THULAMELA LOCAL MUNICIPALITY

RECONSTRUCTION OF ITSANI TO SHAYANDIMA ROAD IN THULAMELA LOCAL MUNICIPALITY

BID NUMBER:43/2026/2027

CIDB GRADING: 6CE OR HIGHER

THULAMELA LOCAL MUNICIPALITY Contact Person: Mr. TP Mudzili Tel: (015) 962 7629/ Ms. F Sikhipha Tel: (015) 962 7631		**CONSULTANTS PRINCIPAL AGENT** Contact Person: Mr. MI Makwala Tel: (087) 093 2039	
Name of Bidder:			
Bid Amount (VAT Incl.):			
Bidder Address:			
Receipt Number:			
Email Address:			
Contact numbers:	**Tel:**	**Cell:**	**Fax:**
		EXPANDED PUBLIC WORKS PROGRAMME Creating opportunities towards human fulfilment	

CONTENTS

THE TENDER

PART T1: TENDERING PROCEDURES

T1.1 Tender Notice and Invitation to Tender (White pages)..... T.1

T1.2 Tender Data (Pink pages) T.8

PART T2: RETURNABLE DOCUMENTS

T2.1 List of Returnable Schedules (Yellow pages) T.28

T2.2 Other Documents required for Tender Evaluation (Yellow pages) T.62

T2.3 Returnable Schedules that will be Incorporated into the Contract (Yellow pages) T.86

THE CONTRACT

PART C1: AGREEMENT AND CONTRACT DATA

C1.1 Form of Offer and Acceptance (White pages) C.1

C1.2 Performance Guarantee (White pages).....C.8

C1.3 Contract Data (White pages) C.11

C1.4 Performance Guarantee for Materials and Equipment Not Yet Built into the works (White pages) C.26

C1.5 Retention Money Guarantee (White pages) C.29

C1.6 AGREEMENT IN TERMS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT 85 of 1993 AND APPOINTMENT AS MINE MANAGER IN TERMS OF SECTION 3(1)(a) OF MINE HEALTH AND SAFETY ACT 29 of 1996. .....C.31

C1.7 ABSTRACTS OF THE MINE HEALTH AND SAFETY ACT No. 29 OF 1996 AND AMENDMENT ACT No. 72 OF 1997 .....C.38

C1.8 Agreement with Adjudicator (White pages).....C.39

EXPANDED PUBLIC WORKS PROGRAMME

PART C2: PRICING DATA

C2.1 Pricing Instructions (Yellow pages)……C.41
C2.2 Bills of Quantities (Yellow pages) C.46

PART C3: SCOPE OF WORK (Back to Back pages)

C3.1 Description of Works (Blue pages) C.67
C3.2 Engineering (Blue pages) C.74
C3.3 Procurement (Blue pages).....C.75
C3.4 Construction (Blue pages) C.81
C3.5 Management (Blue pages) C.200

PART C4: SITE INFORMATION

C4.1 Site Information (Green pages) C.201
C4.2 Locality Plan (Green pages) C.204

PART C5: ANNEXURES

C5.1 : Proforma Documents (White Pages) C.205
C5.4 : Contract Drawings (White Pages) C.212

EXPANDED PUBLIC WORKS PROGRAMME

THE TENDER

PART T1: TENDERING PROCEDURES

PART T2: RETURNABLE DOCUMENTS

EXPANDED PUBLIC WORKS PROGRAMME

PART T1: TENDERING PROCEDURES

T1.1 TENDER NOTICE AND INVITATION TO TENDER..... T.3
T1.2 TENDER DATA T.8

EXPANDED PUBLIC WORKS PROGRAMME

THULAMELA LOCAL MUNICIPALITY

INVITATION TO BID

Thulamela Local Municipality is inviting capable service providers for the

Bid number	Project Description	Contact Persons	CIDB Grading	Compulsory Briefing	Evaluation Criteria
No. 43/2026/2027	Reconstruction of Itsani to Shayandima Road	Ms. F Sikhipha (015) 962 7631 Mr. TP Mudzili (015) 962 7629 Mr. MI Makwala (087)093 2039	6CE or Higher	Location: Tshisahulu Global filling station Junction Co-Ordinates (23°0'20.68"S 30°24'16.43"E) Date:18/11/2026 Time: 11H00	Functionality and 80/20 Preference points system.

Tender documents are obtainable from Procurement Office, Office No. 02 at Thulamela Local Municipality Head Office, during the following times: 08:00 to 15:30 (Monday to Friday) as from **06 November 2026 to 11 December 2026 at a non-refundable bid price of R4.00 per page**. or can alternatively be downloaded from Thulamela website **(www.thulamela.gov.za)** for free. The bidders should also download SCM forms that are found in the Documents SCM-FORMS folder on the website and complete as part of the Bid documents.

The service providers must submit the completed Bid documents (in black ink) and hand deliver or courier them to Thulamela Municipality. All completed Bid documents (hand delivered or couriered) must be dropped in the BID BOX before the closing date and time of the Bids closure. The onus is on the service providers to make sure the Bid documents are submitted on time and late submission won't be accepted. Interested service providers must attend a compulsory briefing session.

EXPANDED PUBLIC WORKS PROGRAMME

Interested Contractors and/or service providers will be expected to submit the Bid documents with the following compulsory requirements.

- **Tax Compliance Status Letter or Tax Compliance Pin Number**
- **Company registration documents (e.g. CK)**
- **Company profile**
- **Valid proof of registration with CIDB**
- **Proof of registration on CSD**
- **Compensation fund registration in good standing COIDA**
- **Curriculum vitae of the proposed project team**
- **Organogram of the project team indicating project key personnel**
- **If the company is required by law to be audited, we need audited annual financial statements for the recent past three (3) years or audited financial statements since the establishment of the company if the company was established during the past three (3) years. If the company is not required by law to be audited, please provide us with a letter for from a registered accountant stating that the past recent 3years were not required to be audited and the reasons thereof.**
- **Certified copy of partnership or JV agreement (if tenderer is a partnership or JV)**
- **Bidders must submit proof that municipal rates and taxes for both the company and its director(s) are not in arrears for more than three (3) months, and such proof must not be older than three (3) months from the closing date of advertisement. Where the business operates from leased premises, a valid lease agreement must be attached. Where a director does not own property or is renting, a valid lease agreement must also be provided. If the bidder resides or operates in an area where municipal services are not billed, an official signed and stamped letter from the relevant local municipality, not older than three (3) months from the closing date of advertisement, must be submitted confirming that the area is not subject to municipal billing and that the bidder is formally exempted from municipal service charges.**

- **List of Roads and Stormwater Construction projects completed by the contractor in the past 10 years with clients contact details, description, and contract values. NB: Only projects that were completed within the municipal environment (RAL, SANRAL and GOVERNMENT INSTITUTION OR PARASTATALS) (Attach signed appointment letters, completion certificates and reference letters) NB: The municipality reserves the right to conduct verification with the referred clients of the similar completed projects.**

- **All records of any additional information posted should be submitted as compulsory requirements and it is the responsibility of the bidders to check with the respective project engineer or client representatives (contact details as provided above) if there are any additional information before submission of the tender documents.**

Tenderers should note the following: Functionality will be scored out of **100% and the minimum threshold to qualify is 70%.** Tenderers who fail to meet the minimum threshold will not be considered for further evaluation.

The submitted tender document must contain all pages, as indicated, in specified colour, page sequence (incl. double sided) and binding method. The binding method must be stapled or hole punched plus an adhesive tape binding.

	TARGETED GOALS:	WEIGHT
Points for functionality	Experience in Road and Stormwater Construction Projects: (Demonstrate company experience in roads and stormwater construction project and past performance). Project Programme and Schedule of estimated monthly expenditure	**40**
	Key staff – Demonstrate experience and qualifications.	**20**
	Proof of plant and equipment owned by the bidder: Details of major equipment owned (please provide proof of ownership). NB: Proof of registration certificate and valid licence disk will serve as proof of ownership. An Invoice/bank letter will serve as a proof of ownership for plant such as track excavator, smooth drum roller and grid roller.	**20**
	Financial Reference.	**20**
TOTAL		**100**

Bids will be assessed under the provisions of the following Acts and its Regulations: Municipal Finance Management Act, (Act 56 of 2003); PPPFA, Supply Chain Management Policy of the municipality in accordance with the specifications and in terms of **80/20 preferential points system and functionality as per the advert and bid document.**

Specific Goals Categories (CSD will be used for verification)	Number of Points (80/20 system) 20 Points breakdown
1. 100% Black ownership	**10**
2. 100% Women ownership	**5**
3. Youth	**3**
4. Disability (Medical certificate will be used to verify the disability status of the bidder).	**2**

Sealed bid documents must be submitted in envelopes clearly indicating "**BID NUMBER AND DESCRIPTION"** on the outside and must reach the undersigned by depositing it into the official Bid Box at the front of the main entrance to **Thohoyandou Civic Centre, Old Agriven Building, Thohoyandou, by no later than 11h00 on, 11 December 2026.**

The Municipality is not bound to accept the lowest 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 the submission thereof.

Bids may only be submitted on the bid documentation provided by the municipality.

NB: Bids which are late, incomplete, unsigned, completed by pencil, sent by telegraph, facsimile, electronically (Fax), or E- mail and without the compulsory requirements will be disqualified.

_____ _____

MR. SIGIDI KTM **DATE**

MUNICIPAL MANAGER

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, (July 2015) as published in Government Gazette No 38960, Board Notice 136 of 2015 of 10 July 2015. (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 applies.

Clause Number	Tender Data
2. EMPLOYER **Cl. F1.1**	The "Employer" is **"THULAMELA MUNICIPALITY"** The Employer's domicilium citandi et executandi (permanent physical business address) is: Thulamela Municipality, Civic Centre, Old Agriven Building, Thohoyandou. The Employer's address for communication relating to this project is: Private Bag x 5066, Thohoyandou, 0950.
3. TENDER DOCUMENTS **Cl. F.1.2**	"The following documents form part of this tender: **VOLUME 1** **THE TENDER** **Part T1: Tendering procedures:** T1.1 Tender notice and invitation to tender T1.2 Tender Data **Part T2: Returnable documents** T2.1 Returnable Schedules required for Tender Evaluation T2.2 Other Documents required for Tender Evaluation T2.3 Returnable Schedules that will be incorporated into the Contract **THE CONTRACT** **Part C1: Agreements and contract data** C1.1 Form of Offer and Acceptance C1.2 Performance Guarantee C1.3 Contract Data C1.4 Performance Guarantee for materials and equipment not yet built into the works

Clause Number	Tender Data
	C1.5 Retention money guarantee C1.6 Agreement in Terms of the Occupational Health and Safety Act 85 of 1993 C1.7 Abstracts of the mine health and safety Act No 29 of 1996 and Amendment act No.72 of 1997 C1.8 Agreement with Adjudicator **Part C2: Pricing data** C2.1 Pricing instructions C2.2 Bills of quantities **Part C3: Scope of work** C3.1 Description of Works C3.2 Engineering C3.3 Procurement C3.4 Construction C3.5 Management **Part C4: Site information** C4.1 Site Information C4.2 Locality Plan **Part C5: Annexures** C5.1 : Proforma Documents C5.2 : Contract Drawings (Book 2 of 2) **VOLUME 2** • Tender Drawings
4. EMPLOYER'S AGENT **Cl. F.1.4**	The Employer's agents are: **a) Principal Agent** **JTMI Consulting Engineers** Physical Address: 18 Hospital Road Arbor Park Tzaneen 0850 Tel.: (087) 093 2039 E-mail: office@jtmi.co.za
5. TENDERER'S OBLIGATIONS	

EXPANDED PUBLIC WORKS PROGRAMME

Clause Number	Tender Data
5.1. Eligibility **Cl. 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, are eligible to have their tenders evaluated. Joint ventures are eligible to submit tenders provided that: 1. every member of the joint venture is registered with the CIDB; 2. the lead partner has a contractor grading designation of minimum **6CE (or higher)** 3. 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**).
5.2. Site Visit and Clarification Meeting **Cl. F.2.7**	The arrangements for a compulsory pre-tender meeting are: **Location: Tshisahulu Global filling station Junction** **Co-Ordinates (23°0'20.68"S 30°24'16.43"E)** **Date : 18/11/2026** **Time : 11H00**
5.3. Insurance **Cl. F.2.9**	No insurance cover will be provided by the Employer.
5.4. Alternative Tender Offers **Cl. F. 2.12**	No alternative tender offers will be considered
5.1. Submitting a Tender Offer Cl. F2.13	**5.1.1. Whole of the Works (Cl. F.2.13.1)** Tenderers shall offer to provide for the whole of the Works identified. **5.1.2. Original tender documents (Cl. F2.13.3)** The original tender document, issued to the Bidder, shall be submitted in its entirety. No copies are required. **5.1.3. Marking of Tender Submissions (Cl. F2.13.5)** The complete tender documents shall be enclosed and sealed in a single envelope, marked:

Clause Number	Tender Data
	"BID NO.43/2026/2027: RECONSTRUCTION OF ITSANI TO SHAYANDIMA ROAD IN THULAMELA MUNICIPALITY" The Employer's address for delivery of tender offers to be shown on each tender submission package is the Tender Box located at: The Tender Box next to Thulamela Municipality's Boardroom, Civic Centre, Old Agriven Building, Thohoyandou **5.1.4 Two envelope system (Cl. F.2.13.6)** A two-envelope procedure will not be followed. **5.1.5. Closing time (Cl. F.2.15)** The closing time for submission of tender offers is: 11H00 Telegraphic, telephonic, telex, facsimile, e-mail, electronic and late tender offers will not be accepted. **5.1.6. Tender offer validity (Cl. F.2.16)** The tender offer validity period is 90 days after tender closing date. **5.1.7. Clarification of tender offer after submission (Cl. F.2.17)** Delete the last part of the second sentence, commencing with the word "and". Furthermore, delete the last two sentences of Cl. F2.17. Add the following sentence: "The rates stated by the Bidder shall be binding". **5.1.8. Provide other Material (Cl. F.2.18.1)** Upon request by the Employer, the Bidder shall promptly supply any other material that has a bearing on the tender offer, the bidder's commercial position (including, where applicable, notarized joint venture agreements), preferencing arrangements, or samples of materials, considered necessary by the Employer for the purpose of a full and fair assessment. Should the Bidder not provide the information or material called for, by the time for submission stated in the Employer's request, the Employer will regard the tender offer as being non-responsive.

Clause Number	Tender Data
	5.1.9. Letter of Intent The bidder is required to submit with his tender a letter of intent from an approved financial institution undertaking to provide the Construction Guarantee in the format included in Part C1.2 of this procurement document. **5.1.10 Certificates (Cl. F.2.23)** The following certificates are to be provided with this tender: a) Provide a valid Central Supplier Database (CSD) number. b) Compensation Fund registration certificate c) Certificate of Contractor Registration issued by the Construction Industry Development Board or a copy of the application Form for registration in terms of the Construction Industry Development Board Act (Form F006). A minimum grading of 6CE or Higher is required. d) A copy of a valid Tax Compliance Status letter. No tender will be awarded to a bidder whose tax matters are not in order with the South African Revenue Service (SARS) at the time of award. e) An EME must submit a sworn affidavit confirming the following: • Annual Turnover Revenue of R10 million or less; and • Level of Black ownership • Any misrepresentation in terms of the above constitutes a criminal offence as set out in the Preferential Procurement Regulation 2022 as amended. f) Documents and Schedules listed in Part T2. Important Note: Failure to provide the required particulars as per the above-listed certificates implies a non-responsive tender and warrants rejection of the tender on account of non-compliance with the requirements of the Tender Data
EMPLOYER'S UNDERTAKING	
6. Opening of Tender	The time and location for opening of the tender offers are: **11:00 on 11 December 2026**

Clause Number	Tender Data
Submissions Cl. F3.4	**Location: The Tender Box next to Thulamela Municipality's Boardroom, Civic Centre, Old Agriven Building, Thohoyandou**
7. Arithmetical Errors **Cl. F.3.9**	Delete Clause 3.9.1 Insert the following new clause F.3.9.1 Check responsive bids for discrepancies between amounts in words and amounts in figures. Where there is a discrepancy between the amounts in figures and the amount in words, the amount in words shall govern. F3.9.2 Check the highest ranked bid or bidder with the highest number of bid evaluation points after the evaluation of bid offers in accordance with F.3.11 for: a) the gross misplacement of the decimal point in any unit rate; b) omissions made in completing the pricing schedule or bills of quantities; or c) arithmetic errors in: i) line item totals resulting from the product of a unit rate and a quantity in bills of quantities or schedules of prices; or ii) the summation of the prices F.3.9.3 Notify the bidder of all errors or omissions that are identified in the bid offer and either confirm the bid offer as bid or accept the corrected total of prices. F.3.9.4 Where the bidder elects to confirm the bid offer as bid, correct the errors as follows: a) If bills of quantities or pricing schedules apply and there is an error in the line item total resulting from the product of the unit rate and the quantity, the line item total shall govern, and the rate shall be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line item total as quoted shall govern, and the unit rate shall be corrected. b) Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the tenderer's addition of prices, the total shall govern and the tenderer will be asked to revised selected item prices (and their

Clause Number	Tender Data
	rates if bills of quantities apply) to achieve the tendered total of the prices.
8. EVALUATION OF BIDS **Cl. F.3.11**	The procedure for the evaluation of responsive tenders is Method 2 (Price and Preferences). No Technical evaluation. Only compliance and Price and Preference point system will be applied. The Preference Point System assigns a score to each tenderer based on the tender price and preference points system (specific goals). These scores are combined to determine an overall score for the tender. The tenderer with the highest score will be considered for acceptance. The Preference Point System will be applied as follows. For tenders below R50 million 80 points are assigned to price Up to 20 points are assigned for specific goals For tenders of R50 million and above: • 90 points are assigned to price • Up to 10 points are assigned for specific goals Points scored will be rounded off to the nearest 2 decimal places.
9. ACCEPTANCE OF TENDER OFFER **Cl. F3.13**	Tender offers will only be accepted if: a) The bidder has in his or her possession an original valid Tax Clearance Certificate issued by the South Africa Revenue Services or in case wherein the Bidder provide the municipality with a printed tax clearance from e-filing, it is compulsory that the bidder provide municipality with tax compliance status pin for verification; b) The bidder is registered with the Construction Industry Development Board in an appropriate contractor grading designation. A minimum grading of **6CE** is required for the main contractor. c) The bidder has demonstrated previous experience within the Municipal Environment, RAL, SANRAL, Government Institutions and parastatals with the type of work required under this contract, having successfully completed projects of Roads and Stormwater scope and size. d) The bidder or any of its principals is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities

EXPANDED PUBLIC WORKS PROGRAMME

Clause Number	Tender Data
	Act of 2004 as a person prohibited from doing business with the public sector; and e) The bidder has not abused the Employer's Supply Chain Management System. f) The bidder has not failed to perform on any previous contract. g) Has completed the Compulsory Enterprise Questionnaire and there are no conflicts of interest which may impact on the bidder's ability to perform the contract in the best interests of the employer or potentially compromise the tender process.
10. PROVIDE COPIES OF THE CONTRACT DOCUMENT **Cl. F.3.18**	The number of paper copies of the signed contract to be provided by the employer is one.
11. COMPLIANCE/ DISQUALIFICATION	**BIDDERS WILL BE DISQUALIFIED FOR:** • **FAILURE TO COMPLETE AND SIGN THE FORM OF OFFER PAGE;** • **FAILURE TO COMPLETE AND SUBMIT A PRICED BILL OF QUANTITIES IN FULL;** • **FAILURE TO DULY COMPLETE FORM T 2.2 C (WHERE REQUIRED) THAT INCLUDES FOR ANY ADDENDA THAT MAY HAVE BEEN ISSUED WHERESUCH ADDENDA HAS A MATERIAL EFFECT ON THE PRICING OF THE TENDER;** • **FAILURE TO BE REGISTERED AND ACTIVE WITH CIDB ON THE RELEVANT GRADING;** • **COMPLETING TENDER DOCUMENT IN PENCIL;** • **IN THE CASE OF A BIDDER WHO DURING THE LAST FIVE YEARS HAS BEEN TERMINATED ON PREVIOUS CONTRACTS WITH THULAMELA MUNICIPALITY** • **FAILURE TO ATTEND THE COMPULSORY SITE BRIEFING** • **FAILURE TO DULY COMPLETE ALL MBD FORMS AS ISSUED ON PART T2 OF THE BID DOCUMENT** • **A TENDER THAT IS RECEIVED AFTER THE CLOSING DATE AND TIME**
12. PRICE AND PREFERENCE	Having completed compliance checks, the procedure for the evaluation of compliant tenders is Method 2 (Price and Preferences). The Preference Point System assigns a score to each tenderer based on the tender price and on preference points system (specific goals). These scores are combined to determine an overall score for the tender. The tenderer with the highest score will be considered for acceptance. Points scored will be rounded off to the nearest 2 decimal places.

EXPANDED PUBLIC WORKS PROGRAMME

Clause Number	Tender Data

FORMULA FOR SCORING TENDER PRICE

The following formula will be used to calculate the points for price.

$$Ps = X\ [1 - (Pt - Pmin)]$$
$$Pmin$$

Where

Ps = Points scored for comparative price of tender under consideration

Pt = Comparative price of tender under consideration

Pmin = Comparative price of lowest acceptable tender

X = Points assigned to price

POINTS AWARDED FOR PREFERENCE

Bids will be assessed under the provisions of the following Acts and Regulations: Municipal Finance Management Act (Act 56 of 2003); PPPFA, Supply Chain Management policy of the municipality in accordance with the specifications and in terms of 80/20 preferential points system and functionality as per the advert and bid document.

The following table is applicable

Specific Goals Categories (CSD will be used for verification	Number of Points (80/20 system) 20 Points breakdown
1. 100% Black ownership	**10**
2. 100% Women ownership	**5**
3. Youth	**3**
4. Disability (Medical certificate will be used to verify the disability status of the bidder)	**2**

EXPANDED PUBLIC WORKS PROGRAMME

Clause Number	Tender Data
13. CONDITIONS OF CONTRACT AWARD	Contracts will only be awarded if: a) A copy of a valid Tax Compliance Status letter. No tender will be awarded to a bidder whose tax matters are not in order with the South African Revenue Service (SARS) at the time of award. b) The tenderer submits a letter of intent from an approved financial institution undertaking to provide the Construction Guarantee in the format included in Part C1.3 of this procurement document; c) the tenderer is registered with the Construction Industry Development Board in an appropriate contractor grading designation; d) the tenderer or any of its directors/shareholders is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector; e) the tenderer has not: i. abused the Employer's Supply Chain Management System; or ii. failed to perform on any previous contract and has been given a written notice to this effect; f) The tenderer has completed the Declaration of Interest and there are no conflicts of interest which may impact on the tenderer's ability to perform the contract in the best interests of the employer or potentially compromise the tender process. g) the tenderer is registered and in good standing with the compensation fund or with a licensed compensation insurer; h) The employer is reasonably satisfied that the tenderer has in terms of the Construction Regulations, 2014, issued in terms of the Occupational Health and Safety Act, 1993, the necessary competencies and resources to carry out the work safely. i) The tendering entity or the directors/partners of the tendering entity are in good standing with the local authority/municipality. j) No tender will be awarded to a bidder not registered on the National Treasury Central Supplier Database (CSD) k) Contracts Manager & OHS officer must be registered with SACPCMP or ECSA at the time of award l) No tender will be awarded to a bidder who does not have a valid COIDA Letter of Good Standing
14. Proof of	Only those tenderers who can demonstrate that they will have in their employ

EXPANDED PUBLIC WORKS PROGRAMME

Clause Number	Tender Data
Availability of Staff with LI Competencies	management and supervisory staff satisfying the requirement of the scope of work for labor-intensive competencies for supervisory and management staff during the validity of the contract are eligible to submit tenders
15. Requirement for submission of names of LI staff	The tenderer must submit to the Employer, names of all management and supervisory staff that will be employed to supervise the labor-intensive portion of the works together with satisfactory evidence that such staff members satisfy eligibility requirements.

