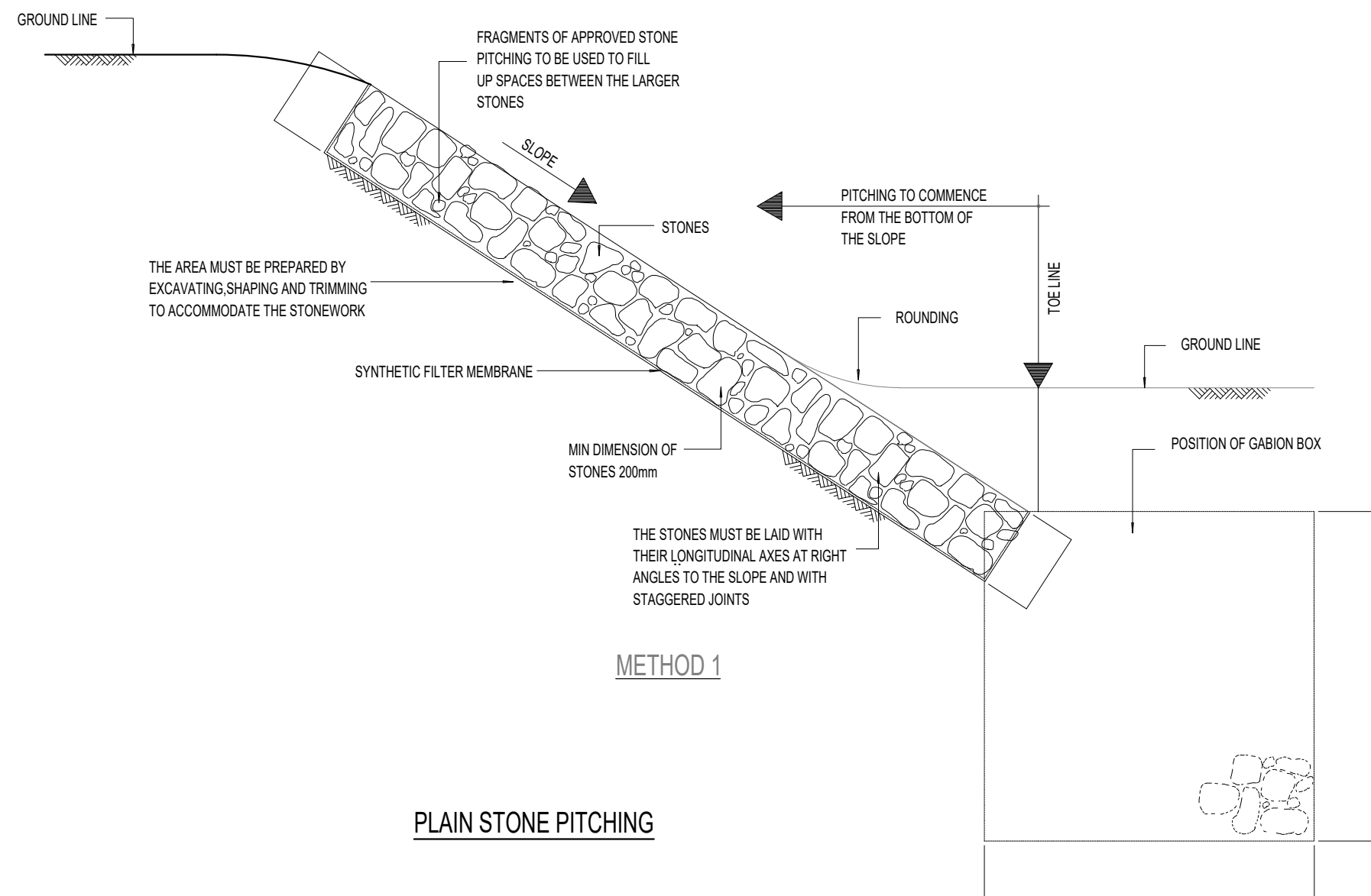
ADVANCE WARNING SIGN LOCATION AND SIZE		
OPERATING SPEED (km/h)	LOCATION (DISTANCE FROM HAZARD) (m)	SIZE (mm)
120	330	1500
100	240	1500
80	160	1200
60	120	900

NOTES :