EVALUATION CRITERIA

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.

The second stage of the evaluation will be based on Price (80) and preference points system (specific goal) (20). Detailed points scoring for functionality are as follows:

Functional Requirements

A tenderer must score a minimum of **Seventy points (70/100)** to qualify for further evaluation. Tenders will be evaluated individually and scored by an evaluation panel according to the evaluation criteria mentioned below:

Functionality Evaluation Criteria	Sub Criteria	Points Allocation for Sub Criteria	Maximum Points obtainable per main functionality Criteria
Company Experience (Demonstrate company experience on similar Roads and stormwater construction projects and past performance.	**Signed Appointment letter indicating the project value and completion certificates and reference letters of completed projects:** • Roads and Stormwater		

NB: Signed Appointment letters, completion certificates and reference letters with contactable references within the Municipal Environment, RAL, SANRAL Government Institutions, and parastatals must be attached. **Completed in the past ten (10) years**	Construction Completed within the municipality environment, RAL, SANRAL, Government Institutions and parastatals. • The Tenderer should have a proven track record of road & stormwater experience (Attach both Appointment letter and Completion Certificate per project). Points for projects successfully completed will be awarded as follows: • Completed similar Projects with reference letter of value between R6 million to R20 million is - 5 points / project • Completed similar Projects with reference letter of value above R20 million is -10 points / project **Reference letter from the clients for each of the above-mentioned projects indicating:** • The full project description, • Project value; and • Completion date. **Each Reference letter must be stamped on the client letterhead, have a client Name, phone, or Email.** Maximum points will only be allocated to the bidders who submitted Signed appointment letter, Completion certificate and reference letter for each project. (**NB**: No points will be allocated should one of the requirements is not submitted) **NOTE**: Project where the contractor was a subcontractor will not get points. The	30	**40**

	Contractor must have been the main contractor on the project to get points.		
Tenderer to supply project programme, using acceptable software, in sufficient detail to cover the various facets of the work. This programme is to be supported by a method statement indicating the tenderer's proposed work plan for the construction of the works.	**Project Programme** – Understanding the scope and provide a concise and clear methodology of the tasks as well as adequacy of the programme of work with the estimated construction period	5	
The tenderer shall state his estimated value of the work to be completed every month, based on his preliminary programme and his tendered unit rates.	**Schedule of estimated monthly expenditure** – Realistic cash-flow based on estimated construction period and project cost.	5	
Key Personnel CVs (Demonstrate Experience and Qualifications)	• **Contract/Project Manager with the following Requirements:** • B-Tech/ BSC Eng/ B-Eng or Higher Civil Engineering and Must be professionally registered with ECSA (Pr Eng. / Pr Tech Eng.) or (4 Points). Valid ECSA digital certificate must not be older than 3months from the closing date of the tender advert. • Relevant experience in Roads and Stormwater Construction • 12 years and above = 3 Points • 11 years = 2 Points • 10 years = 1 Points • 9 years and less=0 Points	07	**20**

	• **Site Agent with the following Requirements:** •National Diploma civil Engineering or Higher Civil Engineering (3 points). Minimum five(5) years relevant experience in Roads and Stormwater Construction (3 Points) • 4 years and less=0 Points • **General Foreman with the following Requirements:** • National N.Dip Civil Engineering (1Point) with Minimum 5 years relevant experience as General Foreman in Roads and Stormwater Construction (1 Point). • **OHS Officer with the following Requirements:** • Registered with SACPCMP as Construction Health and Safety Officer (3 Points) • 5 years and above = 2 Points • 4 years = 1 Points **NOTE:** CVs of the Contract/Project Manager, Site Agent, General Foreman and OHS Officer must clearly demonstrate Relevant experience (actual duties performed, involvement and responsibility),including Date(Day/Month/year). Full points will be awarded for all the requirements met.	06 02 05	

<table>
<tr>
<td>Plant and Equipment

Proof of plant and equipment owned by the bidder: Details of major equipment owned (please provide proof of ownership).

NB: Proof of registration certificate and valid licence disk will serve as a proof of ownership.

An Invoice/bank letter will serve as a proof of ownership for plant such as track excavator, smooth drum roller and grid roller.

NB: No points will be allocated should one of the requirements is not submitted</td>
<td>Plant and Equipment for this project.
(Tenderer’s own plant)
<table>
<tr><th>Plant required</th><th>Min. Number Required</th><th>Weight</th></tr>
<tr><td>Excavator</td><td>1</td><td>2</td></tr>
<tr><td>TLB</td><td>1</td><td>2</td></tr>
<tr><td>Watercart min.10 000 litres</td><td>2</td><td>4</td></tr>
<tr><td>Grader</td><td>2</td><td>4</td></tr>
<tr><td>10t Smooth drum roller</td><td>1</td><td>2</td></tr>
<tr><td>10t Grid roller</td><td>1</td><td>2</td></tr>
<tr><td>Tipper Truck, min. 6m^3 or 10m^3</td><td>2</td><td>4</td></tr>
<tr><td colspan="2">SUB-TOTAL</td><td>20</td></tr>
</table></td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Company’s Financial Capacity

• Bidder to submit proof of bank rating not older than three (03) months. Bank rating should be</td>
<td>Original stamped bank reference letter indicating the Bank Rating:

<table>
<tr><th>Bank Rating</th><th>Points</th></tr>
<tr><td>A</td><td>10</td></tr>
<tr><td>B</td><td>8</td></tr>
</table></td>
<td></td>
<td></td>
</tr>
</table>

EXPANDED PUBLIC WORKS PROGRAMME

<table>
<tr>
<td>of the Lead Partner in case of a Joint Venture.
• Audited Financial statement. If the company is not required by law to be audited, please provide us with a letter from a registered accountant stating that the past recent 3years were not required to be audited and the reasons thereof
Note: Points will not be allocated if proof not attached</td>
<td>
<table>
<tr><td>C</td><td>6</td></tr>
<tr><td>D</td><td>4</td></tr>
<tr><td>E</td><td>2</td></tr>
<tr><td>F-G</td><td>0</td></tr>
</table>
Recent Three (03) Years Audited Financial Statement or letter from a registered accountant: 10 Points

No Financial Statement: 00 Points
</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td colspan="3">TOTAL</td>
<td>100</td>
</tr>
</table>

- **Bidders must score a minimum of 70 percentage points out of the 100 percentage to qualify for further adjudication.**
- **The successful bidder (to be later referred to as the contractor) will be subjected to performance scoring at the end of the project in line with the municipal approved score sheet.**

The following is a statement of Roads and Stormwater Construction (similar) works executed by the company/ies in the last recent Ten (10) years:

Employer Name, Contact person and telephone number	**Description of contract**	**Value of work inclusive of VAT (Rand) if applicable**	**Start Date**	**Date Completed**	**Project Duration**

The following is a statement of Roads and Stormwater Construction (similar) works executed by the company/ies in the last recent Ten (10) years:

Employer Name, Contact person and telephone number	**Description of contract**	**Value of work inclusive of VAT (Rand) if applicable**	**Start Date**	**Date Completed**	**Project Duration**

PART T2: LIST OF RETURNABLE DOCUMENTS

The tenderer must complete the following returnable documents:

T2.1 LIST OF RETURNABLE SCHEDULES T.29
T2.2 OTHER DOCUMENTS REQUIRED FOR TENDER EVALUATION T.62
T2.3 RETURNABLE SCHEDULES THAT WILL BE INCORPORATED INTO THE CONTRACT..... T.86

T2.1 LIST OF RETURNABLE SCHEDULES

T2.1 A INVITATION TO BID AND TERMS AND CONDITIONS FOR BIDDING-MBD1T.30

T2.1 B TAX CLEARANCE CERTIFICATE REQUIREMENTS-MBD2 .....T.33

T2.1 C PRICING SCHEDULE : FIRM PRICES -MBD 3.1.....T.34

T2.1 D PRICING SCHEDULE : NON-FIRM PRICES -MBD 3.2.....T.35

T2.1 E PRICING SCHEDULE : PROFESSIONAL SERVICES -MBD 3.3 .....T.38

T2.1 F DECLARATION OF INTEREST -MBD 4 ..... T.40

T2.1 G DECLARATION FOR PROCUREMENT ABOVE R10 MILLION (ALL APPLICABLE TAXES INCLUDED) – MBD 5.....T.43

T2.1 H PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022 – MBD 6.1 ..... T.45

T2.1 I CONTRACT FORM -PURCHASE OF GOODS/WORKS MBD 7.1..... T.50

T2.1 J CONTRACT FORM -RENDERING OF SERVICES- MBD 7.2……..... T.52

T2.1 K CONTRACT FORM -SALE OF GOODS- MBD 7.3……..... T.54

T2.1 L DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES- MBD 8……..……..... T.56

T2.1 M CERTIFICATE OF INDEPENDENT BID DETERMINANTION -MBD 9..... T.58

T2.1 A INVITATION TO BID AND TERMS AND CONDITIONS FOR BIDDING-MBD1

PART A: INVITATION TO BID

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE THULAMELA LOCAL MUNICIPALITY					
BID NUMBER:	43/2026/2027	CLOSING DATE:	**11 December 2026**	CLOSING TIME:	**11:00HRS**
DESCRIPTION	**RECONSTRUCTION OF ITSANI TO SHAYANDIMA ROAD**				
BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT *(STREET ADDRESS)*					
THULAMELA MUNICIPALITY OFFICES					
OLD AGRIVEN BUILDING					
THOHOYANDOU					
0950					

BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO		**TECHNICAL ENQUIRIES MAY BE DIRECTED TO:**	
CONTACT PERSON	**Mr T.P Mudzili**	CONTACT PERSON	**Mr MI Makwala**
TELEPHONE NUMBER	**+27(0)15 962 7629**	TELEPHONE NUMBER	**+27 (0)87 093 2039**
FACSIMILE NUMBER	**+27(0)15 962 4020**	FACSIMILE NUMBER	**N/A**
E-MAIL ADDRESS	**mudzilitp@thulamela.gov.za**	E-MAIL ADDRESS	**office@jtmi.co.za**

SUPPLIER INFORMATION					
NAME OF BIDDER					
POSTAL ADDRESS					
STREET ADDRESS					
TELEPHONE NUMBER	CODE		NUMBER		
CELLPHONE NUMBER					
FACSIMILE NUMBER	CODE		NUMBER		
E-MAIL ADDRESS					
VAT REGISTRATION NUMBER					
SUPPLIER COMPLIANCE STATUS	TAX COMPLIANCE SYSTEM PIN:		**OR**	CENTRAL SUPPLIER DATABASE No:	MAAA

EXPANDED PUBLIC WORKS PROGRAMME

(a) ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?	Yes ☐ No ☐ [IF YES ENCLOSE PROOF]	**(b)** ARE YOU A FOREIGN BASED SUPPLIER FOR **THE GOODS /SERVICES /WORKS OFFERED?**	Yes ☐ No ☐ [IF YES, ANSWER PART B:3]

QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS

IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)	YES NO
DOES THE ENTITY HAVE A BRANCH IN THE RSA?	YES NO
DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA?	YES NO
DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA	☐ YES ☐ NO
IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATI	☐ YES ☐ NO

IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO REGISTER FOR A TAX COMPLIANCE STATUS SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 2.3 BELOW.

PART B: TERMS AND CONDITIONS FOR BIDDING

1. BID SUBMISSION:

1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.

1.2. ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED (NOT TO BE RE-TYPED) OR ONLINE

1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT 2000 AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2022, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER LEGISLATION OR SPECIAL CONDITIONS OF CONTRACT.

1.4. **THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM (SBD7).**

2. TAX COMPLIANCE REQUIREMENTS

2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.

2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VIEW THE TAXPAYER'S PROFILE AND TAX STATUS.

2.3 APPLICATION FOR TAX COMPLIANCE STATUS (TCS) OR PIN MAY ALSO BE MADE VIA E-FILING. THROUGH THE SARS WEBSITE, WWW.SARS.GOV.ZA.

2.4 BIDDERS MAY ALSO SUBMIT A PRINTED TCS TOGETHER WITH THE BID.

2.5 IN BIDS WHERE CONSORTIA/JOINT VENTURES/SUB-CONTRACTORS ARE INVOLVED; EACH PARTY MUST SUBMIT A SEPARATE TCS/PIN/CSD NUMBER.

2.6 WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.

2.7 NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE, COMPANIES WITH DIRECTORS WHO ARE PERSONS IN THE SERVICE OF THE STATE, OR CLOSE CORPORATIONS WITH MEMBERS PERSONS IN THE SERVICE OF THE STATE.

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

SIGNATURE OF BIDDER: …….

CAPACITY UNDER WHICH THIS BID IS SIGNED: ……

(Proof of authority must be submitted, e.g. Company Resolution)

DATE: …….

EXPANDED PUBLIC WORKS PROGRAMME

TAX CLEARANCE CERTFICATE REQUIREMENTS

It is a condition of bid that the taxes of the successful bidder must be in order, or that satisfactory arrangements have been made with South African Revenue Service (SARS) to meet the bidder's tax obligations.

1 In order to meet this requirement bidders are required to complete in full the attached form TCC 001 "Application for a Tax Clearance Certificate" and submit it to any SARS branch office nationally. The Tax Clearance Certificate Requirements are also applicable to foreign bidders / individuals who wish to submit bids.

2 SARS will then furnish the bidder with a Tax Clearance Certificate that will be valid for a period of 1 (one) year from the date of approval.

3 The original Tax Clearance Certificate must be submitted together with the bid. Failure to submit the original and valid Tax Clearance Certificate will result in the invalidation of the bid. Certified copies of the Tax Clearance Certificate will not be acceptable.

4 In bids where Consortia / Joint Ventures / Sub-contractors are involved, each party must submit a separate Tax Clearance Certificate.

5 Copies of the TCC 001 "Application for a Tax Clearance Certificate" form are available from any SARS branch office nationally or on the website www.sars.gov.za.

6 Applications for the Tax Clearance Certificates may also be made via eFiling. In order to use this provision, taxpayers will need to register with SARS as eFilers through the website www.sars.gov.za.

PRICING SCHEDULE – FIRM PRICES (PURCHASES)

NOTE: **ONLY FIRM PRICES WILL BE ACCEPTED. NON-FIRM PRICES (INCLUDING PRICES SUBJECT TO RATES OF EXCHANGE VARIATIONS) WILL NOT BE CONSIDERED**

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 **(ALL APPLICABLE TAXES INCLUDED)

- Required by: .....
- At: .....
  .....
- Brand and Model .....
- Country of Origin
  .....
- Does the offer comply with the specification(s)? *YES/NO
- If not to specification, indicate deviation(s) .....
- Period required for delivery .....
  *Delivery: Firm/Not firm
- Delivery basis .....

Note: All delivery costs must be included in the bid price, for delivery at the prescribed destination.

** "all applicable taxes" includes value- added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies.

*Delete if not applicable

MBD 3.2

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 **(ALL APPLICABLE TAXES INCUDED)

- Required by: .....
- At: .....
- Brand and model .....
- Country of origin .....
- Does the offer comply with the specification(s)? *YES/NO
- If not to specification, indicate deviation(s) .....
- Period required for delivery .....
- Delivery: *Firm/Not firm

** "all applicable taxes" includes value- added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies.

*Delete if not applicable

PRICE ADJUSTMENTS

A **NON-FIRM PRICES SUBJECT TO ESCALATION**

1. IN CASES OF PERIOD 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:

$$Pa = (1 - V)Pt\left(D1\frac{R1t}{R1o} + D2\frac{R2t}{R2o} + D3\frac{R3t}{R3o} + D4\frac{R4t}{R4o}\right) + VPt$$

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

PRICING SCHEDULE
(Professional Services)

Name of Bidder:..... Bid Number: .....

Closing Time: ..... Closing Date .....

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

ITEM NO	DESCRIPTION	BID PRICE IN RSA CURRENCY **(ALL APPLICABLE TAXES INCLUDED)

1. The accompanying information must be used for the formulation of proposals.

2. Bidders are required to indicate a ceiling price based on the total estimated time for completion of all phases and including all expenses inclusive of all applicable taxes for the project. R.....

3. PERSONS WHO WILL BE INVOLVED IN THE PROJECT AND RATES APPLICABLE (CERTIFIED INVOICES MUST BE RENDERED IN TERMS HEREOF)

4. PERSON AND POSITION	HOURLY RATE	DAILY RATE
_____	R_____	_____
_____	R_____	_____
_____	R_____	_____
_____	R_____	_____
_____	R_____	_____

5. PHASES ACCORDING TO WHICH THE PROJECT WILL BE COMPLETED, COST PER PHASE AND MAN-DAYS TO BE SPENT

_____	R_____	_____ days
_____	R_____	_____ days
_____	R_____	_____ days
_____	R_____	_____ days

5.1 Travel expenses (specify, for example rate/km and total km, class of airtravel, etc). Only actual costs are recoverable. Proof of the expenses incurred must accompany certified invoices.

DESCRIPTION OF EXPENSE TO BE INCURRED	RATE	QUANTITY	AMOUNT
_____	.....	.....	R.....
_____	.....	.....	R.....
_____	.....	.....	R.....
_____	.....	.....	R.....

**"all applicable taxes" includes value-added taxes, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies.

5.2 Other expenses, for example accommodation (specify, eg. Three star hotel, bed and breakfast, telephone cost, reproduction cost, etc.). On basis of these particulars, certified invoices will be checked for correctness. Proof of the expenses must accompany invoices.

DESCRIPTION OF EXPENSE TO BE INCURRED	RATE	QUANTITY	AMOUNT
_____	.....	.....	R.....
_____	.....	.....	R.....
_____	.....	.....	R.....
_____	.....	.....	R.....
		TOTAL:	R.....

6. Period required for commencement with project after acceptance of bid .....

7. Estimated man-days for completion of project .....

8. Are the rates quoted firm for the full period of contract? .....*YES/ NO.

9. If not firm for the full period, provide details of the basis on which adjustments will be applied for, for example consumer price index.....

.....

.....

.....

*Delete if not applicable

ANNEXURE C

MBD 4

DECLARATION OF INTEREST

1. No bid will be accepted from persons in the service of the state[1].

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, hareholder[2]):.....

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. .....

.....

[1]MSCM 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

MBD 5

DECLARATION FOR PROCUREMENT ABOVE R10 MILLION (ALL APPLICABLE TAXES INCLUDED)

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

1 Are you by law required to prepare annual financial statements for auditing?

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 any municipality for more than three months 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 any municipality for more than three months 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 during the past five years, including particulars of any material non-compliance or dispute concerning the execution of

* Delete if not applicable

*YES / NO

such contract?

3.1 If yes, furnish particulars

.....

.....

*YES / NO

4. Will any portion of goods or services be sourced from outside 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? *YES / NO

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

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	
SPECIFIC GOALS	
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**

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

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmin = 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:

80/20 or 90/10

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

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmax = Price of highest acceptable tender

4. POINTS AWARDED FOR SPECIFIC GOALS

4.1. In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in table 1 below as may be supported by proof/ documentation stated in the conditions of this tender:

4.2. In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that, if it is unclear whether the 80/20 or 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of—

(a) an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system; or

(b) any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system,

then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.

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

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

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

The specific goals allocated points in terms of this tender	Number of points allocated (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)

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 - PURCHASE OF GOODS/WORKS

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

PART 1 (TO BE FILLED IN BY THE BIDDER)

1. I hereby undertake to supply all or any of the goods and/or works described in the attached bidding documents to (name of institution)..... in accordance with the requirements and specifications stipulated in bid number..... 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 time of 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);
   - Technical Specification(s);
   - 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 goods and/or works 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 - PURCHASE OF GOODS/WORKS

PART 2 (TO BE FILLED IN BY THE PURCHASER)

1. I..... in my capacity as..... accept your bid under reference number .....dated.....for the supply of goods/works indicated hereunder and/or further specified in the annexure(s).

2. An official order indicating delivery instructions is forthcoming.

3. I undertake to make payment for the goods/works delivered in accordance with the terms and conditions of the contract, within 30 (thirty) days after receipt of an invoice accompanied by the delivery note.

ITEM NO.	PRICE (ALL APPLICABLE TAXES INCLUDED)	BRAND	DELIVERY PERIOD	B-BBEE STATUS LEVEL OF CONTRIBUTION	MINIMUM THRESHOLD FOR LOCAL PRODUCTION AND CONTENT (If applicable)

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

SIGNED AT .....ON.....

NAME (PRINT) .....

SIGNATURE .....

OFFICIAL STAMP

WITNESSES

1. .....

2. .....

DATE .....

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 (name of the institution)..... in accordance with the requirements and task directives / proposals specifications stipulated in Bid Number..... 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: .....

MBD 7.2

CONTRACT FORM - RENDERING OF SERVICES

PART 2 (TO BE FILLED IN BY THE PURCHASER)

1. I..... in my capacity as..... 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)

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

SIGNED AT ..... ON .....

NAME (PRINT) .....

SIGNATURE .....

OFFICIAL STAMP

WITNESSES

1 .....

2 .....

DATE: .....

CONTRACT FORM - SALE OF GOODS/WORKS

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

PART 1 (TO BE FILLED IN BY THE BIDDER)

1. I hereby undertake to purchase all or any of the goods and/or works described in the attached bidding documents from (name of institution)..... in accordance with the requirements stipulated in (bid number)..... at the price/s quoted. My offer/s remain binding upon me and open for acceptance by the seller during the validity period indicated and calculated from the closing time of 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);
   - Declaration of interest;
   - Declaration of Bidder's past SCM practices;
   - 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) quoted cover all the goods and/or works specified in the bidding documents; that the price(s) cover all my obligations and I accept that any mistakes regarding price(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 undertake to make payment for the goods/works as specified in the bidding documents.

6. I declare that I have no participation in any collusive practices with any bidder or any other person regarding this or any other bid.

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

NAME (PRINT) .....

CAPACITY .....

SIGNATURE .....

NAME OF FIRM

DATE .....

WITNESSES

1 .....

2. .....

DATE: .....

MBD 7.3

CONTRACT FORM - SALE OF GOODS/WORKS

PART 2 (TO BE FILLED IN BY THE SELLER)

1. I..... In my capacity as.....
accept your bid under reference number .....dated.....for the purchase of goods/works indicated hereunder and/or further specified in the annexure(s).

2. I undertake to make the goods/works available in accordance with the terms and conditions of the contract.

ITEM NO.	DESCRIPTION	PRICE (ALL APPLICABLE TAXES INCLUDED)		

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

SIGNED AT .....ON.....

NAME (PRINT) .....

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	Is the bidder or any of its directors listed on the National Treasury's Database of Restricted Suppliers as companies or persons prohibited from doing business with the public sector? (Companies or persons who are listed on this Database were informed in writing of this restriction by the Accounting Officer/Authority of the institution that imposed the restriction after the *audi alteram partem* rule was applied). **The Database of Restricted Suppliers now resides on the National Treasury's website(www.treasury.gov.za) and can be accessed by clicking on its link at the bottom of the home page.**	Yes ☐	No ☐
4.1.1	If so, furnish particulars:		
4.2	Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)? **The Register for Tender Defaulters can be accessed on the National Treasury's website (www.treasury.gov.za) by clicking on its link at the bottom of the home page.**	Yes ☐	No ☐
4.2.1	If so, furnish particulars:		
4.3	Was the bidder or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?	Yes ☐	No ☐

4.3.1	If so, furnish particulars:		
	Tick Yes/No	**Yes**	**No**
4.4	Does the bidder or any of its directors owe any municipal rates and taxes or municipal charges to the municipality / municipal entity, or to any other municipality / municipal entity, that is in arrears for more than three months?	Yes ☐	No ☐
4.4.1	If so, furnish particulars:		
4.5	Was any contract between the bidder and the municipality / municipal entity or any other organ of state terminated during the past five years on account of failure to perform on or comply with the contract?	Yes ☐	No ☐
4.7.1	If so, furnish particulars:		

CERTIFICATION

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

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

....
Signature **Date**

....
Position **Name of Bidder**

Js367bW

MBD 9

CERTIFICATE OF INDEPENDENT BID DETERMINATION

1 This Municipal Bidding Document (MBD) must form part of all bids[1] invited.

2 Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).[2] Collusive bidding is a *pe se* prohibition meaning that it cannot be justified under any grounds.

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 consortium[3] 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

Js9141w 4

The specific goals allocated points 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

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]

T2.2 OTHER DOCUMENTS REQUIRED FOR TENDER EVALUATION

T2.2 A CERTIFICATE OF AUTHORITY OF SIGNATORY T.63
T2.2 B CERTIFICATE OF REGISTRATION WITH THE CONSTRUCTION INDUSTRY DEVELOPMENT BOARD T.67
T2.2 C RECORD OF ADDENDA TO BID DOCUMENTS T.72
T2.2 D FORM OF INTENT TO PROVIDE A DEMAND GUARANTEE T.73
T2.2 E HEALTH AND SAFETY PLAN: DECLARATION BY BIDDER T.74
T2.2 F SCHEDULE OF PROPOSED SUB-CONTRACTORS..... T.75
T2.2 G QUALITY ASSURANCE PROGRAMME..... T.78
T2.2 H INSURANCE STATEMENT T.79
T2.2 I FINANCIAL INFORMATION OF BIDDER T.80
T2.2 J ALTERATIONS BY BIDDER..... T.82
T2.2 K AUDITED ANNUAL FINANCIAL STATEMENT FOR THE PAST THREE YEARS T.83
T2.2 L MUNICIPAL UTILITY ACCOUNT..... T.84

EXPANDED PUBLIC WORKS PROGRAMME

T2.2 A CERTIFICATE OF AUTHORITY OF SIGNATORY

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

A Company ☐

B Partnership ☐

C Joint Venture ☐

D Sole Proprietor ☐

E Close Corporation ☐

EXPANDED PUBLIC WORKS PROGRAMME

A. Certificate for company

I, ……., chairperson of the board of directors of ……

…....., hereby confirm that by resolution of the board (copy

attached) taken on ……. 20……, Mr/Ms .....,

acting in the capacity of ……., was authorized to sign all documents in connection with this bid and any contract resulting from it on behalf of the company.

As witnesses:

1. ....
Chairman

....
Print Name Print Name

2. ....
Date

.....
Print Name

B. Certificate of partnership

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

....., hereby authorize Mr/Ms..... , acting in

the capacity of....., to sign all documents in connection with

the bid for Contract ……., and any contract resulting from it on our behalf.

Name	Address	Signature	Date

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

EXPANDED PUBLIC WORKS PROGRAMME

C. Certificate for Joint Venture

We, the undersigned, are submitting this bid offer in Joint Venture and hereby authorize Mr/Ms ……., authorised signatory of the firm ....., acting in the capacity of lead partner, to sign all documents in connection with the bid offer for Contract.....and any contract resulting from it on our behalf.

This authorisation is evidenced by the attached power of attorney signed by legally authorised signatories of all the partners to the Joint Venture.

Name of Firm	Address	Authorising	
		Signature	Name
Lead Partner			

D. Certificate for sole proprietor

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

…….. ……..……

Signature: Sole Owner Print Name

As witnesses:-

1. …….. ……..
   Print Name Date

2. …….. ……..
   Print Name Date

EXPANDED PUBLIC WORKS PROGRAMME

E. Certificate for Close Corporation

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

……..…… hereby authorise Mr/Ms....., acting in

the capacity of..... , to sign all documents in connection with the bid

for Contract..... and any contract resulting from it on our behalf.

Name	Address	Signature	Date

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

T2.2 B CERTIFICATE OF REGISTRATION WITH THE CONSTRUCTION INDUSTRY DEVELOPMENT BOARD

1. General

The Register of Contractors is established by the Construction Industry Development Board in terms of the CIDB Act 38 of 2000 and Construction Industry Development Regulations as published in Government Gazette number 26427 of 2004.

The Act makes it mandatory for public sector clients to apply this register when considering bids. Any enterprise that submits a bid or enters into contract for construction works with the public sector, must be registered.

Once-off joint ventures do not have to register, provided that each partner of the joint venture is separately registered.

2. Status

Bidders shall fill in the following sections of this form, depending on their status:

2.1 Section A

Bidders who have accomplished registration and can provide proof of their grading designation.

2.2 Section B

Bidders who are in the process of registration of an update to an existing registration or a renewal.

2.3 Section C

Bidders who have submitted the first application.

2.4 Section D

Bidders submitting this Bid offer in Joint Venture and can provide proof that each partner of the Joint Venture is separately registered.

Note: Only complete one of Sections A, B, C or D.

EXPANDED PUBLIC WORKS PROGRAMME

SECTION A

I, …… acting in capacity of ……
was authorised to sign all documents in connection with this bid an any contract resulting from it on behalf of the following entity:

……

hereby declare that the above-mentioned entity has achieved registration with the Construction Industry Development Board on date ..... and declare that the grading designation is reflected in the following **symbols** on the registration certificate.

Contract Value

Type of Work		

……..
Signature of Bidder

……..
Signature of Witness

……..
Print Name

……..
Print Name

EXPANDED PUBLIC WORKS PROGRAMME

SECTION B

I, ……. acting in capacity of..... was authorised to sign all documents in connection with this bid and any contract resulting from it on behalf of the following entity: … ..... hereby declare that the above mentioned entity has achieved registration with the Construction Industry Development Board on date …..... furthermore declare that the existing grading designation is:

Contract Value

Type of Work		

and the following update ha s been applied for:

Amendment of Category Status	
Change of Particulars	
Annual Confirmation of Particulars	
Renewal of Registration	

mark with a "✓"

…… ……..
Signature of Bidder Signature of Witness

…… ……..
Print Name Print Name

EXPANDED PUBLIC WORKS PROGRAMME

SECTION C

I, …….. acting in capacity of …… was authorised to sign all documents in connection with this bid and any contract resulting from in/on behalf of the following entity: …….. hereby declare that the above-mentioned entity has submitted its FIRST APPLICATION FOR REGISTRATION with the Construction Industry Development Board on date …….

I furthermore accept that failure to achieve registration with the Construction Industry Development Board in a category stipulated in the Bid Data within 10 days from the date of closing this bid, implies a non-responsive bid and warrants rejection of the Bid on account of non-compliance with the requirements of the Bid Data.

…… ……..
Signature of Bidder Signature of Witness

…… ……..
Print Name Print Name

EXPANDED PUBLIC WORKS PROGRAMME

SECTION D

I, ...acting in capacity of the LEAD PARTNER in the Joint Venture

…….
. was authorised to sign all documents in connection with this bid and any contract resulting from it, hereby declare that each of the Joint Venture is separately registered with the Construction Industry Development Board and declare that the grading designation is reflected in the following **symbols** on the registration certificates:

Name of Lead Partner:		
Contract Value		
Type of Work		

Name of 2nd Partner:		
Contract Value		
Type of Work		

Name of 3rd Partner:		
Contract Value		
Type of Work		

…… ……..
Signature of Bidder Signature of Witness

…… ……..
Print Name Print Name

EXPANDED PUBLIC WORKS PROGRAMME

T2.2 C RECORD OF ADDENDA TO BID DOCUMENTS

We confirm that the following communications received from the Procuring Department before the submission of this Bid Offer, amending the Bid Documents, have been taken into account in this Bid Offer:

	Date	Title or Details
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Attach additional pages if more space is required.

Signed …….. Date ……..

Print Name …….. Position ……..

Bidder ……

EXPANDED PUBLIC WORKS PROGRAMME

T2.2 D FORM OF INTENT TO PROVIDE A DEMAND GUARANTEE

If my/our bid is accepted, I/we will, when required and within the time stipulated, provide a guarantee of

Insurance Company (name) …….. (of

address) ……

……..

or

Commercial Bank (Name) ……...

(Branch) ……...

(of address) ……

……..

to be approved by you, the Employer, for the amount stipulated.

I/we understand that failure to produce an acceptable Demand Guarantee within the stipulated period is a fundamental breach of Contract, entitling the Employer to:

(i) withhold all payments which may be due to the Contractor pending compliance with the stipulated requirements to produce an acceptable Demand Guarantee.

(ii) instruct the Contractor to cease all work pending provision of the Demand Guarantee, and

(iii) cancel the Contract.

Signed …….. Date ……

Print Name …….. Position ……

Bidder ……..

EXPANDED PUBLIC WORKS PROGRAMME

T2.2 E HEALTH AND SAFETY PLAN: DECLARATION BY BIDDER

I/we declare that we have read and understand the health and safety specifications contained in the Contract Data and undertake to:

- provide and demonstrate to the Employer a suitably and sufficiently documented health and safety plan, which shall be applied from the date of commencement of and for the duration of the construction work,
- appoint a full-time competent employee in writing as the Construction Supervisor from the date of commencement of and for the duration of construction work,
- appoint a full time/part time competent employee in writing as the Construction Safety Officer from the date of commencement of and for the duration of construction work.

I/we undertake to rectify all non-conforming conditions for which we are responsible. I/we accept that, should I/we not rectify these timeously, they will be corrected by the Employer and the cost subtracted from any amounts due to me/us in terms of the Contract Data.

I/we confirm that I/we am/are registered and in good standing with the Compensation Fund and our

registration number is:.....,

alternatively, my/our licensed compensation insurer is:

(Name) …….

(Address) …….

…….

To this effect, I/we attach proof of registration and good standing.

I/we certify that to the best of my/our knowledge and belief, the curricula vitae of our proposed key health and safety personnel cited hereinafter correctly describe their qualifications and experience.

Signed ……. Date …….

Print Name ……. Position …….

Bidder …….

EXPANDED PUBLIC WORKS PROGRAMME

T2.2 F SCHEDULE OF PROPOSED SUB-CONTRACTORS

We notify you that it is our intention to employ the following Sub-Contractors for work in this contract.

If we are awarded a contract we agree that this notification does not change the requirement for us to submit the names of proposed Sub-Contractors in accordance with requirements in the Contract for such appointments.

	Name and Address of Proposed Sub-Contractor	Nature and Extent of Work	Previous Experience with Sub-Contractor
1			
2			
3			
4			
5			

Signed …….. Date …….

Print Name …….. Position …….

Bidder ……

EXPANDED PUBLIC WORKS PROGRAMME

SUB-CONTRACTING UNDERTAKING

LETTER OF UNDERTAKING TO PERFORM AS A SUB-CONTRACTOR
(Copy as many as necessary)

Contract Number: ……

From: (Name and address of Sub-contractor)

……

……

……

To: (Name and address of Contractor)

……

……

……

The undersigned undertakes to *perform work/provide services/supply goods in connection with the above Contract as a *close corporation/sole proprietor/partnership/company and is prepared to perform in connection with the above-named Contract as Sub-contractor to the Contractor, the following *work/provide the following services/supply the following goods:
*(**delete that which is not applicable**)

……

……

for an estimated amount of R..... excluding VAT, subject to the terms of any agreement made between us for the purpose of the Contract which agreement shall include the General Conditions of Contract and relevant Special Conditions that govern this Contract.

Signature: ……

Name: ……

Designation: ……

Date: ……
who duly warrants that he/she is authorized to sign this letter.

EXPANDED PUBLIC WORKS PROGRAMME

SUB-CONTRACTING UNDERTAKING

LETTER OF UNDERTAKING TO PERFORM AS A SUB-CONTRACTOR
(Copy as many as necessary)

Contract Number: ……

From: (Name and address of Sub-contractor)

……

……

……

To: (Name and address of Contractor)

……

……

……

The undersigned undertakes to *perform work/provide services/supply goods in connection with the above Contract as a *close corporation/sole proprietor/partnership/company and is prepared to perform in connection with the above-named Contract as Sub-contractor to the Contractor, the following *work/provide the following services/supply the following goods:
*(**delete that which is not applicable**)

……

……

for an estimated amount of R..... excluding VAT, subject to the terms of any agreement made between us for the purpose of the Contract which agreement shall include the General Conditions of Contract and relevant Special Conditions that govern this Contract.

Signature: ……

Name: ……

Designation: ……

Date: ……
who duly warrants that he/she is authorized to sign this letter.

EXPANDED PUBLIC WORKS PROGRAMME

T2.2 G QUALITY ASSURANCE PROGRAMME

Bidder to submit details here below of his Quality Assurance Policy whereby he shall demonstrate that he has the following:

(a) An Operating Quality Management System based on SABS/ISO 9001 : 2000 international standards, if not, state alternative.

(b) Proof of Quality Assurance Co-ordination.

(c) Proven technical capabilities and resources to ensure Quality Management.

(d) A recent assessment/audit report on his Quality Management and Quality Control System(s).

Contractor's details with respect to items a), b), c) and d):

SIGNATURE OF BIDDER …… DATE ……..

……
Print Name of Signatory

ON BEHALF OF: ..... (the Bidder)

EXPANDED PUBLIC WORKS PROGRAMME

T2.2 H INSURANCE STATEMENT

BIDDER'S DECLARATION OF INSURANCES

I/We hereby declare that the insurances enumerated below have been affected by me/us.

I/We further declare that all premiums in respect of the insurances are fully paid up to date.

Cover Effected	Insurer and Policy Number	Expiry Date	Limits of Indemnity / Sums Insured	Deductibles
Contractor's All Risks				
Occupational Injuries and Diseases				
Unemployment Insurance				
Motor Vehicle Insurance				
Other:				

We submit herewith a letter of good standing from the Workman's Compensation Commissioner in respect of Occupational Injuries and Diseases Insurance.

Bidder: ……

....
Signature of Bidder Print Name of Signatory

.....
Capacity

EXPANDED PUBLIC WORKS PROGRAMME

T2.2 I FINANCIAL INFORMATION OF BIDDER

This information sheet has to be filled in by the financier of the Bidder, duly signed and stamped on behalf of the financial institution he represents.

Bidder / Bid Details

Bid Description : ……

Contract Period : ……

Name of Bidder : ……

Bank Account Number : ……

Bidding Amount : ……

Demand Guarantee will be provided by this Bank: YES ☐ NO ☐

If yes, state amount of Demand Guarantee: R ……

Financial Institution

Name of Commercial Bank : ……

Branch : ……

Name of Bank Manager : ……

Telephone Number : ……

I / We acting on behalf of the above Commercial Bank confirm that

…..(Bidder)

has operated an account with us for the last .....years.

We have been requested to provide a bank rating based in relation to the financial capability of the Bidder, taking into account directives set out in the following two tables.

Financial Capability

Maximum value of contract that the Bidder is considered capable of	Value on which Bank Rating must be used
up to R300 000	R24 000
R1 000 000	R78 000
R3 000 000	R240 000
R5 000 000	R480 000
R10 000 000	R900 000
R30 000 000	R2 400 000
R100 000 000	R7 800 000

EXPANDED PUBLIC WORKS PROGRAMME

BANK RATING	
Bank Code	**Description of Bank Code**
A	Undoubted for the amount of enquiry
B	Good for the amount of enquiry
C	Good for the amount quoted if strictly in the way of business
D	Fair trade risk for amount of enquiry
E	Figures considered too high
F	Financial position unknown
G	Occasional dishonours
H	Frequent dishonours

The value on which our Bank Rating of the Bidder is based is R……..

(In words..... only)

The Bank Rating is code: ……

…… …….. ……..
Signature: Manager Financial Institution Print Name Date

RUBBER STAMP OF INSTITUTION

EXPANDED PUBLIC WORKS PROGRAMME

T2.2 J ALTERATIONS BY BIDDER

Should the Bidder desire to make any departures from or modifications to the "Bid" or "Contract", or to qualify his bid in any way, he shall set out his proposals clearly hereunder or alternatively state them in a covering letter attached to his bid and referred to hereunder, failing which the bid will be deemed to be unqualified.

Page	Item of Clause	Details	Cost Involved (R)

Signed …….. Date ……..

Print Name …….. Position ……..

Bidder ……

EXPANDED PUBLIC WORKS PROGRAMME

T2.2 K AUDITED ANNUAL FINANCIAL STATEMENT FOR THE PAST THREE YEARS

ATTACH AUDITED FINANCIAL STATEMENTS

EXPANDED PUBLIC WORKS PROGRAMME

T2.2 L MUNICIPAL UTILITY ACCOUNT

DECLARATION BY THE TENDERER

I the undersigned _____, has been duly authorized to sign all documents with the Bid Number _____on behalf of_____ hereby make a declaration as follows:(referred to herein as “the Bidder”)

1. I declare that the bidder and /or any of its director(s) / member(s) does not owe the municipality, or any other municipality and/or municipal entity any amount which is in arrears in respect of any municipal rates and taxes or municipal service charges.

2. I understand and accept that in the event that this declaration is proved to be false, the bid shall be rejected forthwith. All other rights of the municipality (including but not limited to the right to claim damages where applicable) shall remain reserved in full.

SIGNED ON BEHALF OF THE COMPANY _____

IN HIS CAPACITY AS _____

DATE _____

FULL NAMES OF SIGNATORY _____

UTILITY ACCOUNT NUMBER	NAME OF MUNICIPALITY	NAME OF OWNER

ATTACH ORIGINAL OR A CERTIFIED COPY OF A MUNICIPAL UTILITY ACCOUNT (NOT OLDER THAN THREE (3) MONTHS)

Important: Note the following

- List Account(s) registered either in the name(s) of the Director(s) or the Company on the declaration form attached hereto.
- Attach Municipal Utility account of Company's registered office (if applicable) and in case of leased premises, attach lease agreement.

T2.3 RETURNABLE SCHEDULES THAT WILL BE INCORPORATED INTO THE CONTRACT

T2.3 A PROJECT PROGRAMME AND METHOD STATEMENT T.87
T2.3 B SCHEDULE OF ESTIMATED MONTHLY EXPENDITURE..... T.88
T2.3 C RATES FOR SPECIAL MATERIALS T.89

EXPANDED PUBLIC WORKS PROGRAMME

T2.3 A PROJECT PROGRAMME AND METHOD STATEMENT

Tenderer to supply project programme, using acceptable software, in sufficient detail to cover the various facets of the work.

This programme is to be supported by a method statement indicating the tenderer's proposed work plan for the construction of the works.

SIGNED ON BEHALF OF TENDERER:.....

Note to Tenderer

If a tenderer wishes to submit an alternative tender then this form, appropriately completed, shall be attached to the bill of quantities for the alternative proposal.

EXPANDED PUBLIC WORKS PROGRAMME

T2.3 B SCHEDULE OF ESTIMATED MONTHLY EXPENDITURE

The tenderer shall state his estimated value of the work to be completed every month, based on his preliminary programme and his tendered unit rates, in the table below. The amounts for contingencies and contract price adjustment shall not be included.

MONTH	**VALUE (INCLUDING VAT)**
1	**R**
2	**R**
3	**R**
4	**R**
5	**R**
6 (FINAL)	**R**
TOTAL: R…… (EXCLUDING CONTINGENCIES AND CONTRACT PRICE ADJUSTMENT)	

SIGNED ON BEHALF OF TENDERER: .....

EXPANDED PUBLIC WORKS PROGRAMME

T2.3 C RATES FOR SPECIAL MATERIALS

Only bitumen products will be dealt with as a special material in terms of subclause 6.8.3 of the General Conditions of Contract. All bitumen products, as indicated in the contract data must be stated in the list below.

The rates and prices for the special materials shall be furnished by the contractor, which rates and prices shall exclude VAT but shall include all other obligatory taxes and levies.

BASE MONTH = NOVEMBER 2026

SPECIAL MATERIALS	UNIT *	RATE OR PRICE FOR THE BASE MONTH

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

When called upon to do so, the contractor shall substantiate the above rates or prices with acceptable documentary evidence from the applicable refinery supplying the bitumen.

SIGNED ON BEHALF OF TENDERER:.....

EXPANDED PUBLIC WORKS PROGRAMME

THE CONTRACT

PART C1 AGREEMENT AND CONTRACT DATA
PART C2 PRICING DATA
PART C3 SCOPE OF WORKS
PART C4 SITE INFORMATION

EXPANDED PUBLIC WORKS PROGRAMME

PART C1: AGREEMENT AND CONTRACT DATA

C1.1 FORM OF OFFER AND ACCEPTANCE C.3

C1.2 PERFORMANCE GUARANTEE C.8

C1.3 CONTRACT DATA C.11

C1.4 PERFORMANCE GUARANTEE FOR MATERIALS AND EQUIPMENT NOT YET BUILT INTO THE WORKS.....C.26

C1.5 RETENTION MONEY GUARANTEE C.29

C1.6 AGREEMENT IN TERMS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT 85 OF 1993 AND APPOINTMENT AS MINE MANAGER IN TERMS OF SECTION 3(1)(A) OF MINE HEALTH AND SAFETY ACT 29 OF 1996. .....C.31

C1.7 ABSTRACTS OF THE MINE HEALTH AND SAFETY ACT NO. 29 OF 1996 AND AMENDMENT ACT NO. 72 OF 1997.....C.38

C1.8 AGREEMENT WITH ADJUDICATOR.....C.39

C1.1 FORM OF OFFER AND ACCEPTANCE

Offer

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

BID No.: 43/2026/2027
RECONSTRUCTION OF ITSANI TO SHAYANDIMA ROAD

The tenderer, identified in the offer signature block, 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 authorized, signing this part of the 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 PRICE INCLUSIVE OF VALUE ADDED TAX IS (CONTRACT PRICE)

.....

.....

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.

For the Tenderer:

Signature(s) ....

Name(s) ....

Capacity ....

Name and address of organization

.....

Signature and Name of Witness:

Signature ……..

Name ……..

Date ……..

EXPANDED PUBLIC WORKS PROGRAMME

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 C1 Agreements and contract data, (which includes this agreement)

PART C2 Pricing data

PART C3 Scope of work

PART C4 Site information

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

Deviations from and amendments to the documents listed in the tender data and any addenda thereto as 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 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 copy of the fully signed original 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.