THE ROAD SIGN FACES SHALL BE MANUFACTURED AND ERECTED IN ACCORDANCE
WITH THE FOLLOWING REQUIREMENTS :

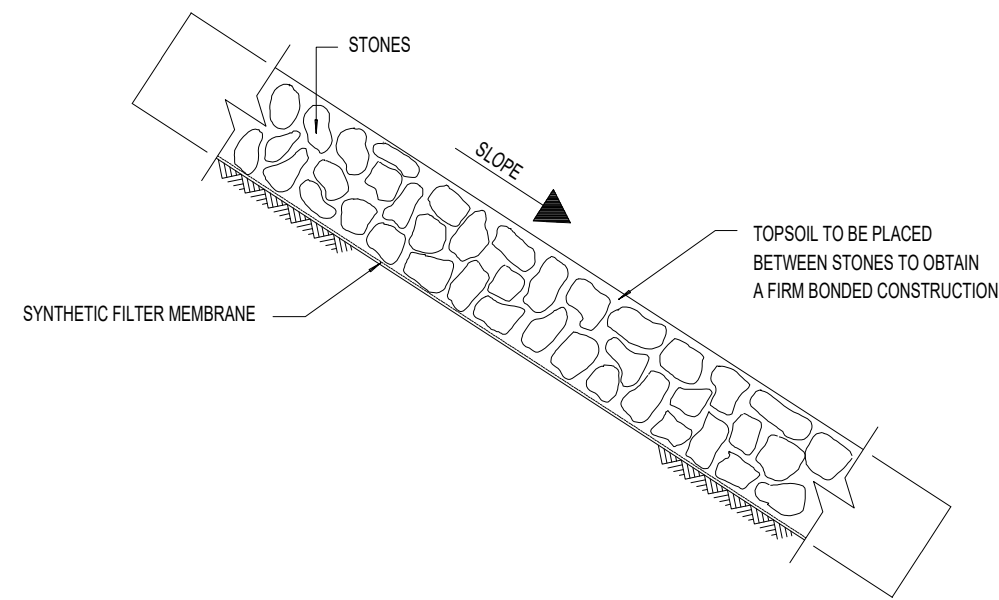
- DETAILS ON THIS DRAWING ARE APPLICABLE TO ROAD SIGNS
SMALLER THAN 1.5m² REQUIRING DOUBLE / SINGLE SUPPORTS.
- STRUCTURAL STEEL SECTIONS SHALL BE MILD STEEL CONFORMING TO THE
REQUIREMENTS OF SANS 1431, GRADE 300W. RECTANGULAR HOLLOW SECTION
AND SPECIAL CHANNEL PROFILES MAY BE COLD FORMED OF COMMERCIAL
QUALITY MILD STEEL. ALL SECTIONS SHALL BE HOT-DIP GALVANISED IN
ACCORDANCE WITH THE REQUIREMENTS OF SANS 121 : 2000 (ISO 1461 : 1999).

STONE PITCHING



PLAIN STONE PITCHING

METHOD 1

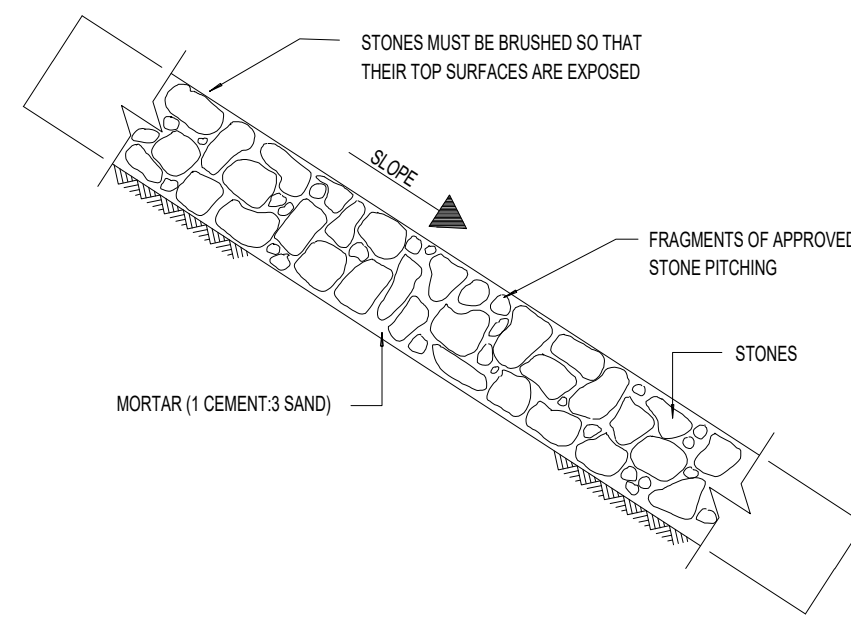


METHOD 2

NOTES:

THE TECHNIQUE AND REQUIREMENTS LAID DOWN IN METHOD 1 SHALL APPLY WITH THE FOLLOWING EXCEPTIONS:

1. NO SMALL STONES SHALL BE USED TO FILL THE SPACES BETWEEN THE LARGER STONES.
2. TOPSOIL SHALL BE INTRODUCED BETWEEN INDIVIDUAL STONES SIMULTANEOUSLY WITH PLACING OF STONES.
3. ROOTED GRASS OR GRASS TUFTS SHALL THEN BE PLACED IN THE TOPSOIL.

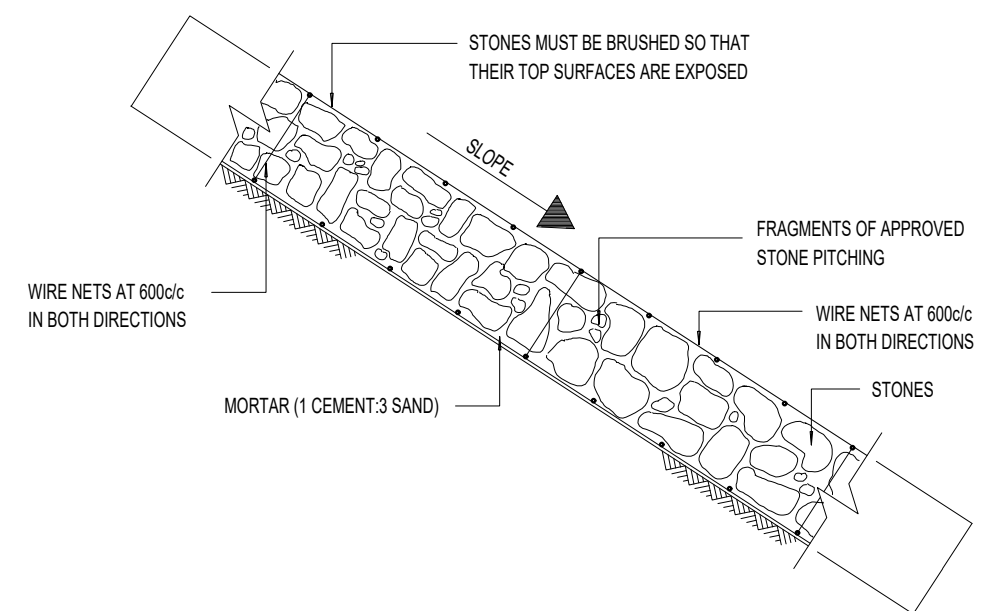


GROUTED STONE PITCHING

NOTES:

THE TECHNIQUE AND REQUIREMENTS LAID DOWN IN METHOD 1 SHALL APPLY WITH THE FOLLOWING EXCEPTION:

1. THE SPACES BETWEEN THE STONES SHALL BE FILLED WITH MORTAR.



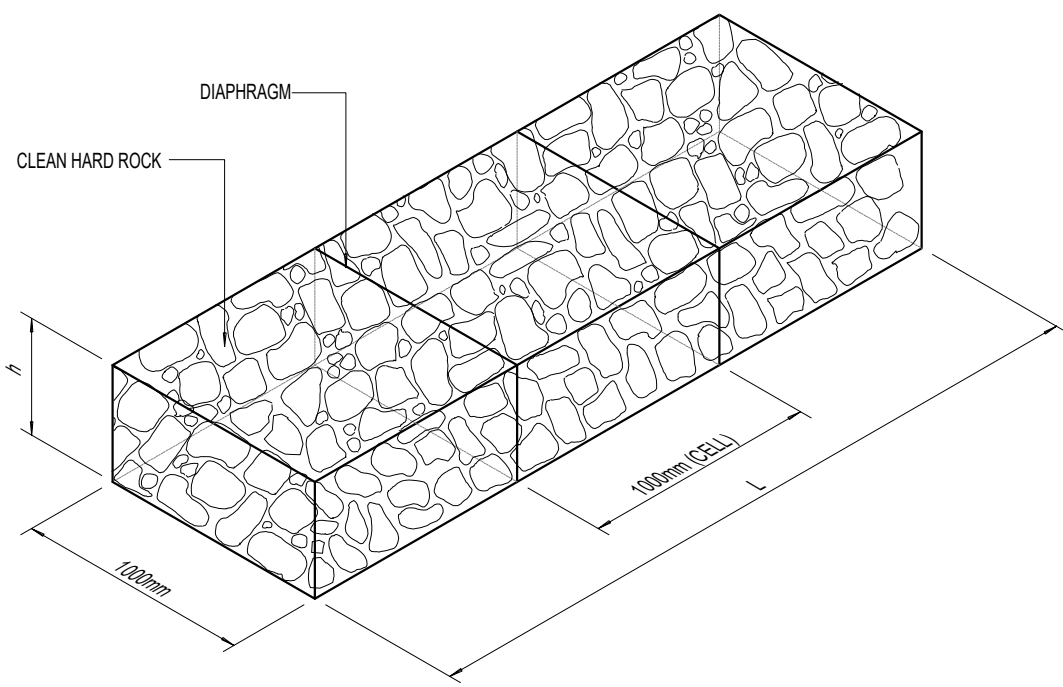
WIRE AND GROUTED STONE PITCHING

NOTES:

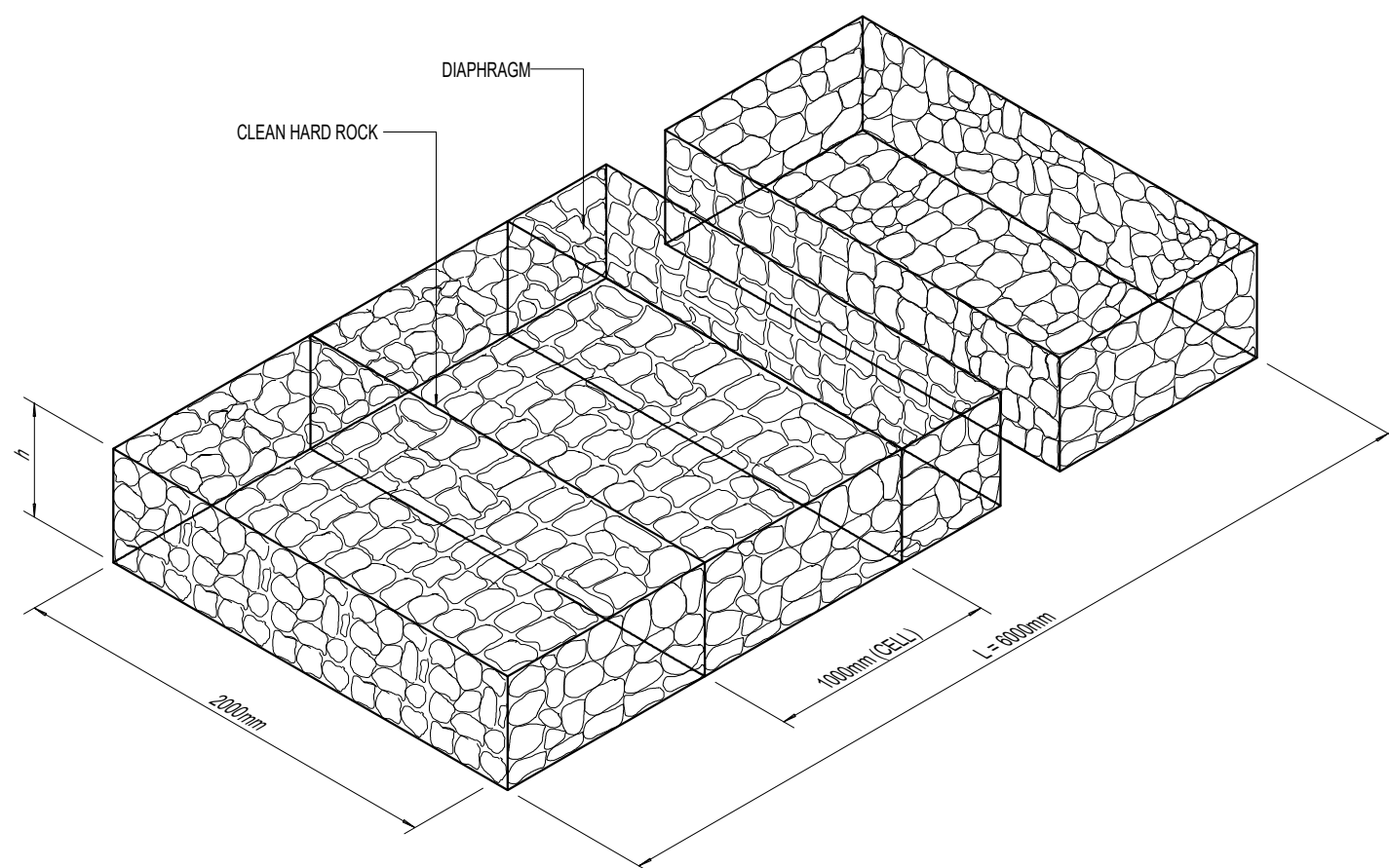
THE TECHNIQUE AND REQUIREMENTS LAID DOWN IN METHOD 1 SHALL APPLY WITH THE FOLLOWING EXCEPTIONS:

1. PITCHING IN ACCORDANCE WITH GROUTED STONE PITCHING.
2. CONSTRUCTION SHALL BE AS FOLLOWS:
 - a) PLACING OF BOTTOM WIRE NET.
 - b) ATTACHING OF WIRE TIES TO BOTTOM MESH.
 - c) PITCHING.
 - d) PLACING THE TOP WIRE NET AND FASTENING WIRE TIES.
 - e) GROUTING.

GABIONS



BOXES



MATTRESSES

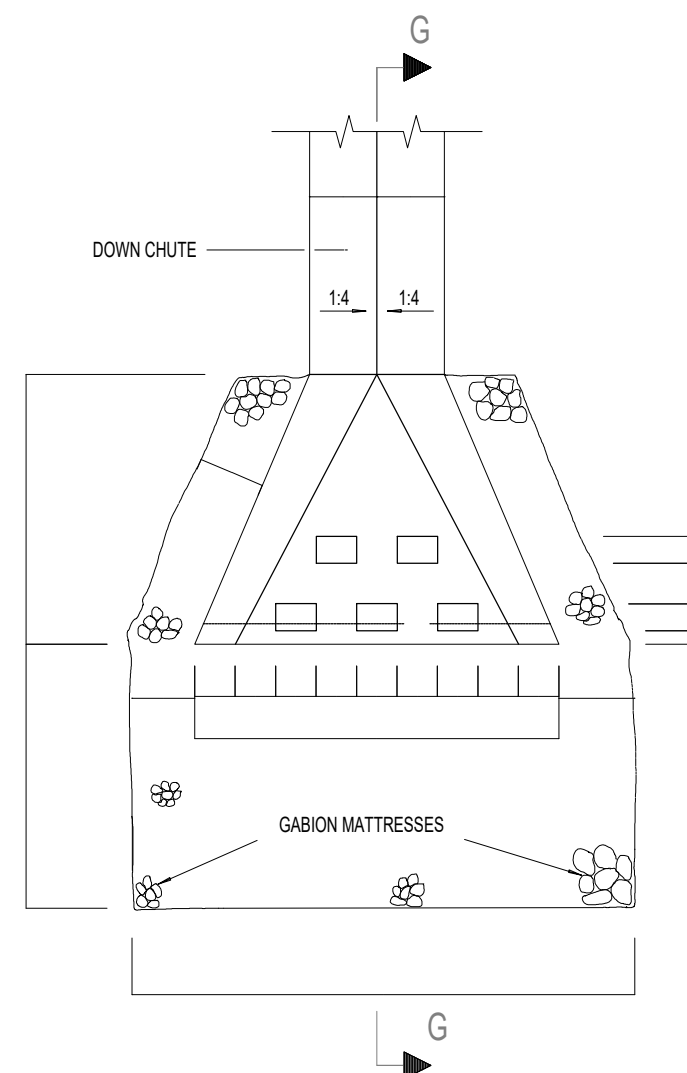
STANDARD SIZES OF BOXES	
LENGTH	1000mm, 2000mm, 3000mm, 4000mm
WIDTH	1000mm
DEPTH	500mm, 1000mm
DIAPHRAGM SPACING	1000mm