EXPANDED PUBLIC WORKS PROGRAMME

For the Employer

Signature .....

Name .....

Capacity .....

Name and address of organization

Thulamela Local Municipality
Private Bag x 5066
Thohoyandou
0950

Signature and Name of Witness

Signature .....

Name .....

Capacity .....

EXPANDED PUBLIC WORKS PROGRAMME

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,

4.1 Subject .....

Details …….....

4.2 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 changes to the terms of the offer agreed by the tenderer and the employer during this process of offer and acceptance.

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

EXPANDED PUBLIC WORKS PROGRAMME

For the Tenderer:		**For the Employer**
.....	Signature	.....
.....	Name	.....
.....	Capacity	.....
Name and address of organisation:		Name and address of organisation
.....		**THULAMELA LOCAL MUNICIPALITY**
……		Private Bag x 5066
		THOHOYANDOU
		0950
.....		
.....	Witness Signature	.....
.....	Witness Name	.....
.....	Date	.....

Confirmation of Receipt

The Tenderer, (now Contractor), identified in the Offer part of this Agreement hereby confirms receipt from the Employer, identified in the Acceptance part of this Agreement, of one fully completed original copy of this Agreement, including the Schedule of Deviations (if any) today:

the …… (day) of …….. (month) 20….. (year)

at ..... (place)

For the Contractor:

Signature .....

Name .....

Capacity .....

Signature and name of witness:

Signature

Name .....

EXPANDED PUBLIC WORKS PROGRAMME

C1.2 PERFORMANCE GUARANTEE

(Not to be completed at tender stage)

In accordance with clause 6.2.1 of General Conditions of Contract, 3rd Edition (2015)

"Guarantor" means: ……

Physical address: ……

"Employer" means: ……

"Contractor" means: ……

"Engineer" means: ……

"Works" means: ……

"Site" means: ……

"Contract" means: The Agreement made in terms of the Form of Offer and Acceptance and such amendments or additions to the Contract as may be agreed in writing between the parties.

"Contract Sum" means: The accepted amount inclusive of tax of R ……

Amount in words: ……

"Guaranteed Sum" means: The maximum aggregate amount of R ……

Amount in words: ……

"Expiry Date" means: ……

CONTRACT DETAILS

Engineer issues: Interim Payment Certificates, Final Payment Certificate and the Certificate Completion of the Works as defined in the Contract.

EXPANDED PUBLIC WORKS PROGRAMME

PERFORMANCE GUARANTEE

1. The Guarantor's liability shall be limited to the amount of the Guaranteed Sum.
2. The Guarantor's period of liability shall be from and including the date of issue of this Performance Guarantee and up to and including the Expiry Date or the date of issue by the Engineer of the Certificate of Completion of the Works or the date of payment in full of the Guaranteed Sum, whichever occurs first. The Engineer and/or the Employer shall advise the Guarantor in writing of the date on which the Certificate of Completion of the Works has been issued.
3. The Guarantor hereby acknowledges that:

3.1 any reference in this Performance Guarantee to the Contract is made for the purpose of convenience and shall not be construed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a suretyship;

3.2 its obligation under this Performance Guarantee is restricted to the payment of money.

4. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 4.1 to 4.3:

4.1 A copy of a first written demand issued by the Employer to the Contractor stating that payment of a sum certified by the Engineer in an Interim or Final Payment Certificate has not been made in terms of the Contract and failing such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 4.2;

4.2 A first written demand issued by the Employer to the Guarantor at the Guarantor's physical address with a copy to the Contractor stating that a period of seven (7) days has elapsed since the first written demand in terms of 4.1 and the sum certified has still not been paid;

4.3 A copy of the aforesaid payment certificate which entitles the Employer to receive payment in terms of the Contract of the sum certified in 4.

5. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor undertakes to pay to the Employer the Guaranteed Sum or the full outstanding balance upon receipt of a first written demand from the Employer to the Guarantor at the Guarantor's physical address calling up this Performance Guarantee, such demand stating that:

5.1 the Contract has been terminated due to the Contractor's default and that this Performance Guarantee is called up in terms of 5; or

5.2 a provisional or final sequestration or liquidation court order has been granted against the Contractor and that the Performance Guarantee is called up in terms of 5; and

5.3 the aforesaid written demand is accompanied by a copy of the notice of termination and/or the provisional/final sequestration and/or the provisional liquidation court order.

6. It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 4 and 5 shall not exceed the Guarantor's maximum liability in terms of 1.
7. Where the Guarantor has made payment in terms of 5, the Employer shall upon the date of issue of the Final Payment Certificate submit an expense account to the Guarantor showing how all monies received in terms of this Performance Guarantee have been expended and shall refund to the Guarantor any resulting surplus. All monies refunded to the Guarantor in terms of this Performance Guarantee shall bear interest at the prime

overdraft rate of the Employer's bank compounded monthly and calculated from the date payment was made by the Guarantor to the Employer until the date of refund.

8. Payment by the Guarantor in terms of 4 or 5 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.
9. Payment by the Guarantor in terms of 5 will only be made against the return of the original Performance Guarantee by the Employer.
10. The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer may deem fit and the Guarantor shall not have the right to claim his release from this Performance Guarantee on account of any conduct alleged to be prejudicial to the Guarantor.
11. The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.
12. This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 2, where after no claims will be considered by the Guarantor. The original of this Guarantee shall be returned to the Guarantor after it has expired.
13. This Performance Guarantee, with the required demand notices in terms of 4 or 5, shall be regarded as a liquid document for the purposes of obtaining a court order.
14. Where this Performance Guarantee is issued in the Republic of South Africa the Guarantor hereby consents in terms of Section 45 of the Magistrate's Courts Act No 32 of 1944, as amended, to the jurisdiction of the Magistrate's Court of any district having jurisdiction in terms of Section 28 of the said Act, notwithstanding that the amount of the claim may exceed the jurisdiction of the Magistrate's Court.

Signed at ……

Date ……

Guarantor's signatory (1) ……

Capacity……

Guarantor's signatory (2) ……..

Capacity ……..

Witness signatory (1) ……

Witness signatory (2) ……

C1.3 CONTRACT DATA

C1.3.1 Conditions of Contract

The Conditions of Contract are:

- the "General Conditions of Contract" as they appear in the commercially available publication "General Conditions of Contract for Construction Works, Third Edition, 2015", hereinafter referred to as "GCC 2015"; and
- Specific data as contained in this Contract Data.

Each party to the Contract shall purchase its own copy of the GCC 2015 (Third Edition) that applies to this Contract, available from its publisher:

South African Institution of Civil Engineering

Private Bag X200

Halfway House

1685

South Africa

Tel +27 (0)11 805 5947

The following Notes apply:

Note 1

The GCC 2015 makes several references to the Contract Data.

Each item of data below is cross-referenced to the clause in the Conditions of Contract to which it applies. Notwithstanding anything specified to the contrary, the Contract Data shall take precedence in the interpretation of any ambiguity or inconsistency between it and the GCC 2015.

The documents forming the Contract are to be taken as mutually explanatory of one another. For the purpose of interpretation, the priority of the documents shall be in accordance with the following order of precedence:

(a) The Form of Offer and Acceptance.

(b) Amendments to the General Conditions of Contract within the Contract Data.

(c) Additional conditions to the General Conditions of Contract within the Contract Data.

(d)corrigenda to the General Conditions of Contract.

(e) The General Conditions of Contract.

(f) The Specifications, Drawings, Schedules and other documents forming part of the Contract (in that order) contained in the Scope of Work and the Site Information.

If any ambiguity or discrepancy is found in the documents, the Engineer needs to be contacted to issue any necessary clarification or instruction.

Note 2

Certain pro-forma forms and pro-forma agreements contained in the GCC 2015 have been adapted for this particular contract. Those pro-forma forms and pro-forma agreements contained in the GCC 2015 do not apply where replaced by similar pro-forma forms and pro-forma agreements in this document.

EXPANDED PUBLIC WORKS PROGRAMME

C1.3.2 Contract Specific Data

The following contract-specific data, referring to the General Conditions of Contract, are applicable to this Contract:

Section 1: Data provided by the Employer

Clause	Data
1.1.1.13	The Defects Liability Period is **12 calendar months** calculated from the date of the Certificate of Completion.
1.1.1.14	The time for achieving Practical Completion is **06 months** calculated from the Commencement Date, excluding special non-working days.
1.1.1.15	The name of the Employer is **Thulamela Local Municipality**
1.1.1.26	The Pricing Strategy of a Re-measurement Contract shall apply
1.2.1.2	The address of the Employer is: Physical address: Civic Centre Old Agriven Building Thohoyandou Postal address: Private Bag x 5066 Thohoyandou 0950 e-mail address: mudzilitp@thulamela.gov.za Contact numbers: Corporate: 015 962 7500 Direct: 015 962 7629 Fax: 015 962 4020

Clause	Data
1.1.1.16	'Engineer' means any Director, Associate or Professional Engineer/Professional Technologist appointed by a Director of JTMI Consulting Engineers to fulfil the functions of the Engineer in terms of the Contract Data.
1.2.1.2	The employer's agent address for receipt of communication is: Physical address: 18 Hospital Road Arbor Park Tzaneen, 0850 e-mail address: office@jtmi.co.za Contact numbers: Corporate: 087 093 2039 Fax: 086 608 4989
3.2.1	The Employer's Agent is required in terms of his appointment with the Employer to obtain the following specific approvals from the employer: e.g. 1. Approval of extension of time; 2. Approval of additional costs; 3. Approval of variation orders; 4. Approval of penalties; 5. Approval from Thulamela Local Municipality for the utilization of any Contingencies.
4.4	A portion of the works must be sub-contracted to local contractors or suppliers as defined in the Scope of Works.

EXPANDED PUBLIC WORKS PROGRAMME

Clause	Data
4.9.1	The Contractor shall deliver to the Employer Agent, on a monthly basis, a detailed inventory of Construction Equipment kept on Site, full particulars given for each day of the month. Distinction shall be made between Owned Equipment and Hired Equipment as well as Equipment in working order and Equipment out of order. Such inventory shall be submitted by the seventh day of the month following the month to be reported.
4.10.2	The Contractor shall deliver to the Employer Agent, on a monthly basis, a return in detail of supervisory staff and the number of categorized classes of labour employed each day for the said period by the Contractor for execution of the Contract. Such return shall be submitted by the seventh day of the month following the month to be reported.
5.3.1	The documentation required **before commencement with Works execution** are: a) Health and Safety Plan (Refer to clause 4.3) b) Initial Programme (Refer to clause 5.6) c) Initial cash flow projection linked to the programme (Refer to clause 5.6.2.6) d) Security (Refer to clause 6.2) e) Insurance (refer to clause 8.6) f) Approach and methodology document for inclusion of QSE / EME sub-contractors, including detailed breakdown of rates. As described in Section 1.3.2 in Part C3 – Scope of Works.
5.3.1	The Works are to be commenced within fourteen **(14)** Days of the Commencement Date taken as Date of Site Hand-over.
5.3.2	The time to submit the documentation required before commencement with Works execution is **14 Days.**
5.4.2	The access and possession of Site shall not be exclusive to the Contractor but as set out in the Scope of Work and Site Information, as well as other Municipality appointed contractors, and in terms of all legislation, including the Construction Regulations 2014.
5.6.2	The programme shall contain the following activities and or items as a minimum requirement: a) Testing and acceptance control b) As-built levels and drawings c) Date for Practical Completion d) Date for Completion e) Health & Safety Compliance Audits

Clause	Data
	f) Environmental Compliance Audits
5.8.1	The non-working Days are Sundays. The special non-working Days are: Statutory public holidays; and All annual year-end shutdown periods as recommended by the South African Federation of Civil Engineering Contractors (SAFCEC), and which commence after the Commencement Date, and which commence before the Due Completion Date.
5.9.7	All designs, calculations, drawings and operation and maintenance manuals shall be fully endorsed by a third party registered engineer, accomplished in such specific field of practice and the cost thereof shall be borne solely by the Contractor. Once the alternative design has been approved, the Contractor shall indemnify and hold harmless the Engineer, the Employer, their agents and assigns, against all claims howsoever arising out of the said design, whether in contract or delict".
5.13.1	The penalty for delay is **R 5000.00 per calendar day.**
5.16.3	The latent defect period is **10 years**, commencing on the Day after the date of certification of Practical Completion.
6.2.1	The type of security required for the due performance of the Contract shall be restricted to one of the following: • Cash deposit of **10 (ten) percent of the Contract Sum,** or • Performance Guarantee of 10 (ten) percent of the Contract Sum, issued by a Commercial Bank registered in the Republic of South Africa, or • Performance Guarantee of 10 (Ten) percent of the Contract Sum, issued by an Insurance Company registered in terms of the Short-tem Insurance Act (Act 53 of 1998). **Whenever a Joint Venture constitutes the contracting party (Contractor) to this Contract, the Performance Guarantee shall be issued on behalf of the Joint Venture.**

Clause	Data
6.2.2	Delete the entire contents of Clause 6.2.2 and replace with: "Failure to deliver an acceptable security as selected in the Contract Data within the stipulated period is a fundamental breach of Contract".
6.5.1.2.3	The percentage allowance to cover overhead charges is **10 (ten) percent**.
6.8.2	The value of certificates issued shall be adjusted in accordance with the Contract Price Adjustment Schedule with the following values: x = 0.10 Labour a = 0.20 Plant b = 0.40 Material c = 0.25 Fuel d = 0.15 The applicable area is **Limpopo Province.** The applicable industry for the Producer Price Index for materials is Civil Engineering Materials Index The applicable area for the Producer Price Index for fuel is **Thohoyandou** The base month is the month prior to closing date of bid.
6.8.3	The following are special materials: Bitumen binder extracted from petroleum based products and used on site, including that used in asphalt, irrespective of whether it is produced and/or placed by the Contractor or an approved subcontractor. The rates and prices for the special materials shall be furnished by the contractor, which rates and prices ex refinery with the base date specified under 6.8.2 and shall exclude VAT but shall include all other obligatory taxes and levies on the basis specified in the contract price adjustment schedule (paragraph 4(i) and 4(ii)).
6.10.1.5	The percentage advance on materials not yet built into the Permanent Works is 80%. Proof of ownership is required and material on site must be utilized within three (3) months after delivery.

EXPANDED PUBLIC WORKS PROGRAMME

Clause	Data
6.10.3	The percentage retention on amounts due to the Contractor is **10 (ten) percent**. The limit of retention money is 10 (ten) percent of the Contract Sum. Add the following sub-clause 6.10.3.1: A Retention Money Guarantee is not permitted.
8.6.1.1.2	The value of Plant and materials supplied by the Employer to be included in the insurance sum is **nil**.
8.6.1.1.3	The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is a maximum of **nil.**
8.6.1.3	The Limit of the liability insurance required should not be less than the contract amount.
8.6.1.5	The following additional and varied insurances are required: CAR & SASRIA.
9.2.1.3.2	Clause 9.2.1.3.2 is replaced by the following "Has failed to submit documentation or to commence the Works in terms of Clause 5.3, or has suspended the progress of the Works for fourteen (14) consecutive days after receiving from the Employer's Agent written notice to proceed," duplicate to C1.5.2
10.5.2	Dispute resolution shall be referred to ad-hoc adjudication.
10.6.1	Should either of the contracting parties disagree with any decision of the ad-hoc adjudicator, such matter shall be referred to litigation for court judgement.
Special Clause in terms of RDP	Requirements in terms of government's reconstruction and development programme. Target values: In this project the minimum target values shall be as follows: • Labour Maximisation (Wages) :**12%**

EXPANDED PUBLIC WORKS PROGRAMME

Clause	Data
	It is a requirement that the Contractor plan for achieving these targets and that a planned programme for achieving each of the targets is submitted at the start of the project together with the clause 12 programme of construction. **Penalties:** The penalties for not reaching the required labour target values will be calculated at **200%** of the difference between the set target values and the actual target values achieved by the contractor at completion of the works. Penalties will be applied monthly, when the actual figures are less than **75%** of the planned monthly figures. No bonuses for achieving the set target values are applicable.
Special Clause in terms of EPWP	
Payment for LI Component of Works	Payment for works identified in the Scope of Works as being labour-intensive shall only be made in accordance with the provisions of the Contract if the works are constructed strictly in accordance with the provisions of the Scope of Work. Any payment for such works shall not relieve the Contractor in any way from his obligations either in contract or in delict
Linkage of Payment to Submission of Project Data	The Contractor's payment invoices shall be accompanied by labour information for the corresponding period in a format specified by the employer. If the contractor chooses to delay submitting payment invoices, labour returns shall still be submitted as per frequency and timeframe stipulated by the Employer. The contractor's invoices shall not be paid until all pending labour information has been submitted.
Applicable Labour Laws	The current Ministerial Determination (also downloadable at www.epwp.gov.za), Expanded Public Works Programmes, issued in terms of the Basic Condition of Employment Act of 1997 by the Minister of Labour in Government Notice, shall apply to works described in the scope of work as being labor-intensive and which are undertaken by unskilled workers.

EXPANDED PUBLIC WORKS PROGRAMME

C1.3.4 Section 2: Data provided by the Contractor

Clause	Data
1.1.1.9	The contractor is .....
1.2.1.2	The contractor's address for receipt of communication is: Telephone: ..... Facsimile: ..... E-mail:…… Address:……
5.5.1	The Works shall be completed within .....Months as proposed by the contractor.
6.5.1.2.3	The percentage allowances to cover all charges for the contractor's and subcontractor's profits, timekeeping, clerical work, insurance, establishment, superintendence and the use of hand tools is .....% (**Maximum 10%).**
6.8.3	The rate for special materials, exclusive of Value Added Tax is to be completed in Schedule T2.3 C.

PRIORITY OF DOCUMENTS

The documents forming the Contract are to be taken as mutually explanatory of one another. For the purpose of interpretation, the priority of the documents shall be in accordance with the following sequence:

a) The Form of Offer and Acceptance.

b) Amplifications of the General Conditions of Contract within the Contract Data.

c) Additional special conditions or amendments to the General Conditions of Contract within the Contract Data.

d) The General Conditions of Contract.

e) The Specifications, Drawings, Schedules and other documents forming part of the Contract (in that order) contained in the Scope of Work and the Site Information.

If any ambiguity or discrepancy is found in the documents, the Engineer shall issue any necessary clarification or instruction.

EXPANDED PUBLIC WORKS PROGRAMME

C1.3.3 Variations to the General Conditions of Contract

The following amendments of the General Conditions of Contract 2015 apply to this contract. The headings in these Special Conditions of Contract shall not be deemed to be part thereof nor be taken into consideration in the interpretation or construction thereof or of the Contract.

1. CONTRACTOR'S GENERAL OBLIGATIONS

1.1 EXTENT OF OBLIGATIONS AND LIABILITY

Add the following sub clause:

4.1.1.1 The Contractor shall, save in so far as it is legally or physically impossible,

(b) Provide all superintendence, labour, materials, Constructional Plant, Temporary Works, including the design thereof, all requisite transport and all other things, whether of a temporary or permanent nature, required in and for such design, execution and completion of the Works and for the remedying of any defects, so far as the necessity for providing the same is specified in or reasonably to be inferred from the Contract.

(c) After award of the Contract, the Contractor shall be obligated to ensure that at least the Constructional Plant stated on the prescribed form in the Tender Documents, or Constructional Plant equivalent thereto, are on the site when required."

"4.1.3 Contractor deemed to have inspected the Site

The Contractor shall be deemed to have inspected and examined the Site and its surroundings and information available in connection therewith and to have satisfied himself before submitting his tender (as far as practicable) as to

(a) the form and nature of the Site and its surroundings, including subsurface conditions,

(b) the hydrological and climatic conditions.

(c) the extent and nature of work and materials necessary for the execution and completion of the Works,

(d) the means of access to the Site and the Accommodation he may require and, in general, shall be deemed to have obtained all information (as far as is practicable) as to risks, contingencies and all other circumstances which may influence or affect his tender.

No subsequent claims by the Contractor arising from his lack of knowledge of perceptible conditions on the site or its surroundings or of information available in connection therewith shall be entertained."

4.3 LEGAL PROVISIONS

Add the following sub-sub clauses:

4.3.1 The Contractor shall, in fulfilling the Contract, comply with all applicable laws, *with regard to Health, Safety, Wages and Condition of Work*, regulations, statutory provisions and agreements, and shall, at the request to the Employer's Agent, provide proof that he has complied therewith.

EXPANDED PUBLIC WORKS PROGRAMME

4.3.1.1 Mine Health and Safety Act, number 29 of 1996

The Employer shall obtain the Mining Authorisation for all sites where mining activities, as defined in the Mine Health and Safety Act, number 29 of 1996 as amended, are to be conducted.

4.3.1.2 Mineral Resources Petroleum Development Act, number 28 of 2002

The Contractor shall assume responsibility for the Environmental Management Programme (EMPR) in respect of the sites and shall ensure that the sites are rehabilitated at the conclusion of the contract."

4.4. SUBCONTRACTING

Add the following subclauses:

"4.4.7 Continuing obligation extending beyond date of completion of the work

In the event of a Selected Subcontractor having undertaken to the Contractor, in respect of work executed or goods or materials supplied by such Selected Subcontractor, any continuing obligation extending beyond the date of completion of the work or the end of the Defects Liability Period, and Latent Defect Liability Period as the case may be, the Contractor shall at any time after such date cede to the Employer, at the Employer's request and cost, the benefit of such obligation for the unexpired duration thereof, whereupon the Employer shall have no further claim against the Contractor in respect of the said continuing obligation.

4.4.8 Convert the subcontract

If the contract shall have been cancelled in terms of clause 9.2, the Employer shall have the right, by written notice given to any Selected Subcontractor not later than 28 days after the said cancellation, to convert the subcontract concerned to a direct contract between the Employer and the Subcontractor.

Provided that:

(a) the terms of the said direct contract shall mutatis mutandis be those of the subcontract concerned, and

(b) the Employer shall have the said right, notwithstanding any breach of the subcontract by the Contractor, subject to his forthwith paying to the Subcontractor all amounts then owing to the Subcontractor by the Contractor and perform any obligation which the Contractor has failed to perform."

4.9 CONSTRUCTION EQUIPMENT

Add the following: sub clauses:

"4.9.2 Preclude seizure of construction equipment

In order to preclude seizure by the owner of any constructional plant being held by the Contractor on a hire or hire-purchase agreement for the purposes of the contract, the Employer shall be entitled to pay any such owner the amount of any outstanding instalment or other sum owing under any hire or hire-purchase agreement and in the event

of his doing so, any amount thus paid by him shall be a debt payable to the Employer by the Contractor and may be deducted by the Employer from any moneys owing or that may become owing to the Contractor in terms of the contract, or be recovered at law from the Contractor by the Employer.

4.9.3 Constructional plant brought to the site by the subcontractor

When entering into any subcontract agreement for the execution of any part of the works, the Contractor shall incorporate in such subcontract agreement, by reference or otherwise, the provisions of this clause in respect of construction equipment brought to the site by the subcontractor."

5. TIME AND RELATED MATTERS

5.4 ACCESS TO THE SITE

Add the following subclause:

5.4.4 "If the site is insufficient for the needs and requirements of the work, the Contractor shall arrange with the owners or tenants for the additional land required and pay all rent and costs in connection therewith. The Contractor shall be responsible for all damage to such land and property, and he shall indemnify the Employer and hold him harmless in respect of all claims, demands proceedings, damages, costs, including attorneys and client costs, charges and expenses arising in respect thereof."

5.14 COMPLETION

Delete the following:

"5.14.5.3 The retention shall be reduced to half in terms of Clause 6.10.5"

5.16 APPROVAL

5.16.1 Final Approval Certificate

Delete the last sentence of this clause and replace with:

The payment of the retention money or the release of the retention money guarantee shall only be permitted after the Engineer has issued the Final Approval Certificate.

6. PAYMENT AND RELATED MATTERS

6.6 PROVISIONAL SUMS AND PRIME COST SUMS

6.6.1.2.1 In the first line after the word "sums" insert "excluding VAT"

6.6.1.2.2 In the fourth line after the word "amount" insert "excluding VAT"

6.10.5 Payment of retention money

Delete the first four lines where reference is made to the first half of retention. The paragraph should read:"

EXPANDED PUBLIC WORKS PROGRAMME

"Retention money shall become due when the Employer's Agent shall have certified payment thereof within 14 days after the expiration of the Defects Liability Period, extended if necessary, in terms of Clauses 5.14.4 or 7.8.1. No retention, or part thereof, will hence be payable upon the issue of a Certificate of Completion as indicated in Clause 5.14.5.3.

6.11 VARIATIONS EXCEEDING 15 PER CENT

6.11.1 Second paragraph:

Change "15%" to "20%".

Add the following subclause:

"6.11.2 Variations exceeding 20% per cent

Where the decrease or increase in the quantity of work has not resulted from a written variation order (or an additional agreement) in terms of clause 5.11 but from the fact that the quantities are less or more than those given in the bill of quantities, the tendered rates or sums shall still apply, except in the case of a sub-item (or an item not subdivided into sub-items) in the bill of quantities, which covers work the value of which during the tender stage exceeds 7,5% of the value of the tender sum, and where the quantity of such sub-item or item, upon completion of the contract, deviates by more than 20% from the quantity given in the bill of quantities so that the scale of activities or the method of construction consequently changes to such an extent that the tendered rate or sum no longer applies. In such case the Engineer, should he deem it to be in the interest of the Employer or should the Contractor enter a claim, shall, considering the extent by which the deviation in respect of the quantity of the sub-item or item concerned exceeds 20%, determine a sum which will be equitable in the circumstances, and shall certify that such sum shall be deducted from or added to the sums owing to the Contractor."

8. RISKS AND RELATED MATTERS

8.2 Care of works

Add the following:

8.2.2.4 The Contractor shall take care that property beacons, trigonometrical survey beacons or setting-out beacons are not displaced or destroyed without the consent of the Employer's Agent. Property beacons and trigonometrical survey beacons that have been displaced or destroyed shall be replaced by a registered land surveyor, who shall certify such replacement.

The cost of replacing all beacons displaced or destroyed during the course of the Contract without the consent of the Employer's Agent shall be borne by the Contractor."

EXPANDED PUBLIC WORKS PROGRAMME

9. TERMINATION OF CONTRACT

9.3 Termination by Contractor

Delete the wording of sub clause 9.3.1.1.2 and replace this clause with the following:

9.3.1.2 "Failing to pay the contractor the amount due in terms of any payment certificate issued by the Employer's Agent, provided that such payment certificate is acceptable to the Employer and further more subject to the provision of sub-clause 3.2.3, within the time of payment provided in the contract, or."

10. CLAIMS AND DISPUTES

Add the following

10.12 Joint ventures

"If the Contractor is in a joint venture of two or more parties or persons, the parties or persons shall be jointly and severally bound to the Employer for fulfilment of the Contractor's obligations and terms of this Contract. The formation and/or conditions of agreement of the joint venture shall not be altered without the consent of the Employers. Should such a change be acceptable to the Employer then two notarially certified copies of the revised Joint Venture Agreement shall be submitted to the Employer's Agent within fourteen (14) days of signature thereof by the parties to the Joint Venture."

EXPANDED PUBLIC WORKS PROGRAMME

C1.4 PERFORMANCE GUARANTEE FOR MATERIALS AND EQUIPMENT NOT YET BUILT INTO THE WORKS

(not to be completed at bid stage)

To: .....

.....

.....

(hereinafter referred to as the Employer)

re: Demand Guarantee in respect of the project : ……

Contract No. : ……

For construction of : ……

Contractor : ……

I/We, the undersigned,

……

and

……

of

……

(hereinafter referred to as the “Bank”)

EXPANDED PUBLIC WORKS PROGRAMME

address:

……

……

and acting on behalf of the Bank have been informed that ……

(hereinafter called "the Contractor") is your contractor under such Contract and wishes to receive payment in respect of manufacture or partial manufacture of equipment and/or materials brought in a ready state for dispatch to the construction site, whether temporarily stored in the warehouse of the Contractor or on the Construction Site, for which the Contract requires him to obtain a guarantee.

We hereby irrevocably undertake to pay you, the Employer, any sum or sums not exceeding in total the amount of R..... (in words..... only) the "Guaranteed Amount"

upon receipt by us of your demand in writing and your written statement stating:

- that the Contractor has failed to deliver such equipment and/or materials when required or instructed to do so.

The Bank's liability under this guarantee is principal in nature and is not subject to the Contract. The Bank's liability shall not be reduced, or in any way be affected by any alteration of the terms of the Contract, or any other arrangements made between the Employer and Contractor.

The Bank will pay on demand and will not determine the validity of the demand or the correctness of the amount demanded or become party to any claim or dispute of any nature which any party may allege.

The Bank will pay the amount demanded into the bank account to be notified by the Employer.

This guarantee is neither negotiable nor transferable, is restricted to the payment of a sum of money only and is limited to the Guaranteed Amount.

This guarantee will lapse sixty (60) days after all the said equipment and/or materials have been built into the Works unless the Bank is, before the expiration date, advised in writing by the Employer of his intention to demand payment for such equipment and/or materials.

This original guarantee must be returned to the Bank by the Employer or the Employer's duly authorized agent either:

- on expiry of the guarantee; or
- against payment of the Guaranteed Amount.

This guarantee shall be governed by the law of the Republic of South Africa.

EXPANDED PUBLIC WORKS PROGRAMME

The Bank chooses as its domicilium citandi et executandi for the purpose of the service of all notices and legal processes the following address:

THUS DONE AND SIGNED AT ..... ON ..... 20.....

In the presence of the following:

AS WITNESSES:

1. .....
   .....
   Print Name

2. .....
   .....
   Print Name

on behalf of the Bank and duly authorized thereto

1. .....
   .....
   Print Name

and

on behalf of the Bank and duly authorized thereto

2. .....
   .....
   Print Name

EXPANDED PUBLIC WORKS PROGRAMME

C1.5 RETENTION MONEY GUARANTEE

(not to be completed at bid stage)

TO: .....

.....

.....

.....

(whom the Contract defines as "the Employer")

Re:	Retention Money Guarantee in respect of	:	……..
	Contract Number	:	……..
	For supply of	:	……..
	Contractor	:	……..

I/We, the undersigned,

……..

and

……..

of

……..

(hereinafter referred to as the "Bank")

address:

……..

……..

and acting on behalf of the Bank have been informed that..... (hereinafter called the "Contractor") is your contractor under such Contract and wishes to receive early payment of the retention money, for which the Contract requires him to obtain a guarantee.

We hereby irrevocably undertake to pay you, the Employer, any sum or sums not exceeding in total the amount of R..... (in words.....) (the "guaranteed amount",

upon receipt by us of your demand in writing and your written statement stating:

- that the Contractor failed to carry out his obligation(s) to rectify defect(s) for which he is responsible under the Contract.

The Bank's liability under this guarantee is principal in nature and is not subject to the Contract. The Bank's liability shall not be reduced, or in any way be affected by any alteration of the terms of the Contract, or any other arrangements made between the Employer and Contractor.

The Bank will pay on demand and will not determine the validity of the demand or the correctness of the amount demanded, or become party to any claim or dispute of any nature which any party may allege.

The Bank will pay the amount demanded into the Bank account to be notified by the Employer.

This guarantee is neither negotiable nor transferable, is restricted to the payment of a sum of money only and is limited to the Guaranteed Amount.

This guarantee shall expire on the date on which the last of the retention monies, which but for this guarantee would have been retained by the Employer, becomes payable to the Contractor.

This original guarantee must be returned to the Bank by the Employer or the Employer's duly authorized agent either:

- on expiry of the guarantee; or
- against payment of the Guaranteed Amount.

This guarantee shall be governed by the law of the Republic of South Africa.

The Bank chooses as its domicilium citandi et executandi for the purpose of the service of all notices and legal processes the following address:

THUS DONE AND SIGNED AT ..... ON ..... 20.....

In the presence of the following:

AS WITNESSES:

1. .....

.....
Print Name

2. .....

.....
Print Name

on behalf of the Bank and duly authorized thereto

1. .....

.....
Print Name

and

on behalf of the Bank and duly authorized thereto

2. .....

.....
Print Name

C1.6 AGREEMENT IN TERMS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT 85 of 1993 AND APPOINTMENT AS MINE MANAGER IN TERMS OF SECTION 3(1)(a) OF MINE HEALTH AND SAFETY ACT 29 of 1996.

This AGREEMENT made at ……. on this ……. day of..... in the year …… between THULAMELA LOCAL MUNICIPALITY (hereinafter called "the Employer" on the one part, herein represented by ……. in his capacity as …… And delegate of the Employer and …..... (hereinafter called "the Principal Contractor") of the other part, herein represented by ……. in his capacity as ……

WHEREAS the Employer is desirous that certain works be constructed, as stated for in Contract No RAL/……For (description of contract)..... ……..… …… in the ……District of Limpopo Province and has accepted a tender by the Principal Contractor for the construction, completion and maintenance of such works and whereas the Employer and the Principal Contractor have agreed to certain arrangements and procedures to be followed in order to ensure compliance by the Principal Contractor with the provisions of the Occupational Health and Safety Act 1993(Act 85 of 1993 and the Construction Regulation, February 2014):

NOW THEREFORE THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. The Principal Contractor shall execute the work in accordance with the contract documents pertaining to this contract.

2. This Agreement shall hold good 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 certificate issued in terms of clause 5.14 of the General Conditions of Contract for Construction Works 2015 (Third Edition) as issued by the South African Institution of Civil Engineering (hereinafter referred to as "the GCC 2015"), as contained in the contract documents pertaining to this contract, or

   b) the date of termination of the contract in terms of clause 9.1, 9.2 or 9.3 of the GCC 2015.

3. The Principal Contractor declares himself to be conversant with the following:-

   a) All 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

EXPANDED PUBLIC WORKS PROGRAMME

iv. Sub-section 37(2) relating to the purpose and meaning of this Agreement.

v. Construction Regulations 2014, and other safety regulations, as applicable.

b) The procedures and safety rules of the employer as pertaining to the Principal Contractor and to his subcontractors.

4. The Principal Contractor is responsible for the compliance with the Act by his sub-contractors, whether or not selected and/or approved by the employer.

5. The Principal Contractor warrants that all his and his sub-contractors' employees (permanent and temporary) are covered in terms of the Compensation for Occupational Injuries and Diseases Act 1993 which cover shall remain in force whilst any such employees are present on site. The Principal Contractor shall submit a written report to this effect at each Progress Site Meeting.

6. The Principal Contractor undertakes to ensure that he and/or his sub-contractors and/or their respective employees will at all times comply with the following conditions:

a) The Principal Contractor shall assume the responsibility in terms of Section 16.1 of the Occupational Health and Safety Act. The Principal contractor shall not delegate any duty in terms of Section 16.2 of this Act without the prior written approval of the Employer. If the Principal contractor 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 Principal Contractor 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.

c) The Employer hereby obtains an interest in the issues of any formal enquiry conducted in terms of Section 32 of the Occupational Health and Safety Act into any incident involving the Principal Contractor and/or his employees and/or his sub-contractors.

Further to the abovementioned, where contracts involve quarries or borrow pits, the following shall be applicable:-

In terms of Section 3(1)(a) of the Mine Health and Safety Act of 1996, The Roads Agency Limpopo SOC. shall appoint a manager for its mine/s.

You are hereby appointed as the mine manager for ……, with effect from ..... until further notice.

In terms of this appointment you are charged with the functions, duties and responsibilities imposed by the aforementioned Act and its regulations. Without derogating from the duties, functions and responsibilities imposed by this legislation, you are to:

i) Control, manage and direct employees at the Mine (borrow pit or quarry).

ii) Take all reasonable measures to ensure the health and safety of employees and proper discipline at the Mine.

iii) Take all reasonable measures to ensure that the provisions of the Mine Health and Safety Act and its regulations (as may be amended from time to time) are implemented and adhered to at the Mine.

iv) Ensure and maintain a healthy and safe mine environment for all persons.

v) Ensure an adequate supply of health and safety equipment and facilities.

vi) Staff the Mine, with due regard to health and safety.

vii) Provide health and safety training as far as reasonably practicable to all employees.

viii) Initiate, prepare and implement codes of practice, relating to health and safety.

ix) Maintain an effective risk identification and management system.

x) Ensure the effective maintenance of hazard identification and medical monitoring records.

xi) Prepare and or review the Health and Safety Policy for the Mine.

xii) Ensure that an annual medical report is compiled at the Mine, and forwarded to the owner or the appointed owner representative of the Mine.

xiii) Ensure compliance with relevant environmental legislation.

xiv) Assist with implementation and maintenance of the Road Agency Limpopo SHE Management Standards, the Contractor's Compliance Pack and operational procedures.

xv) Enhance a culture of high performance in safety and health.

You are to appoint the prescribed persons to assist you in your duties and functions, and you are hereby authorised and obliged to take all reasonable measures to comply with legislative requirements. You are to ensure that an acting mine manager is appointed when you are to be absent, or on leave for a period longer than five (5) days.

Instructions and procedures are from time to time issued by the board of the Roads Agency Limpopo, and it will be your responsibility to ensure the implementation and adherence to these instructions and procedures at the Mine.

You are further responsible to ensure that relevant environmental legislative requirements are complied with, including the implementation of all internal procedures and systems to ensure compliance with such legislation.

It would be the responsibility of yourself to report any shortcomings, in relation to the implementation of applicable legislation which you are unable to rectify, immediately in writing to the appointed owner representative.

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

EXPANDED PUBLIC WORKS PROGRAMME

SIGNED FOR ON BEHALF OF THE EMPLOYER/SECTION 4.1 APPOINTEE

……

WITNESS: 1…….. 2……..

NAME

(IN CAPITALS) 1…….. 2……

DATE: ……

SIGNED FOR AND ON BEHALF OF THE PRINCIPAL CONTRACTOR/MINE MANAGER

……

WITNESS: 1…….. 2……..

NAME

(IN CAPITALS) 1…….. 2……..

DATE: ……

Copy to: The Chief Inspector - Department of Minerals and Energy

EXPANDED PUBLIC WORKS PROGRAMME

EXAMPLE FOR USE BY CONTRACTOR WHEN APPOINTING SUB-ORDINATES IN TERMS OF THE MINE HEALTH AND SAFETY ACT (1996) AS AMENDED.
(To be printed on Contractors letter head)

APPOINTMENT IN TERMS OF SUB-ORDINATE MANAGER: REGULATION 2.6.1 IN FORCE IN TERMS OF SCHEDULE 4 OF THE MINE HEALTH AND SAFETY ACT (ACT NO. 29 OF 1996) AS AMENDED BY THE HEALTH SAFETY AMENDEMENT ACT (ACT NO. 72 OF 1997)

I, …….. in my capacity as ……., having been appointed in terms of **Section 3(1)** of the Act (as amended), by the Executive Manager: Roads Management who is our client, 'Thulamela Local Municipality' and owner of the Mine(s) to be worked under the requirements of the above mentioned Acts hereby, in terms of **Regulation 2.6.1** of the Act as amended, appoint.....as Sub-Ordinate Manager of the Contractor, …….. of address, …….. and contact number, ……... on **BID No.: 43/2026/2027 RECONSTRUCTION OF ITSANI TO SHAYANDIMA ROADS**

In accordance with the provisions of the Mine Health and Safety Act, 1996 (Act 29 of 1996), you are also appointed in terms of Section 7(2) of the Mine Health and Safety Act, 1996 to perform the following functions, assigned to the Mine Manager in terms of Section 7(1), 10(2) (b) and (c) and 11 (1) in so far as your area of responsibilities are concerned:-

1. You must identify the hazards, assess the risk and record the hazards to health and safety to which employees may be exposed while they are at work, and
2. To the extent that is reasonable, you must ensure that every employee is properly trained:
   a. In the measures necessary to eliminate, control and minimise those risks to health and safety.
   b. In the procedures to be followed to perform the employee's work.
3. To the extent that is reasonably practical, you must:-

   Ensure that every employee becomes familiar with the work-related hazards and risk and the measures that must be taken to eliminate, control and minimise those hazards and risks.
4. To the extent that is reasonably practical, you must:-

   Ensure that every employee under your control complies with the requirements of the Act.

   Institutes the measures necessary to secure, maintain and enhance health and safety.

   Considers and employees training and capabilities in respect of health and safety before assigning a task to that employee.

   Ensure that work is performed under the general supervision of a person trained to understand the hazards associated with the work, and who has the authority to ensure that the precautionary measures laid down by the Manager are implemented.

   You will be responsible for the control, management and direction of all the activities and employees connected with work and you are required to ensure that all such

EXPANDED PUBLIC WORKS PROGRAMME

activities take place in accordance with the provisions of the Mine Health and Safety Act and the Regulations are complied with.

You are further required to inform the Manager, …… as soon as practicable, of any breach of any provision of these Regulation, to enable him to inform the Principal Inspector of Mines, Department of Minerals and Energy, or take such steps as may be necessary.

Please acquaint yourself with the relevant Regulations, Standards and Procedures, which have a bearing on your appointment. You must ensure that you are fully conversant with the requirements of the Procedures for Reporting Accidents.

SIGNED: .....

DATE: .....

WITNESS: 1. ..... 2. .....

NAME(Print):1. ..... 2. .....

I,....., having been appointed in terms of Regulation 2.6.1 of the act (as amended) to perform all functions entrusted to……In terms of the Act (as amended) hereby accept the above appointment.

SIGNED: .....

DATE: .....

WITNESS: 1. ..... 2. .....

NAME(Print):1. ..... 2. .....

EXPANDED PUBLIC WORKS PROGRAMME

EXAMPLE FOR USE BY CONTRACTOR WHEN APPOINTING SUB-ORDINATES IN TERMS OF THE MINE HEALTH AND SAFETY ACT (1996) AS AMENDED.
(To be printed on Contractors letter head)

APPOINTMENT AS COMPETENT PERSON IN CHARGE OF MACHINERY IN TERMS OF REGULATION 2.13.2 IN FORCE IN TERMS OF SCHEDULE 4 OF THE MINE HEALTH AND SAFETY ACT (ACT NO. 29 OF 1996) AS AMENDED BY THE HEALTH AND SAFETY AMENDEMENT ACT (ACT NO. 72 OF 1997)

I, …… in my capacity as ..... , having been appointed in terms of **Section 3(1)** of the Act (as amended), by the Executive Manger: Roads Management, who is our client, 'Thulamela Local Municipality' and owner of the Mine(s) to be worked under the requirements of the above mentioned Acts hereby, in terms of **Regulations 2.13.2** of the Act as amended, appoint …….. as Competent Person in charge of machinery for the Contractor, ...of address ……. and contact number, ...on all contracts in the Limpopo Province that are undertaken by the contractor.

You are to report any accident to the mine manager immediately and personally visit the scene of the accident without delay.

You must familiarise yourself with the Mine Health and Safety Act and the Minerals Act and the Regulations and ensure that you have a copy in your possession and you must take all reasonable measures to ensure that the provisions of this Act are complied with.

Your attention are further drawn to Regulation 2.13.4.1 as well as the requirements of Chapter 18,20 and 21.

Please confirm this appointment by signing at the bottom.

SIGNED: ..... DATE:.....

NAME: .....

SIGNED: ..... DATE:.....

NAME: .....

C1.7 ABSTRACTS OF THE MINE HEALTH AND SAFETY ACT No. 29 OF 1996 AND AMENDMENT ACT No. 72 OF 1997

FDEFINITIONS:

Section 102 of the Mine Health and Safety Act refers.

"mine" means, when –

(a) "used as a noun-

(i) any borehole, or excavation, in any tailing or in the earth, including the portion of the earth that is under the sea or other water, made for the purpose of searching for or winning a mineral, whether is being worked or not, or

(ii) any other place where a mineral deposit is being exploited, including the mining area and all buildings, structures, machinery, mine dumps, access roads or objects situated on or in that area that are used or intended to be used in connection with searching, winning, exploiting or processing of a mineral, or for health and safety purposes. But, if two or more excavations, boreholes or places are being worked in conjunction with one another

(iii) a works; and

b) used as a verb, the making of any excavation or borehole referred to in paragraph (a) (i), or the exploitation of any mineral deposit in any other manner, for the purpose of winning a mineral including prospecting in connection with the winning of a mineral.

a) whether that substance is in solid, liquid or gaseous form;

b) that occurs naturally in or on the earth, in or under water or in tailings, and

c) that has been formed by or subjected to a geological process.

"processing" means the recovering, extracting, concentrating, refining, calcimining, classifying, crushing, milling, screening, washing, reduction, smelting or gasification or any mineral, and "process" has a similar meaning

"works" means any place, excluding a mine, where any person carries out-

a) The transmitting and distributing to another consumer of any form of power from a mine, by the owner thereof, to the terminal point of bulk, to the power supply meter on any such other consumer's premises, or

b) Training at any central rescue station, or

c) The making, repairing, re-opening or closing of any subterranean tunnel, or

d) Any operations necessary in connection with any of the operational listed in this paragraph.

EXPANDED PUBLIC WORKS PROGRAMME

C1.8 AGREEMENT WITH ADJUDICATOR

This agreement is made on the.....day of ..... 20 ..... between: the Employer

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

of (*address)*.....

.....and the Contractor

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

of *(address)*.....

.....

(hereinafter called **the Parties**)

and

(name).....

of *(address)*

.....

.....

(hereinafter called **the Adjudicator**)

Disputes or differences may arise/have arisen* between the Parties under a Contract dated.....

and known as Contract No.....

(Contract title).....

and these disputes or differences shall be/have been* referred to adjudication in accordance with the CIDB Adjudication Procedure, (hereinafter called "**the Procedure**") and the Adjudicator may be or has been requested to act.

(Delete as necessary)*

IT IS NOW AGREED as follows:

1. The rights and obligations of the Adjudicator and the Parties shall be as set out in the Procedure.
2. The Adjudicator hereby accepts the appointment and agrees to conduct the adjudication in accordance with the Procedure.
3. The Parties bind themselves jointly and severally to pay the Adjudicator's fees and

expenses in accordance with the Procedure as set out in the Contract Data.

4. The Parties and the Adjudicator shall at all times maintain the confidentiality of the adjudication and shall endeavour to ensure that anyone acting on their behalf or through them will do likewise, save with the consent of the other Parties which consent shall not be unreasonably refused.
5. The Adjudicator shall inform the Parties if he intends to destroy the documents which have been sent to him in relation to the adjudication and he shall retain documents for a further period at the request of either Party.