MESH SIZE AND WIRE DIAMETER FOR CAGES		
DEPTH OF GABION	MESH SIZE (mm)	WIRE DIA. (mm)
500mm AND OVER	80 x 100	2.7
200mm TO 300mm	80 x 100	2.5

ROCK USED FOR THE FILLING OF CAGES		
DEPTH OF CAGES	ROCK SIZE (DIMENSIONS)	
	MIN. (mm)	MAX. (mm)
230	100	125
300	100	200
500	100	250
1000	100	300

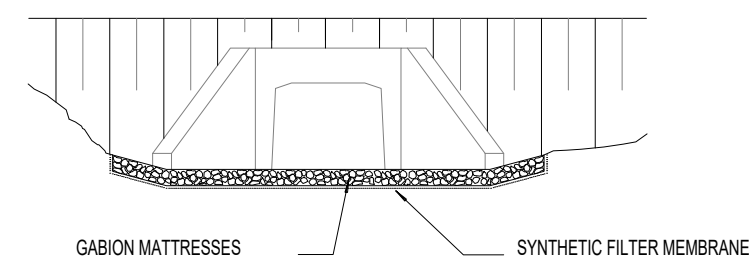
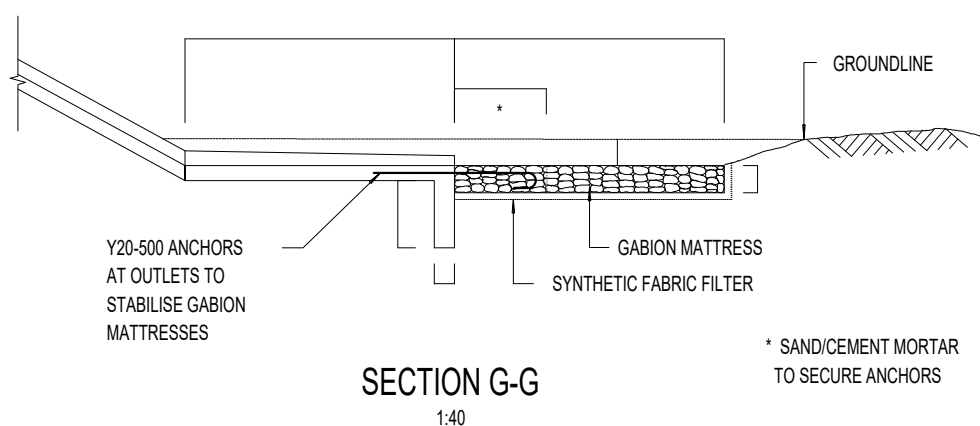