SIGNED by:

Signature):	(*Signature*):	(*Signature*): .....
Name:	**Name**:	**Name**: .....
who warrants that he/ she is duly authorised to sign for and on behalf of the **First Party** in the presence of	who warrants that he/ she is duly authorised to sign for and on behalf of the **Second Party** in the presence of	the **Adjudicator** in the presence of
Witness:	**Witness:**	**Witness:**
(*Signature*).....	(*Signature*).....	(*Signature*).....
Name:	**Name**:	**Name**: .....
Address:	Address:	Address: .....
.....	.....	.....
Date:	Date:	Date: .....

EXPANDED PUBLIC WORKS PROGRAMME

PART C2: PRICING DATA

C2.1 PRICING INSTRUCTIONS.....C.42
C2.2 BILL OF QUANTITIES C.46

C2.1 PRICING INSTRUCTIONS

1 For the purposes of this bill of quantities, the following words shall have the meanings hereby assigned to them:

Unit: The unit of measurement for each item of work as defined in the standard specifications or the project specifications.

Quantity: The number of units of work for each item.

Rate: The payment per unit of work for which the tenderer tenders to do the work.

Amount: The product of the quantity and the rate tendered for an item.

Lump Sum: An amount tendered for an item, the extent of which is described in the bill of quantities, the specifications or elsewhere, but of which the quantity of work is not measured in units.

2 This bill of quantities forms part of the contract documents and must be read in conjunction with all the other documents comprising the contract documents.

3 The quantities set out in the bill of quantities are only approximate quantities. The quantities of work finally accepted and certified for payment, and not the quantities given in the bill of quantities, will be used to determine payments to the contractor.

The validity of the contract shall in no way be affected by differences between the quantities in the bill of quantities and the quantities finally certified for payment. Work is valued at the rates or lump sums tendered, subject only to the provisions of sub-clause 1209 (a) of the standard specifications.

4 Rates and lump sums shall include full compensation for overheads, profits, incidentals, tax (other than VAT), etc, and for the completed items of work as specified, all in accordance with sub-clause 1209 (b) of the standard specifications. Full compensation for completing and maintaining, during the defects liability period, all the work shown on the drawings and specified in the standard specifications and project specifications and for all the risks, obligations and responsibilities specified in the general conditions of contract, special conditions of contract, standard specifications and project specifications shall be considered as provided for collectively in the items of payment given in the bill of quantities, except in so far as the quantities given in the bill of quantities are only approximate.

5 The tenderer shall fill in a rate or a lump sum for each item where provision is made for it even where no quantities are given. Items against which no rate or lump sum has been entered in the tender will not be paid for when the work is executed, as payment for such work will be regarded as being covered by other rates or lump sums in the bill of quantities.

The tenderer shall fill in a rate against all items where the words “rate only” appear in the amount column. Although no work is foreseen under such item and no quantities are

consequently given in the quantity column, the tendered rate shall apply should work under this item actually be required. Tenders should note the provisions of paragraph 12 of this preamble.

If the tender should group a number of items together and tender one lump sum for each group of items, this single tendered lump sum shall apply to that group of items and not to each individual item, or should he indicate that full compensation for any item has been included in the rate for another item, the rate for the item included in another item shall be deemed to be nil.

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

6 The works executed are measured for payment in accordance with the methods described in the contract documents under the various payment items, notwithstanding any custom to the contrary. Attention is directed to the provisions of clause 1220 of the standard specifications regarding the measurements of quantities for payment. Except where specified otherwise than in clause 1220, the nett measurement or mass of the finished work in place shall be taken for payment, and any volume or mass of work in excess of that prescribed, shall be excluded.

7 The amount of work or the quantities of material stated in the bill of quantities shall not be considered as restricting or extending the amount of work to be done or quantity of material to be supplied by the contractor.

8 The statement of quantities of material or the amount of work in the bill of quantities shall not be regarded as authorisation for the contractor to order material or to execute work. The contractor shall obtain the engineer’s detailed instructions for all work before ordering any materials or executing work or making arrangements in this regard.

9 The short descriptions of the payment items in the bill of quantities are only given to identify the items and to provide specific details. Reference shall, inter alia, be made to the drawings, standard specifications, project specifications, general conditions of contract and special conditions of contract for more detailed information regarding the extent of work entailed under each item.

10 The provisions of clause 6.6 of the general conditions of contract shall apply to provisional sums and prime cost sums.

11 If a bill of quantities (or schedule of quantities or schedule of rates) applies and there is an error in the line item total resulting from product of unit rate and quantity, the line item total shall govern and the rates shall be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line item total as quoted shall govern, and the unit rate shall corrected.

12 A tender may be rejected if the unit rates or lump sums for some of the items in the bill of quantities are, in the opinion of the employer, unreasonable or out of proportion, and if the

tenderer fails, within a period of seven (7) days of having been notified in writing by the employer to adjust the unit rates or lump sums for such items, to make such adjustments.

13 The units of measurement indicated in the bill of quantities are metric units

The following abbreviations are used in the bill of quantities:

mm	=	millimetre
m	=	metre
km	=	kilometre
km-pass	=	kilometre-pass
m²	=	square metre
m²-pass	=	square metre pass
ha	=	hectare
m³	=	cubic metre
m³km	=	cubic metre kilometre
l	=	litre
kl	=	kilolitre
kg	=	kilogram
t	=	ton (1000 kg)
No	=	number
mn	=	meganewton
mn-m	=	meganewton-metre
%	=	per cent
kW	=	kilowatt
Kn	=	kilonewton
PC sum	=	prime cost sum
Prov sum	=	provisional sum

14 All rates and sums of money quoted in the bill of quantities shall be in rands and whole cents. Fractions of a cent shall be discarded

15 The item numbers appearing in the bill of quantities refer to the corresponding item numbers in the standard specifications. Item numbers prefixed by the letter B refer to payment items described under part B of the project specifications, those with C to payment items described under part C, and so on for further parts of the project specifications.

Item numbers in schedule B of the bill of quantities are, in addition, preceded by the number of each separate part of schedule B of the bill of quantities, e.g. payment item 62.02 described in the standard specifications (clause 6210), when used in part 3 of schedule B of the bill of quantities, would be numbered 3/62.02, and if this payment item had been amended in part B of the project specifications, the payment item would be indicated as 3/B62.02.

16. Labour intensive items are highlighted in the bills of quantities for the payment items relating to labour intensive works.

16.1 Those parts of the contract to be constructed using labor intensive methods have been marked in the bills of quantities with the letters LI in a separate column filled in against every item so designated. The works or parts of the works so designated are to be constructed using labour intensive methods only. The use of plant to provide such works, other than plant specifically provided for in the scope of work, is a variation to the contract. The letters marked with LI are **not necessarily an exhaustive list** of all items which must be done by hand, and this clause does not override any of the requirements in the generic labour intensive specification in the Scope of Works.

16.2 Where minimum labour intensity is specified by the design the contractor is expected to use their initiative to identify additional activities that can be done labour-intensively in order to comply with the set minimum labour intensity target

16.3 Payment for items which are designated to be constructed using labour intensively in the schedule of quantities will not be made unless they are constructed using labour intensive methods. Any unauthorised use of plant to carry out work which was to be done labour intensively will not be condone and any work so constructed will not be certified for payment. If a contractor, through innovation on other activities, achieved the Local labour content target, but he did not perform all LI-marked activities through labour, he will not be penalized. However, if a contractor did not achieve the Local labour content target and constructed a LI-marked activity through other means, he will not be paid for that activity. Any non-payment for such works shall not relieve the Contractor in any way from his obligations either in contract or in delict.

17. All cost for formal training to the targeted workforce (amongst others: allowances, wages, administration, transport, etc) shall be deemed to be included in the rates for Labour Intensive items.

C2.2 BILL OF QUANTITIES

SCHEDULE A : ROADWORKS

1200 General Requirements and Provisions C.47
1300 Contractor's Establishment and General Obligations C.48
1400 Housing, Offices and Laboratories for the Engineer's personnel.....C.49
1500 Accommodation of Traffic.....C.51
1700 Clear and Grubbing.....C.52
2200 Prefabricated Culverts.....C.53
2300 Concrete Kerbing, Concrete Channelling, Chutes.....C.54
3500 Stabilization.....C.56
3600 Crushed Stone Base..... C.57
3900 Patching and Repairing Edgebreak..... C.58
4200 Asphalt Base And Surfacing..... C.59
5400 Guardrails.....C.60
5600 Road Signs C.61
5700 Road Marking..... C.62
5900 Finishing the Road and Road Reserve and Treating old Roads.....C.63
8100 Testing Materials and Workmanship C.64
B9100 Cold Insltu Recycling.....C65
Summary Of Schedule Of Quantities.....C.66

SECTION:1200					
ITEM NO	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT R C**
12,00	**GENERAL REQUIREMENTS AND PROVISIONS**				
12,07	Supply and Installation of name Board	No	2		
B12.30	(a) Provision for Community Liaison Officer and PSC	Prov Sum	1	46 800,00	R46 800,00
	(b) Handling cost and profit in respect of B12.30(a)	%	46 800,00		
B12.40	Consultants Fees				
	(a) Safety Consultant Fees	Prov Sum	1	90 000,00	R90 000,00
	(b) Environmental Consultant Fees	Prov Sum	1	90 000,00	R90 000,00
	(c) Handling cost and profit in respect of B12.40(a) and (b)	%	180 000,00		
B12.05	(a) Mine Health and Safety obligations	Month	6		
	(b) Special information signs	PC Sum	1	R10 000,00	R10 000,00
	(c) Handling costs and profit in respect of subitem B12.05(b)	%	10,000.00		
B12.07	a) Provision of Acredited Trainning (Entreprenual &Generic)	Prov Sum	1,00	R60 000,00	R60 000,00
	(b) Handling costs and profit in respect of subitem B12.05(a)	%	60 000,00		
TOTAL CARRIED FORWARD TO SUMMARY					

		SECTION: 1300			
ITEM NO	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT R C**
13,00	**CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS**				
B13.01	**Contractor's general obligations**				
	(a) Fixed obligations	Lump Sum	1		
	(b) Value-related obligations	Lump Sum	1		
	(c) Time-related obligations	month	6		
	N.B. The combined total tendered for items B13.01 (a), (b) and (c) shall not exceed *15% of the total for the tendered sum, excluding VAT*				
TOTAL CARRIED FORWARD TO SUMMARY					

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1400	**HOUSIN, OFFICE AND LABORATORY FOR THE ENGINEER'S SITE PERSONNEL**				
14,01	Offices and laboratory accommodation				
	(a) Offices (interior floor space only)				
	(i) Type 1 (6m x 5)	m²	30		
	(ii) Type 2 (4m x 4)	m²	16,0		
14,02	Offices and laboratory funiture				
	(a) Chairs	No	18,0		
	(b) Desks, complete with drawers and locks	No	4,0		
	(c) Conference tables	No	1,0		
B14.03	Offices and laboratory fittings Installations and equipment.				
	(a) Items measured by number				
	(i) 220/250 volt power points	No	12		
	(iii) Double 80 watt flourescent light fittings complete with ballast and tubes	No	4		
	(v) Single incandescent light fittings complete with 100 watt	No	4		
	(vi) Hand wash basins complete with taps and drains globes	No	2		
	(iv) Double 55 watt fluorescent light fittings complete with ballast and tubes	No	3		
	(x) Fire extinquishers, 9,0 kg, all purpose dry powder type, complete, mounted on wall with brackets	No	2		
	(xiv) General-purpose steel cupboards with shelves	No	2		
	(xv) Steel filing cabinets drawers	No	1		
	(xix) Steel plan cabinets	No	1		
	(xi) Air conditioning units with 2,2 kW minimum capacity, mounted and with own power connection	No	1		
1400	**TOTAL CARRIED FOWARD**				

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD					
	(xvi) Refrigerators	No	1		
	(b) Prime-cost items and items paid for in a lump sum:				
	(ix) Cell phones costs, including pro-rata rentals, for calls in connection with contract administration	PC Sum	1	12,000.00	12,000.00
	(x) Handling costs and profit in respect of subitem B14.03 (b)(ix)above	%	12,000.0		
	(ix) Provisional sum for providing rented housing, hotel or other accomodation, fully furnished	PC Sum	1	120,000.00	120,000.00
	(x) Handling costs and profit in respect of subitem B14.03 (b)(ix)above	%	120,000.0		
	(ix) xi) The provision of computer hardware and software facilities for the supervisory staff	PC sum	1	20,000.00	20,000.00
	(x) Handling costs and profit in respect of subitem B14.03 (b)(ix)above		20,000		
	(c) Items measured by area				
	(i) Shelving as specified, complete with brackets	m²	6		
14.04	Car ports				
	(a) Car ports, as specified,at offices and laboratory buildings	No	3		
14.08	Services				
	(a) Services at office and laboratories				
	(i) Fixed costs	L/sum	1		
	(ii) Running costs	month	6		
14.10	Provision of photostat facilities	month	6		
1400	TOTAL CARRIED TO SUMMARY				

SECTION: 1500					
ITEM NO	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
1500	**ACCOMMODATION OF TRAFFIC**				
15.01	Accommodating Traffic and maintaining temporary deviations	km	10		
15,02	Earthworks for temporary deviations:				
	(a) Shaping of temporary deviations	km	1		
15,03	Temporary traffic-control				
	(a) Flagmen	man-day	504		
	(b) Portable STOP and GO	No	4		
	(d) Amber flicker lights	No	4		
	(e) Road signs, R- and TR-series				
	(i) 900mm diameter	No	12		
	(g) Road signs, STW-, DTG-,TGS- and TG-series (Excluding delineators and barricades)	m²	12		
	(h) Delineators (TWW 401 and TW 402)	No	100		
	(ii) Mountable back to back (800mm x 200mm)	No	100		
15,06	Watering of temporary deviations	kl	6000		
TOTAL CARRIED FORWARD TO SUMMARY					

SECTION: 1700					
ITEM NO	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
17,00	**CLEARING AND GRUBBING**				
17.04	Clearing and grubbing at inlets and outlets of hydraulic structures	m²	112		
17,05	Cleaning out of hydraulic structures				
	(a) Pipes with an internal diameter up to and exceeding 750mm	m3	22,4		
	(b) Box culverts exceeding 1.5m vertical dimension	m3	25		
TOTAL CARRIED FORWARD TO SUMMARY					

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
22	**PREFABRICATED CULVERTS**				
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	308,00		
	(ii) Exceeding 1,5 m and up to 3,0 m	m³	30,80		
	(b) Extra over subitem 22.01(a) for excavation in hard material, irrespective of depth	m³	90,00		
22,02	Backfilling:				
	(a) Using the excavated material	m³	70,95		
	(b) Using imported selected material	m³	141,90		
22,03	Concrete pipe culverts:				
	(b) On class B bedding (Type 100D. Spigot and Socket)				
	(i) 600mm diameter	m	22,00		
	(ii) 900mm diameter	m	44,00		
	(iii) 1200mm diameter	m	11,00		
22,17	Manholes, catchpits, precast inlet and outlet structures complete:				
	(a) Head wall	No	2,00		
	TOTAL CARRIED FORWARD TO SUMMARY				

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
23,00	**CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES, AND CONCRETE LININGS FOR OPEN DRAINS**				
23,02	Concrete kerbing-channeling combination				
	(a) Precast kerb to SABS 927 and cast in situ channel (100mm x 100mm concrete class 20/19)				
	(i) Figure 8C kerb	m	800,00		
	(iii) Straight and to radius not less than 20m(remove and relay)	m	600,00		
	(d)150mm thick concrete drift, class 30/19 concrete (see drawing 965/I/10)	m	36,00		
B23,08	Concrete lining for open drains				
	(a) Cast insitu concrete lining class 30/19 cast in 2.0m alternate sections				
	(1) standard side drain				
	(i) type v1 - v4	m³	258,00		
23,09	Formwork to cast insitu concrete lining for open drains (class F2 surface finish)				
	(a) To sides with formwork on the internal face only	m²	170,00		
	(b) To sides with formwork on both internal and external faces (each face measured)	m²	170,00		
Total Carried Forward					

Total Brought Forward					
23.10	Sealed joints in concrete linings of open drains				
	(a) Polysulphide sealants	m	100,00		
23.12	Steel Reinforcement				
	(c) Welded steel fabric	kg	1 268,50		
23.14	Cutting bituminous surfacing and pavement layers for concrete kerbing, channelling or concrete-lined drains	m	200,00		
23/73.02	Cast in situ concrete edge and intermediate beams (concrete class 30/19)	m^3	10,00		
TOTAL CARRIED TO SUMMARY					

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
3500	**STABILIZATION**				
35,01	Chemical stabilization extra over unstabilized compacted layers :				
(a)	Base layer, 150 mm thick	m^3	3,250.00		
35,02	Chemical stabilizing agent				
(a)	Ordinary portland cement	t	246		
	TOTAL CARRIED TO SUMMARY				

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
3600	**CRUSHED STONE BASE**				
36,01	Crushed Stone Base				
	(c) Constructed from Type G2 material obtained from commercial sources, compacted to 85% Bulk Relative Density (100 mm layer)	m^3	2,250.00		
	TOTAL CARRIED TO SUMMARY				

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
3900	**PATCHING AND REPAIRING EDGE BREAKS**				
39,01	Sawing asphalt or cemented pavement layers for patching				
(a)	Sawing asphalt to an average depth				
(i)	Not exceeding 50 mm	m²	4000		
39,02	Excavation in existing pavements for patch				
(b)	Cemented layers	m³	800		
39,03	Backfilling of excavations for patching with				
(a)	Chemically stabilized pavement material (G5 quality material with 1.5% cement stabilizing agent)	m³	800		
39,04	Compacting the floor of excavation for patch	m²	3874		
39,05	Cutting back the edges of the existing surfacing for the repairing of edge breaks	m	100		
39/41.01	Prime coat on Patches				
(c)	MC 30	l	6000		
39/42.02	Asphalt surfacing material (30mm thick using 60/70 Penetration grade bitumen)				
(a)	Continously graded (medium grade)	m²	4000		
	TOTAL CARRIED TO SUMMARY				

BID NO.43/2026/2027 : RECONSTRUCTION OF ITSANI TO SHAYANDIMA ROAD

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
4200	**4200: ASPHALT BASE AND SURFACING**				
42.02	Asphalt surfacing				
	(a) Continuously graded hot-mix asphalt using:				
	(i) 60/70 pen, 30 mm thick medium grade	m²	15000		
42.04	Tack coat of 30% stable-grade emulsion	l	22500		
B42.08	100mm cores in asphalt paving	No	20		
	TOTAL CARRIED TO SUMMARY				

SECTION 5400					
ITEM NO	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
54,00	**GUARDRAILS**				
54,01	Guardrails on timber posts:				
	(a) Galvanized	m	80		
54,04	End treatments				
	(d) End treatments where single guardrail sections are used	No.	2		
54,05	Additional guardrail posts:				
	(a) Timber	No.	30		
54,06	Reflective plates	No.	200		
TOTAL CARRIED FORWARD TO SUMMARY					

SECTION 5600					
ITEM NO	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT R C**
56,00	**ROAD SIGNS**				
56,01	Road signs boards with painted or colouted semi-matt background. Symbols, lettering and borders in semi-matt black or in Class 1 retro-effective material, where the sign board is constructed from:				
	(c) Prepainted galvanized steel plate (chromadek 1,6 mm thick or approved equivalent):				
	(i) Area not exceeding 2m²	m²	30		
	(ii) Area exceeding 2m² but not 10m²	m²	10		
56,02	Extra over item 56.01 for using:				
	(a) Background of retro-reflective material:				
	(i) Class I	m²	15		
	(b) Lettering, symbols, number, arrows, emblems and borders or retro-reflective material:				
	(i) Class I	m²	15		
56,03	Road sign supports (overhead road sign structures excluded):				
	(b) Timber (150mm diameter, 3,5m long each)	m	8		
56,05	Excavation and backfilling for road sign supports	m²	10		
56,06	Extra over item 56.05 for cement-treated soil backfill	m²	5		
TOTAL CARRIED FORWARD TO SUMMARY					

SECTION 5700					
ITEM NO	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT R C**
57.00	**ROAD MARKINGS**				
57.02	Retro-reflective road marking paint:				
	(a) White lines (broken or unbroken)				
	(1) 100 mm wide	km	2.7		
	(b) Yellow lines (broken or unbroken)				
	(1) 100 mm wide	km	0.8		
	(d) White lettering and symbols	m²	150		
	(e) Yellow lettering and symbols	m²	20		
	(f) Transverse lines, painted island and arrestor bed markings (any colour)	m²	100		
57.06	Setting out and premarking the lines (excluding traffic-island markings, lettering and symbols)	km	3.5		
57.07	Re-establishing the painting unit at the end of the maintenance period	Lump sum	1		
TOTAL CARRIED FORWARD TO SUMMARY					

SECTION 5900					
ITEM NO	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT R C**
59,00	**FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS**				
59,01	Finishing the road and road reserve:				
	(a) Single carriageway road	km	4		
TOTAL CARRIED FORWARD TO SUMMARY					

SECTION 8100					
ITEM NO	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT R C**
81,00	**TESTING MATERIALS AND WORKMANSHIP**				
81,02	(a) Other special test requested by the engineer	Prov. Sum	1	50 000,00	R50 000,00
	(b) Handling cost and profit in respect of Subitem 81.02(a)	%	50 000,00		
TOTAL CARRIED FORWARD TO SUMMARY					

SECTION 9100					
ITEM NO	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT RC**
B9100	**COLD INSITU RECYCLING** **Cold insitu recycled granular layer (Stabilised)**				
B91,01	(a) Cement treated layer, not exceeding 200mm in thickness compacted to 97% of modified AASHTO density	m^3	3,250		
	(b) Cement treated layer, exceeding 200mm in thickness compacted to 97% of modified AASHTO density	m^3	650		
B91,03	Trial section, if instructed (extra over Subitems B91,01(a) and B91,02(b)	m^3	408		
B91.09	Extra over item B91.01 for adding extra material obtained from commercial sources				
B12.06	(a) Gravel base (100mm) G5 material	m^3	3,250		
B9100/ B1602	Overhaul on material hauled in excess of 1km	m^3km	3,250		
TOTAL CARRIED FORWARD TO SUMMARY					

SECTIONS	SUMMARY OF SCHEDULE OF QUANTITIES	AMOUNT
1200	GENERAL REQUIREMENTS AND PROVISIONS	
1300	CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL	
1400	HOUSING, OFFICES AND LABORATORY FOR THE ENGINEER'S	
1500	ACCOMMODATION OF TRAFFIC	
1700	CLEARING AND GRUBBING	
2200	PREFABRICATED CULVERTS	
2300	CONCRETE KERBING, CONCRETE CHANNELLING,	
3500	STABILIZATION	
3600	CRUSHED STONE BASE	
3900	PATCHING AND REPAIRING EDGE BREAKS	
4200	4200: ASPHALT BASE AND SURFACING	
5400	GUARDRAILS	
5600	ROAD SIGNS	
5700	ROAD MARKING	
5900	FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS	
8100	TESING MATERIALS AND WORKMANSHIP	
B9100	COLD INSITU RECYCLING	
-	-	
	SUB-TOTAL	
	Add 2,2% SPECIAL MATERIALS	
	TOTAL	
	Add 15% VAT	
	TENDER SUM CARRIED TO FORM OF OFFR AND ACCEPTANCE	

SCOPE OF WORKS

PART C3 SCOPE OF WORKS

PART C4 SITE INFORMATION

PART C3: SCOPE OF WORK

C3.1 DESCRIPTION OF WORKS.....C.69
C3.2 ENGINEERING.....C.74
C3.3 PROCUREMENT POLICY.....C.75
C3.3.1 REQUIREMENTS C.75
C3.3.2 SUBCONTRACTING – SPECIAL CONDITIONS OF CONTRACT.....C.75
C3.3.3 RESOURCE STANDARD PERTAINING TO TARGETED PROCUREMENT.C.80
C3.4 CONSTRUCTION C.81
C3.5 MANAGEMENT C.200

C3.1 DESCRIPTION OF WORKS

C3.1.1 Employer's Objectives

The objective of the project is to reconstruct about 2.5km road and patchworks of about 4000m^2 on isolated sections of Itsani to Shayandima road.

The employer's other objectives are to deliver public infrastructure using labour intensive methods in accordance with EPWP Guidelines.

C3.1.2 Overview and Location of Works

The project area starts from Itsani in ward 37 and ends at Shayandima in ward 38 an established section within the jurisdiction of Thulamela Local Municipality. The area consists mostly of unsurfaced roads with only the main streets surfaced.

C3.1.3 Extent of Works

The project comprises of the reconstruction of Itsani to Shayandima road. The proposed scope of works is as follows but not limited to:

- Road 1 Part 1 – 1,530m reconstruction; including drainage requirements.
- Road 1 Part 3 – 450m reconstruction; including drainage requirements.
- Road 1 Part 5 – 520m reconstruction including drainage requirements.
- Isolated block patching using Asphalt on Road 2 – 4000m2
- Construction of about 80m guardrail
- Construction of about 800m long concrete kerbing-channeling
- Construction of about 2mx860m long concrete lining open v-drains
- Construction of stormwater concrete pipe cuulverts-22mlong 600mm dia., 44m long 900mm dia., and 11m long 1200mm dia.
- Construction of road signs and road marking

C3.1.4 Location of the Works

The following details provide the key elements of the project area.

- Municipal Area: Thulamela Local Municipality
- Central Co-ordinates:

ROAD NAME	LENGTH (m)	START		END	
ROAD ONE	6688.504	23° 0'20.68"S	30°24'16.43"E	23° 0'40.40"S	30°26'8.64"E
ROAD TWO	3532.863	22°59'27.88"S	30°25'34.65"E	23° 0'35.66"S	30°26'24.23"E
TOTAL	10221.367				

C3.1.5 Temporary Works

The Contractor is to design, supply, construct, demolish and spoil at his own cost any temporary works required in order to carry out the construction works as required. The routes that are part of this contract are:

- Locating and establishing of the site camp site will be the Contractors

responsibility.

The Contractor is required to adequately secure the Site during the contract period.

Tenderers are to note the high crime rate in the vicinity of the Site and are to make an adequate provision for Site security, especially with regards to, but not limited to, survey poles, temporary signage, orange netting, hoarding, electrical reticulation (until contract completion), etc.

C3.1.6 Existing Services

During the visual assessment of the road, an extensive number of services were identified, and these will require to be protected or relocated. Some of the services that have been identified include but are not limited to:

- Electrical overhead and underground cables along the streets;
- Telkom overhead cables;
- Water Reticulation and Bulk line
- Electrical poles and streetlights in all road reserves;
- Cables and pipelines at road crossings; and

The exact location of some services is not known, and the Contractor will always be required to be in contact with the relevant service owners/providers. The positions and relocations of services shown on the drawings are based on the information available at the time and the Contractor is required to exercise extreme caution in his construction activities until the exact positions of all services have been established.

C3.1.7 Access

Furthermore, this Contract requires that the Contractor ensures that all residents have access to their properties after hours and on weekends; all businesses are to have access during business hours. The Contractor is to implement temporary measures/deviations as required in order to achieve this outcome. Prior to the implementation of any deviation, written permission for such deviations shall be obtained from the Employer’s Agent.

The Contractor shall advise all residents, community leaders and other stakeholders at least 2 weeks prior to the commencement of construction activities in an area. The Contractor is to employ a Community Liaison Officer in conjunction with the community structures in the area in order to achieve this outcome.

The construction camp and works area must be watered during dry and windy conditions to control dust fallout. Dust production must be controlled by regular watering of roads and the works area. Contractors are to ensure that dust production at the site camp as well as the works area is controlled during working hours as well as during weekends.

C3.1.8 Accommodation of Traffic

The Contractor shall ensure the safe accommodation of traffic at all areas where the work may impact traffic and shall provide all delineators, watching, lighting, signs and barricades required by the road authorities, and in accordance with the South African Road Traffic Signs Manual.

C3.1.9 Planning / Programming Conditions

The Contractor must consider with the programming of the works the following conditions:

- All traffic accommodation requirements.
- After exposing existing services for pipe trenches and/or kerb-inlets/manholes the position, size and levels of interfering services must be provided to the Engineer.
- A maximum of 5 days need to be allowed in case design changes are required for the installation of new services.

C3.1.10 General Information

C3.1.10.1 Drawings

The reduced drawings contained in book 2 of 2 that form part of the tender document shall be used for tender purposes only. Further drawings are to be provided on an on-going basis by the engineer.

The contractor will be supplied with an unreduced 0,05 mm thick transparent polyester print of each of the drawings. These polyester prints are issued free of charge and the contractor shall make any additional prints he may require at his own cost.

Any information in the possession of the contractor, which the resident engineer requires to complete the as-built drawings, shall be supplied to the resident engineer before a certificate of completion will be issued.

Only figured dimensions shall be used and drawings shall not be scaled unless so instructed by the engineer. The engineer will supply all figured dimensions omitted from the drawings.

C3.1.10.2 Power, Water Supply and Other Services

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

C3.1.10.3 Contractor’s Camp Site and Security

The contractor shall make his own arrangements regarding the establishment of a camp site and housing for his construction personnel and all regulations stipulated by the local authority shall be adhered to.

It is anticipated that the contractor's choice of a camp site will be influenced by the availability of telephone and electrical connections as well as the supply of potable water. Provision is made in these specifications for the erection of a security fence around the site offices. 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 the employer will consider no claims in this regard.

C3.1.10.4 Additional Requirements for Construction Activities

C3.1.10.4.1 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.

C3.1.10.4.2 The contractor shall submit proposals in connection with directional signs to the engineer for approval.

C3.1.10.5 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.

C3.1.10.6 Construction in Confined Areas

It may be necessary for the contractor to work in confined areas. 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 construction plant. However, the contractor must note that measurement and payment will be in accordance with the specified cross-sections and dimensions, irrespective of the method used to achieve these cross-sections and dimensions, and that the rates and amounts tendered will be deemed to include full compensation for any special equipment or construction methods or for any difficulty encountered in working in confined areas and narrow widths, and at or around obstructions, and that no extra payment will be made nor will any claim for payment be considered on account of these difficulties.

C3.1.11 Labour Regulations

C3.1.11.1 EPWP Requirements

Labour-intensive works shall be constructed/maintained using local workers who are temporarily employed in terms of this Scope of Work

Competencies of LI Management and Supervisory staff

Contractors shall engage supervisory and management staff in labour-intensive works that have completed the skills programme including Foremen/Supervisors at NQF "National Certificate: Supervision of Civil Engineering Construction Processes" and Site Agent/Manager at NQF level 5/7 "Manage labour-intensive Construction Processes" or equivalent QCTO qualifications.

Wage Dispute (Contractor default to pay beneficiaries)

Any dispute between the Contractor and labourers, regarding delayed payment or default in payment of fair wages, if not resolved immediately may compel the Employer to intervene.

The Employer may, upon the Contractor defaulting payment, pay the moneys due to the workers not honoured in time, out of any moneys due or which may become due to the Contractor under the Contract.

Provision of Hand tools

The Contractor shall provide his labour force with hand tools of adequate quality, sufficient in numbers and make the necessary provisions to maintain the tools in good and safe working conditions

Reporting Requirements

The Contractor should submit the following at the beginning of the Contract:

(a) Contracts of all the workers employed on the contracts including their certified identity documents;

(b) Proof of Registration for COIDA and UIF;

(c) OHS Files

The Contractor shall submit monthly returns/reports as specified below:

(a) Signed Muster rolls/pay sheets of temporary workers and permanent staff detailing the number, category, gender, rate of pay and daily attendance.

(b) Copies of certified identity documents of workers

(c) Number of persons who have attended training including nature and duration of training provided

(d) Assets created, rehabilitated or maintained in accordance with indicators in the EPWP M&E framework

(e) Plant utilization returns

(f) Progress report detailing production output compared to the programme of works

C3.1.11.2 **Payment for the labour-intensive component of the works**

Payment for works identified in clause 2.3 “the Extent of the Project” in the Project Specifications as being labour-intensive shall only be made in accordance with the provisions of the Contract if the works are constructed strictly in accordance with the provisions of the scope of work. Any non-payment for such works shall not relieve the Contractor in any way from his obligations either in contract or in delict.

C3.1.11.3 **Applicable labour laws**

Ministerial determination 4:

1. Special Public Works Programs Government Gazette no. 34310-3 of 4 May 2012.
2. Code of Good Practice for Employment and Conditions of works of Expanded Public Works Programs – Government Gazette no. 34032 of 18 February 2011.

C3.2 ENGINEERING

C3.2.1 Design

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

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

(c) The **Contractor** shall supply all details necessary to assist the engineer in the compilation of the as-built drawings.

C3.2.2 Employer’s Design

(a) Detail description of Works

(b) General Works

(c) Sign Gantries. E.g.

C3.2.3 Contractor’s Design

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

C3.2.4 Design procedures

All designs and modifications thereto shall be communicated in writing and the contractor and engineer shall maintain master lists to record and track all transactions.

C3.3 PROCUREMENT POLICY

C3.3.1 REQUIREMENTS

The Contractor shall be required to adopt labour-based techniques through the full spectrum of the works with the proviso that the Clients' specific objectives regarding time and quality are not compromised. **Maximisation of employment** shall be of the essence on this contract.

Together with their tenders, all Tenderers are required to submit a comprehensive **implementation plan** clearly stating the labour content and number of jobs that shall be created. The employment of labour shall be reflected in a programme in sufficient details to enable the Project Manager to monitor and compare it with the implementation plan. The Contractor shall be required to submit employment data on a monthly basis to the Project Manager.

The Contractor and all sub-contractors will be required to pay labour rates which are in accordance with SAFCEC rates for the civil construction industry for unskilled workers.

Should the contractor, at Works Completion, be in default by non-attainment of the abovementioned labour-intensive targets, the Employer shall have the right to, without prejudice of any other rights, apply a penalty of not exceeding 5% of the contract sum.

Tenderers are to also note that it is an explicit condition of this tender that all unskilled labourers on the project are to be employed from the local community. The Contractor shall in general, maximise the involvement of the local community.

C3.3.2 SUBCONTRACTING – SPECIAL CONDITIONS OF CONTRACT

Participation and Advancement of Start-Up, Small and Micro Enterprises

The Municipality has identified job creation and access to procurement opportunities by Start-ups, Small and Micro Enterprises (QSE / EMEs) as an essential requirement towards building an economically viable Municipality. In this regard the following definitions are applicable:

"**Start-up Enterprises**" means an enterprise that has been in existence and operating for less than two years.

"**Micro Enterprises"** means an enterprise that has a CIDB grading designation of

or 2.

"**Small Enterprises"** means an enterprise that has a CIDB grading designation of 3.

"Locally based QSE / EMEs" means enterprises that have their operational base in the ward in which the project is to be executed or, alternatively, the members of the enterprise are resident in the particular ward. Should suitable locally based QSE / EME Contractors as defined above not be available in the particular ward, then they shall be sourced from adjacent wards.

The successful contractor is expected to subcontract work which can be executed by local sub-contractors. If it is established that the QSE / EMEs are sufficiently resourced to execute the proposed works as a complete package the Contractor may conclude full sub-contract agreements with locally based QSE / EMEs as per their capabilities with proven track record and availability of the activities which they could execute.

The following activities are intended to be Partially carried out by QSE / EME's:

- Section 2300: Concrete Kerbing and Channelling
- Section 5400: Guardrails
- Section 5600: Road Signs

It is a condition of this tender that the successful Contractor is required to take full responsibility for managing all appointed sub-contractors and the quality of their works. The Contractor will be expected to pay QSE / EMEs full rates as submitted by the Contractor to the Municipality.

Above this, it is a condition of this contract that should the contractor fail to pay the QSE / EME's with no valid reason/s, the Municipality reserves the right to pay the QSE/ EME's directly and deduct same from any amount paid to the contractor.

The form of contract to be used with QSE / EMEs is the GCC sub-contract agreement. The Contract Data must record the specific requirements in respect of

penalties, retention and payment. With regard to the latter, the Contractor is to allow for fortnightly certificates from the QSE / EMEs and for payment to the QSE /EMEs to be effected within 7 days of certification.

In order to achieve the goals of this policy and to ensure that the QSE / EMEs are treated fairly and given every opportunity to advance their business whilst delivering a successful project, the Contractor is to note the following and provide for any cost that may be associated therewith:

1. If appropriate, the QSE / EME bill of quantities is to provide for market related P&G items in order that the QSE / EME may be compensated for any unforeseen delays or events that impact on his ability to complete his works. **It is to be specifically noted that the rates for items of work to be executed by QSE / EME's must be market related. Tenderers are to ensure that rates tendered for this portion of the works is to take into account all items that the main contractor would have allowed for in his normal course of pricing, i.e. materials, labour, wastage, profit, attendance, etc. all at applicable productivity rates.**
2. The Contractor will be expected to have clearly specified the programme dates to the QSE / EME Contractors and these dates are to be included in the contract of agreement between the two parties. The Managing Contractor is to monitor the QSE / EME Contractor's progress against the programme and hold progress meetings with the QSE / EME Contractors where minutes are to be kept and signed off by both parties.
3. The Contractor is to assess the skills of the QSE / EME Contractor and provide the relevant support and training where it is necessary in order for the QSE / EME Contractor to complete the works to programme, budget and specification. The Managing Contractor will be expected to provide on site training to the QSE / EME Contractors that will ensure that the QSE / EME Contractor's staff is suitably trained to execute the works and that they receive sufficient relevant experience on the project.
4. The Contractor is responsible for safety compliance on the project and will assist the QSE / EME Contractors in all aspects to achieve safety compliance, that will include:

a) Assisting the QSE / EME Contractors with developing their safety files, legal appointments, etc
b) Assisting the QSE / EME Contractors with achieving safety on site.
c) Having tool box talks with the QSE / EME Contractor's employees on a daily basis.
d) Providing all safety equipment and signage.

e) Providing safety training where necessary.

5. The Contractor is to provide all the necessary equipment for the timeous monitoring and the checking of the quality of works as carried out by the QSE / EME Contractors. The Managing Contractor will be expected to monitor the QSE / EME Contractor's works for quality compliance and provide all the necessary support to the QSE / EME Contractors in order to achieve quality requirements. The Managing Contractor is to ensure that if the QSE / EME Contractor's quality of works does not achieve specification the Managing Contractor will assist the QSE / EME Contractors to achieve specification and not allow the works to continue until the quality requirements are achieved.

6. The Main Contractor is to generate monthly reports for the Municipality that includes the following:

a) QSE / EME Contractor resources on the site, i.e. supervisors, labour, plant tools and equipment
b) QSE / EME Contractor progress of works on site.
c) QSE / EME Contractor quality control on site.
d) QSE / EME Contractor expenditure on the project versus target expenditure.
e) Copies of minutes of the QSE / EME Contractor and Managing Contractor progress meetings. Concerns and improvements to be made.

The tenderers are to price the works to achieve full compliance with the above requirements. Failure of the Contractor to achieve these requirements may result in the Municipality enforcing compliance by appointing 3rd parties if necessary to assist and deducting all reasonable costs for achieving compliance from money due to the Contractor.

Following from the above, the QSE / EME's to be contracted on the project must be selected from the provided database which will be given to the successful bidder. The database will includes QSE / EME that are youth, women owned, disabled and excombatants. The Contractor will be expected to give preference to QSE / EME's that comply with all/most of these groups. The following information must be provided by said Contractor within 14 days of the commencement date of the contract.

1. Detailed approach and methodology on the employment of local QSE / EME's, including:

- QSE / EME/s company name/s to be employed on the project;
- QSE / EME contact persons;
- Works to be executed by QSE / EME/s;
- Programme (anticipated start, duration and end dates) applicable to the works defined in item above;

- Estimated value of the works identified in item C3.3.2 above.

2. A detailed breakdown of tendered rates for QSE / EME activities, including:

- Labour portion of the activity;
- Equipment portion of the activity;
- Materials portion of the activity;
- Planned percentage of profit.

The Tenderers are to price the works to achieve full compliance with the above requirements. Tenderers are to ensure that they allocate a dedicated individual to manage the QSE / EME's and fulfil the requirements stated above.

The QSE / EME supervisor will be required to conclude a scorecard with the Municipality. The scorecard will encompass four key performance areas and several key performance indicators as outlined overleaf. The QSE / EME supervisor will be required to score a minimum of 80%. The scorecard review will take place monthly.

Key Performance Areas	**Key Performance Indicators**
1) Safety	a) Be familiar with and ensures QSE / EME Contractor enforces the safety specs and relevant OHSA b) Reporting of incidents and accidents • Ensures QSE / EME Contractor Reports incidents and accidents to the Contractor on the day they occur
2) Quality Control	a) Setting out of the Works • Ensures that the Works have been set-out correctly prior to construction commencing b) Monitoring of Construction • Examine the Works daily and pre-empt unnecessary work by the QSE / EME Contractor by warning him of incorrect workmanship as soon as it is identified. c) Approval of the Works • Assist QSE / EME Contractor in the works approval process. d) Read Drawings • Assist QSE / EME Contractor in reading and interpreting construction drawings
3) Financial	a) Daily Costing b) Ensures that QSE / EME Contractors do daily costing c) Variances to Scope • Assist QSE / EME Contractors identify and claim for additional works d) Standing Time Costs

	• Assist QSE / EME Contractors compute and Claim standing time costs
4) Site Administration and Progress Monitoring	a) Communication • Ensures that QSE / EME Contractors communicate with the Contractor in writing on site related issues b) Reporting • Ensures that the Main Contractor's progress report is communicated with the QSE / EME Contractors and that contingency plans are followed through c) Site diary • Ensures QSE / EME Contractors maintain a site diary d) Claims • Assist QSE / EME Contractors draft claims for Extension of Time where applicable e) Quantities • Assist QSE / EME Contractors in the measurement of the works

The Municipality reserves the right to withdraw its acceptance of the offer, should the appointed contractor fail to satisfactorily address the above requirements within 14 days of the commencement date of the contract. Approved documentation will form part of the contract. Failure of the Contractor to achieve the requirements set-out in this tender document during construction may result in the Municipality enforcing compliance by appointing 3rd parties if necessary to assist and deducting all reasonable costs for achieving compliance from money due to the Contractor.

Should the contractor, at Practical Completion, be in default by non-attainment of the above-mentioned labour intensive targets and QSE / EME requirements, the Employer shall have the right to, without prejudice of any other rights, apply a penalty not exceeding 5% of the contract sum.

C3.3.3 RESOURCE STANDARD PERTAINING TO TARGETED PROCUREMENT

The Resource Specification is for SANS 1914-4: Participation of targeted enterprises and targeted labour (local resources). Targeted enterprises and targeted labour groups will be identified by the Community Liaison Officer, in consultation with the local Ward Councillor.

C3.4 CONSTRUCTION

C3.4.1 STANDARD SPECIFICATIONS

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

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

The contractor may purchase copies of Volume (i) from the South African Institution of Civil Engineers.

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

(b) SABS or BS Specifications and Codes of Practice

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

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

(d) Latest **Sabita Manual**, Manual 25 entitled “*Quality Management in the Handling and Transport of Bituminous Binders*”.

C3.4.2 PROJECT SPECIFICATIONS RELATING TO STANDARD SPECIFICATIONS

C3.4.2.1 General Conditions of Contract Referred to in the Standard Specifications

The references to the General Conditions of Contract appearing in the COLTO Standard Specifications refer to the COLTO General Conditions of Contract which is superseded in this contract by the General Conditions of Contract for Construction Works 2015. The corresponding clause in the latter document pertaining to the reference in the COLTO Standard Specifications is listed in the table below.

Clause No. in the Standard Specifications	Clause No. in COLTO General Conditions	Equivalent Clause No. in General Conditions of Contract 2015
1202	15	5.6.1
1206	14	Deleted
1209	52	6.10.2
1210	54	51.1
1212(1)	49	6.10.1
1215	45	5.12.1
1217	35	8.2.1
1303	49	6.8

1303	53	6.11
1303	12	5.6
1303	45	5.12.1
1403	40(1)	6.4.1
1505	40	6.4
31.03	40	6.4
3204(b)	40	6.4
3303(b)	2	3
5803(c)	40	6.4
5805(d)	40	6.4
6103(c)	40	6.4
Item 83.03	22	5.15
ALL SECTIONS	48	6.6

C3.4.2.2 Amendments to the Standard Specifications

There are no amendments to the Standard Specifications as issued by the Committee of Land Transport Officials (COLTO).

C3.4.2.3 Project Specifications Relating to Standard Specifications

This part of the project specifications deals with matters relating to the standard specifications. Where reference is made in the standard specifications to the project specifications this part shall also contain the relevant information e.g. the requirements where a choice of materials or construction methods are provided for the standard specifications.

In certain clauses the standard specifications allow a choice to be specified in the project specifications between alternative materials or methods of construction 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 and amendments of the standard 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, which 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.

Clauses and pay items referring to labour intensive methods are prefixed by L in the project specifications.

Clauses and pay items referring to emerging contractors are prefixed by E in the project specifications.

C3.4.2.4 Project Specifications Relating to EPWP

EPWP Special Project Specification

As much as is economically feasible all work shall be implemented by employing Labour Intensive Construction methods. Over and above the normal Building and Allied works to be implemented by employing skilled and unskilled labour the works specified in the “Guidelines for the Implementation of Labour-Intensive Infrastructure Projects under the Expanded Public Works Programme (EPWP)” shall be undertaken using Labour Intensive Construction methods

Requirement for Sourcing and engagement of Labour

Unskilled and semi-skilled labour required for the execution of all labour intensive works shall be engaged strictly in accordance with prevailing legislation and SANS 1914-5, Participation of Targeted Labour.

The minimum rate of pay set for the EPWP is as per the DPW rates.

Tasks established by the contractor must be such that:

a) the average worker completes 5 tasks per week in 40 hours or less; and

b) the weakest worker completes 5 tasks per week in 55 hours or less.

(d The contractor must revise the time taken to complete a task whenever it is established that the time taken to complete a weekly task is not within the requirements of 1.1.3.

(e The Contractor shall, through all available community structures, inform the local community of the labour intensive works and the employment opportunities presented thereby. Preference must be given to people with previous practical experience in construction and / or who come from households:

a) where the head of the household has less than a primary school education;

b) that have less than one full time person earning an income;

c) where subsistence agriculture is the source of income.

d) those who are not in receipt of any social security pension income

Employment demographics

The Contractor shall endeavour to ensure that the expenditure on the employment of temporary workers is in the following proportions:

a) 60 % women;

b) 55% youth who are between the ages of 18 and 35; and

c) 2% on persons with disabilities.