STANDARD SIZES	
LENGTH	6000mm
WIDTH	2000mm
DEPTH	170mm, 230mm, 300mm

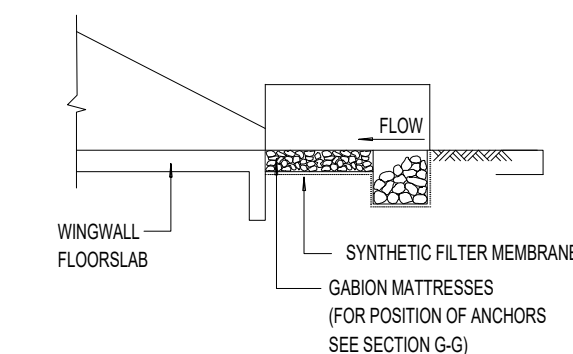


PLAN OF DOWN CHUTE AND ENERGY BREAKER

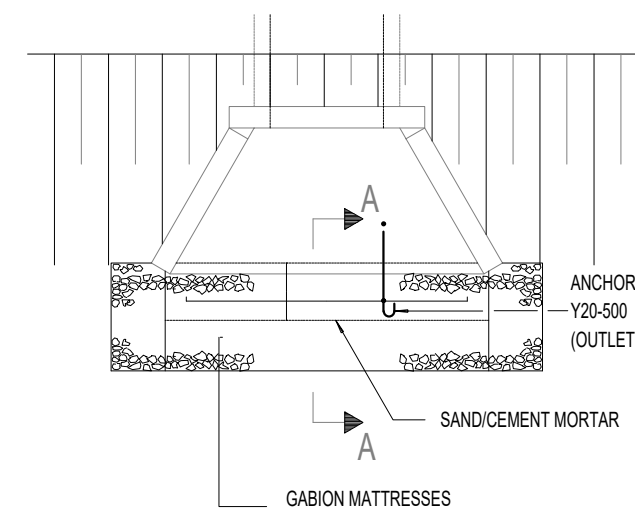
SECTION G-G



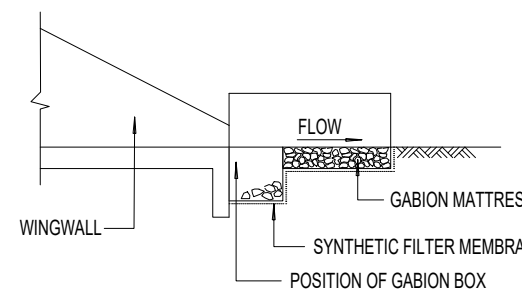
ELEVATION OF INLET/OUTLET



SECTION A-A (INLET)

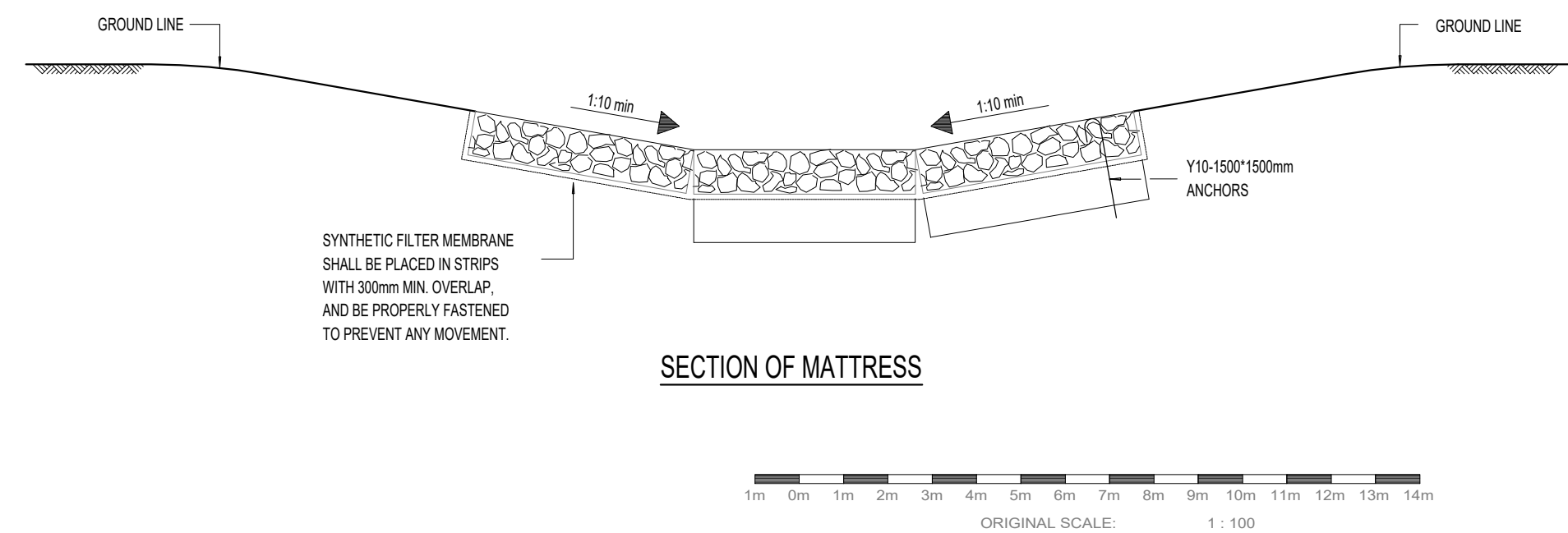


PLAN OF INLET/OUTLET



SECTION A-A (OUTLET)

DETAIL OF GABION MATTRESSES AND BOXES AT INLETS AND OUTLETS



SECTION OF MATTRESS