MATTERS RELATING TO THE STANDARD SPECIFICATIONS

SECTION 1200 : GENERAL REQUIREMENTS AND PROVISIONS C.86

SECTION 1300 : CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS C.96

SECTION 1400 : HOUSING, OFFICES AND LABORATORIES FOR THE ENGINEER'S SITE PERSONNEL.....C.97

SECTION 1500 : ACCOMMODATION OF TRAFFIC C.99

SECTION 1800 : DAYWORK SCHEDULE.....C.104

SECTION 2100 : DRAINS.....C.106

SECTION 2200 : PREFABRICATED CULVERTS.....C.107

SECTION 2300 : CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES AND CONCRETE LININGS FOR OPEN DRAINS.....C.110

SECTION 3100 : BORROW MATERIALS.....C.112

SECTION 3300 : MASS EARTHWORKS.....C.114

SECTION 3400 : PAVEMENT LAYERS OF GRAVEL MATERIAL C.115

SECTION 3600 : CRUSHED-STONE BASE.....C.117

SECTION 4100 : PRIME COAT C.121

SECTION 4200 : ASPHALT BASE AND SURFACING C.123

SECTION 5100 : PITCHING, STONEWORK AND PROTECTION AGAINST EROSIONC.133

SECTION 5200 : GABIONS C.134

SECTION 5600 : ROAD SIGNS.....C.136

SECTION 5700 : ROAD MARKINGS C.138

SECTION 5900 : FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS.....C.139

SECTION 6100 : FOUNDATIONS FOR STRUCTURES C.140

SECTION 6200 : FALSEWORK, FORMWORK AND CONCRETE FINISH.....C.141

SECTION 6300: STEEL REINFORCEMENT FOR STRUCTURES.....C.143

SECTION 6400 : CONCRETE FOR STRUCTURES.....C.144

SECTION 6600 : NO-FINES CONCRETE, JOINTS, BEARINGS, BOLT GROUPS FOR ELECTRIFICATION, PARAPETS AND DRAINAGE FOR STRUCTURE C.146

SECTION 1200 : GENERAL REQUIREMENTS AND PROVISIONS

B1202 SERVICES

Add the following to the fifth paragraph:

“Provision is made in the bill of quantities for payment for searching and exposing of known or unknown services as well as the relocation and/or protection of existing services. Any moving of existing services which may be required within the proclaimed road reserve will be undertaken by the relevant service authorities or by a selected subcontractor if so ordered by the engineer.”

B1204 PROGRAMME OF WORK

(a) General requirements

Amend the word “network” in the fourth line of the first paragraph to read as “bar (Gantt) chart”.

Add the following after the third paragraph:

“The bar-chart programme to be provided by the contractor shall show the various activities in such detail as may be required by the engineer. Progress in terms of the programme shall be updated monthly by the contractor in accordance with the progress made by the contractor.

In compiling the programme of work, the contractor shall indicate and make due allowance for the following, as specified elsewhere in the contract documents:

- The requirements regarding the accommodation of traffic and areas that may be occupied at any time for construction purposes (as indicated on the drawings and specified in Section 1500 of the specifications)
- Requirements regarding the training of labourers and Emerging Contractors (EC’s).
- The requirements for work to be undertaken by labourers and work to be undertaken by EC’s.

(b) Programme of work for rehabilitation work

Amend the word “network” in the fourth line of the second paragraph to read as “bar (Gantt) chart”.

B1205 WORKMANSHIP AND QUALITY CONTROL

Add the following to the third paragraph:

“The engineer shall, however, undertake acceptance control tests for the judgement of workmanship and quality, without accepting any obligations vested with the contractor in terms of the contract with specific reference to quality of materials and workmanship. Such acceptance control test done by the engineer shall not relieve the contractor of his obligations to maintaining his own quality control system.”

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. 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."

B1206 THE SETTING-OUT OF THE WORK AND PROTECTION OF BEACONS

Add the following:

“The contractor shall be responsible for the true and proper setting out of the Works and for the

correctness of the position, levels, dimensions and alignment of all parts of the Works and for the provision of all necessary instruments, appliances and labour in connection therewith."

The Contractor shall take care that property beacons, trigonometrical survey beacons or setting-out beacons are not displaced or destroyed without the consent of the Engineer. Property beacons and trigonometrical survey beacons that have been displaced or destroyed shall be replaced by a registered land surveyor, who shall certify such replacement.

The cost of replacing all beacons displaced or destroyed during the course of the Contract without the consent of the Engineer shall be borne by the Contractor."

B1209 PAYMENT

(b) Rates to be inclusive

Add the following:

"VAT shall be excluded from the rates and provided for as a lump sum in the Summary of Bill of Quantities".

(e) Materials on the site

Add the following:

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

(a) The site selected for this purpose is approved by the engineer

(b) Such land is physically separated from any production plant or operation

(c) Only materials for use under this contract is stockpiled on such land

(d) The contractor has provided proof of an agreement with the owner of such land that the owner has no claim whatsoever on any materials stockpiled on such land

(e) Materials obtained by the contractor for or on behalf of emerging subcontractors (SMME's) shall remain the responsibility of the contractor after payment has been made in respect of materials on site."

B1214 CONTRACTOR'S ACTIVITIES IN RESPECT OF PROPERTY OUTSIDE THE ROAD RESERVE AND OF SERVICES MOVED, DAMAGED OR ALTERED

Add the following to the first paragraph of subclause (d)(ii)

"This is also required with respect to fences, gates, camp sites, bypasses and material spoiled on private property."

Add the following after subclause (e)

"These written statements, as required in Clause 1214(b)-(e) shall be handed to the Engineer before the final certificate will be issued."

B1215 EXTENSION OF TIME RESULTING FROM ABNORMAL RAINFALL

Add the following after the first paragraph of this clause:

"For the purposes of this contract, extension of time resulting from abnormal rainfall or other forms of inclement weather shall be determined according to the requirements of Method ii (critical-path method)."

Method (ii) (Critical path method)

Delete "(based on a five-day working week)" in the fifth and sixth lines of the second paragraph of the description of this method.

Delete the last sentence of the second paragraph of the description of this method and replace with the following:

"The value of "n" shall be taken as five (05) working days per calendar month.

If normal rainy or inclement weather, resulting in delays, occurs for less than five (05) working days in any calendar month, the difference between the five (05) working days and the actual number of working days on which normal rainy or inclement weather occurred, shall be ignored and not accumulated for the duration of the contract period for the purposes of determining an extension of time due to normal rainy weather, nor due to any other reason.

Items of work on the critical path of the programme of work which are subject to climatic limitations shall also be considered for extension of time if such items of work are delayed by e.g. cold weather, high winds or other inclement weather conditions.

In this regard, reference shall be made to weather limitations specified for the application of various bituminous products. However, for months during which seal-work cannot be undertaken in terms of the specifications, no extension of time shall be claimed for.

Rainfall records for **THOHOYANDOU**

MONTH	AVERAGE RAINFALL (mm)	RAIN DAYS (per month)
JANUARY	95.8	12
FEBRUARY	82.9	11
MARCH	65.4	10
APRIL	25	6
MAY	9.7	3
JUNE	14.4	2
JULY	2.4	1
AUGUST	2.8	1
SEPTEMBER	4.1	3
OCTOBER	37.3	7
NOVEMBER	111	14
DECEMBER	92.6	13

B1217 PROTECTION OF THE WORKS AND REQUIREMENTS TO BE MET BEFORE

CONSTRUCTION OF NEW WORK ON TOP OF COMPLETED WORK IS COMMENCED

Add the following subclause:

"(h) No concrete kerbing or concrete drains directly adjoining the bituminous surfacing shall be constructed prior to the completion of the bituminous surfacing."

B1222 USE OF EXPLOSIVES

Add the following subclause:

“(h) Where blasting operations are undertaken in close proximity of temporary deviations, the contractor shall implement all such safeguarding measures as may be required and instructed by the engineer.”

B1224 THE HANDING-OVER OF THE ROAD RESERVE

Add the following:

"The total length of the road reserve between the specified limits of construction will be handed over to the contractor on the commencement date. Reference shall, however, be made to the requirements of section 1500 of these specifications where limitations in respect of work-areas are specified. In the event of the non-adherence by the contractor in terms of the mentioned specifications, the engineer shall withdraw such sections of the road reserve as may be justified to ensure suitable progress of the works or safe passage of traffic."

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 CEM I	32,5 32,5R
RHC	CEM I CEM I	42,5 42,5R
LASRC	No provision made	No provision made
PC15SL	CEM II/A-S	32,5

Old product nomenclature	Typical new product nomenclature	
	Cement type	Cement strength class
	CEM II/A-S CEM II/A-S	32,5R 42,5
PC15FA	CEM II/A-V CEM II/A-V CEM II/A-W CEM II/A-W	32,5 32,5R 32,5 32,5R
RH15FA	CEM II/A-V CEM II/A-V CEM II/A-W CEM II/A-W	42,5 42,5R 42,5 42,5R
PBFC	CEM III/A CEM III/A	32,5 32,5R
PFAC	CEM II/B-V CEM II/B-W	32,5 32,5
RH30SL	CEM II/B-S CEM II/B-S	32,5R 42,5
RH40SL	CEM III/A CEM III/A	32,5R 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:

"B1230: IN-SERVICE AND STRUCTURED TRAINING

The contractor shall in addition to the structured (accredited) training as provided for in Part C of this document implement an in-service training programme, from the commencement of the contract, in which the various skills required for the execution and completion of the works are imparted to the labourers engaged thereon, in a programmed and progressive manner. Labourers shall be trained progressively throughout the duration of the contract, in the various stages of a particular type of work.

(a) Details of in-service and structured training

(i) The contractor shall attach to form RDP 1(E) basic details of his proposed in-service training programme, which details shall inter alia include the following:

- the details of training to be provided
- the manner in which the training is to be delivered
- the number and details of trainers to be utilised.

(ii) The in-service training programme shall be submitted with the initial works programme. The progress in relation to this programme will be recorded monthly and attached to the site meeting minutes and payment certificate.

(iii) The contractor shall provide on site, sufficient skilled and competent trainers to train all labourers engaged on the contract, in the various skills required for the execution and completion of the works.

(iv) All labourers shall be remunerated in respect of all time spent undergoing training.

(v) Every worker engaged on the contract shall on the termination of his participation on the contract, be entitled to receive from the contractor, a certificate of service in which the following information shall be recorded:

- the name of the contractor
- the name of the employee
- the name of the project/contract
- the nature of the work satisfactorily executed by the worker and the time spent thereon
- the nature and extent of training provided to the worker
- the dates of service.

The cost of the above obligations shall be deemed to be covered by the sums and rates tendered for items B13.01(a), (b) and (c) in the bill of quantities. The performance of the contractor in providing in-service training, shall be taken into consideration should the contractor fail to reach his CPG at the completion of the project.

(b) Lead time for training

The training of labour as specified shall, as far as possible, take place before commencement of each activity and the contractor shall take into account in his programme the lead-time he requires for such training. All training herein specified shall be deemed to be a construction activity and a non-negotiable condition of the contract".

B1231 COMMUNITY LIAISON OFFICER (CLO)

The contractor or his appointed agent will appoint a Community Liaison Officer (CLO) 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.

(a) 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 07:00 and 17:00 and at other times as the need arises. His normal working day will extend from 07:00 in the morning until 16:00 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 as illustrated in Part C5.1 of this document (form RDP 12(E)).

(b) Payment for the community 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. The remuneration of the CLO shall be determined by the Employer in terms of the Sectorial determination 2: Civil Engineering Sector (Task grade 3).

(c) Period of employment of the community liaison officer

The period of employment of the community liaison officer shall be as decided upon jointly by the contractor, engineer and employer at a maximum period of eight months basis, but with the option of renewal.

B1232 SUBCONTRACTORS

Over and above the stipulations of clause 4.4 of the General Conditions of Contract 2015, regarding subletting of part of the works, 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. Subletting shall in all cases be critically considered by the engineer.

In addition to the provisions of clause 4.4 of the general conditions of contract regarding subcontracting of the works, it is a requirement of this contract that an approved subcontractor shall not further subcontract work subcontracted to him by the main contractor, to another subcontractor without the consent and approval of the engineer. Subcontracting shall in all cases be critically considered by the engineer. The engineer reserves the right to limit the extent or the volume of work subcontracted by the contractor, should he deem it necessary in terms of progress or quality of workmanship.

B1233 WORKMEN'S COMPENSATION ACT

All labour employed on the site shall be covered by the Compensation for Occupational Injuries and Deceases Act (COIDA). 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 covered by the Contractor to be deemed as included in his General Obligations rates in Section 1300 of the Bill of Quantities.

Add the following clause:

B1234 MINE HEALTH AND SAFETY ACT 1996, ACT 29 OF 1996

(a) Introduction

The main objective of this Act is to protect the health and safety of persons at mines. This specification is therefore aimed at promoting health and safety specifically at borrow pits. Borrow pits are classified as mines.

(b) General Provisions

The contractor shall be responsible for controlling his operations at every borrow pit where material is being excavated to ensure compliance with all the requirements of the Mine Health and Safety Act, 1996. The contractor shall also ensure that the works, shaping and finishing off of the borrow pit are done in accordance with the provisions as specified in section 3100 of the COLTO Standard Specifications and this Act. The contractor shall also comply to the requirements as set out in C3.4.3.2 Environmental Management Plan.

The minimum requirements for operations at borrow pits are:

- Borrow pits are worked in such a way that the health and safety of employees and the public will not be endangered.
- A monthly report shall be submitted to the engineer on health and safety aspects at the borrow pits.
- The contractor shall appoint a manager to manage the borrow pits in accordance with the Mine Health and Safety Act.
- The contractor shall take the necessary steps to ensure that the work area of the borrow pits are safe at all times. This shall include items such as the provision of fencing and security guards.

(c) Duties of the Manager

The minimum duties of the manager supervising the activities at borrow pits shall be:

- Maintain a healthy and safe borrow pit environment.
- Identify hazards and related risks to which persons and employees are exposed.
- Establish a health and safety policy that
    - Describes the organisation of work.
    - Contains aspects concerning the protection of the employees and other persons' health and safety.
    - Contains a risk analysis.
- Supply and erect the necessary safety and warning signs.

Add the following pay items and change the clause number.

B12.35 MEASUREMENT AND PAYMENT

Add the following items:

"ITEM		UNIT
B12.01	**Locating Existing Services**	Provisional Sum

ITEM		UNIT
B12.02	**Hand Excavation to determine the positions of existing services**	
	To determine the positions of existing services	cubic metre (m³)
	Measurement and payment shall be as specified for item 22.01 in the standard specifications.	
ITEM		**UNIT**
B12.03	**Project Launch**	
	Project Launch	Prime Cost Sum
ITEM		**UNIT**
B12.04	**Provision for a Community Liaison Officer**	
	Provisional sum for the payment of the Community Liaison Officer	Provisional Sum
	Expenditure of the above item shall be made in accordance with the general conditions of contract.	
ITEM		**UNIT**
B12.05	**Provision for a Community Liaison Officer**	
	Provisional sum for the payment for attending steering Committee meetings	Provisional Sum
ITEM		**UNIT**
B12.06	Provisional sum for payment of contract notice board as instructed by the engineer	provisional sum
ITEM		**UNIT**
B12.07	Provisional sum for accredited Training	provisional sum
ITEM		**UNIT**
B12.08	Provisional sum for Royalties for borrow material	provisional sum
ITEM		**UNIT**
B12.10	Handling costs and profit in respect of sub-items B12.01, B12.03 to B12.09 above	percentage (%)

Measurement and payment shall be in accordance with the general conditions of contract."

The tendered percentage is a percentage of the amount actually spent under the sub-items B12.01, B12.03 to B12.09, which shall include full compensation for the handling costs of the contractor, and the profit.

The prime cost sums shall be paid in accordance with the provisions of the General Conditions of Contract. The tendered percentage is a percentage of the amount actually spent under the

prime cost items, which shall include full compensation for the profit in connection with providing the specified service.

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

B1302 GENERAL REQUIREMENTS

(a) Camps, constructional plant and testing facilities

Add the following:

"The contractor shall, at each area where work is being undertaken, provide on a daily basis at least one (1) portable chemical latrine unit per thirty (30) 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. No separate payment shall be made for this requirement and 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)

Add the following after the fifth paragraph:

"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."

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

B1402 OFFICES AND LABORATORIES

(a) General

Add the following:

"The facilities to be provided for the engineer in terms of these specifications shall be fenced off by a two metre high veranda type security fence with diamond mesh on the vertical portion and barbed wire on the overhang. A security gate shall be provided in the fence which shall be guarded at all times by an acceptable watchman provided by the contractor.

The engineer's establishment may be incorporated within the contractor's establishment provided that the preceding requirements are met to the satisfaction of the engineer.

Separate payment shall be made for the provision and erecting of the security fence and gate as indicated on the drawings, but the cost in respect of the provision of a watchman at all times by the contractor shall be deemed to be included in the contractor's tendered rate for item B13.01(c)."

(b) Offices

Add the following new sub-sub-clause:

"(xviii) The engineer's site supervisory staff shall be provided with cellular telephones by the contractor for site communication purposes. Provision is made in the bill of quantities for separate payment of the supply and operating costs of such cellular phones."

B1406 MEASUREMENT AND PAYMENT

Add the following sub-item:

ITEM		UNIT
B14.11	**Provision of cellular telephone to the Engineer:**	
	(a) Cost of cellular phone, calls and other charges	Provisional Sum (P Sum)
	(b) Handling cost and profits in respect of item B14.11(a)	Percentage (%)

The unit of measurement for item B14.11 shall include full compensation for the monthly cellular phone costs for the Engineer's site personnel.

Measurement and payment in respect of the provisional sum item shall be made in accordance with the provisions of the general conditions of contract.

ITEM		UNIT
B14.12	**Provision and erection of security fencing (Including gate)**	metre (m)

The unit of measurement shall be the metre of security fence supplied and erected as indicated on the drawings and/or ordered by the engineer. The tendered rate shall include full compensation for procuring and furnishing of all material, including one vehicle gate, labour and equipment required to erect the specified security fence and maintain it for the duration of the contract."

General: Method of payment

Add the following:

"The tendered rates under this section of the bill of quantities shall also include full compensation for the dismantling and removal from site of all offices, laboratories and other facilities provided for the engineer's supervisory staff at the completion of the contract."

SECTION 1500 : ACCOMMODATION OF TRAFFIC

B1502 GENERAL REQUIREMENTS

(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 after subclause (viii):

"(ix) be responsible for contacting all the relevant authorities in the event of an accident on the site of the Works

(vi) arrange for the removal of broken down vehicles that obstruct the normal traffic flow

The Contractor shall provide the traffic safety officer with all the necessary resources to carry out his duties as specified, inter alia, light delivery van (LDV), personnel, warning signs and revolving amber flashing lights. A warning sign with the words "CONTRACTOR TRAFFIC CONTROL" and/or "AANNEMER VERKEERSBEHEER" in clearly legible letters shall be mounted on the vehicle at least 1,5m above ground level to be clearly visible. The vehicle shall be equipped with two revolving amber-coloured flashing lights with a minimum intensity of 55W. The flashing lights shall be switched on and the warning sign be displayed at all times when the vehicle is used on the site.

No separate payment will be made for the traffic safety officer, his vehicle, personnel and equipment and the cost thereof shall be included in the Contractor's cost for his establishment and general obligations (Section 1300)."

Add the following new subclauses:

"(j) 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.

(k) 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.

(l) 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.

"(m) Maximum lengths of construction areas

A temporary deviation, where the proposed road follows the existing route shall be constructed along the length of existing road. Traffic shall generally be accommodated as follows:

On a two-way two lane gravel deviation (Class 1) constructed partially outside or adjacent to the existing road reserve boundaries of road.

(i) On one-way single lane gravel deviation (Class 2) constructed inside the existing road reserve boundaries and on either side of road. In this instance special cognisance shall be taken to accommodate traffic to private properties.

A maximum length of one section of approximately 1.5 km or two sections of 1,0km each of deviation (Class 1 or 2) shall be operational at a time and no relieve of this limitation shall be considered by the engineer except where the programme necessitates such at the construction of bridges."

B1503 TEMPORARY TRAFFIC CONTROL FACILITIES

Add the following after the first paragraph:

"All temporary road signs, devices, sequences, layouts and spacing shall comply with the requirements of the Road Traffic Act, 1996 (Act 93 of 1996), the National Road Traffic Regulations, 2000, the South African Road Traffic Signs Manual, the requirements of the relevant road authority and the drawings. All temporary traffic control facilities shall comply with the guidelines set in SA Road Traffic Signs Manual, Volume 2, Chapter 13: Roadworks Signing, (SARTSM, June 1999, obtainable from the Government Pinter, Pretoria)."

(b) Road signs and barricades

Add the following:

"All the temporary road signs are to be mounted on posts as specified in section 5600 of the specifications. Provision shall be made for the supply and erection of the signs and the maintenance of the signs during the construction period. Provisions shall also be made for the removal of the temporary road signs on completion of the construction work when such signs are no longer required.

Temporary road signs and channelization devices shall be manufactured in accordance with the latest edition of the South African Road Traffic Signs Manual (June 1999) and placed as shown on the drawings and in Road Signs Note 13. Delineators shall be manufactured from a non-metal material and shall be mounted on a base section also manufactured of non-metal material. Single as well as back-to-back mounted delineators are required.

The obligation to arrange safe passage of traffic shall always be vested with the contractor regardless what is indicated on the drawings of the engineer."

(c) Channelization devices and barricades

Add the following:

"Drums shall not be used as channelization devices.

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

a) It shall be manufactured from a flexible material and shall comply with SABS 1555. The blade portion of the delineator shall be positively affixed to a base unit which in turn shall be stable on its own or be stabilized by means of sandbags when used on the road.

ii) The blade shall be retro-reflectorised, with class 1 yellow sheeting on the side facing oncoming traffic..

iii) It shall nominally be 1000mm high x 250mm wide and the bottom edge of the delineator shall not be more than 200mm above the road surface.

iv) It shall be subject to the approval of the Engineer.

The maximum spacing between centres of delineators shall be as shown on the drawings or as directed by the Engineer."

(e) Warning devices

Add the following:

"It is a requirement of this contract that all construction vehicles and plant used on the works will be equipped with rotating amber flashing lights and warning boards as specified in the standard specifications. Construction vehicles travelling outside the limits of construction areas shall however, not operate the warning lights.

The warning lights shall have a base diameter of at least 170mm and the amber bulb cover a height of a least 150mm high. It shall be a requirement that the contractor also provides the engineer's site personnel with warning lights for their vehicles (a maximum of two lights are required) without any payment applicable.

B1514 TEMPORARY FENCING AND GATES

Replace the contents of this clause with the following:

"Where temporary fencing is ordered by the engineer, it shall be paid for under item 55.06 of the standard specifications. The temporary fencing shall be new fencing material, which shall subsequently be dismantled and removed and erected at an alternative position as directed by the engineer. When ordered by the engineer, temporary fences and gates shall be moved to new locations or either left in place or when no longer required be dismantled and removed from site if so directed. Allowance is made in the bill of quantities for moving existing fences and gates."

Add the following clause:

B1517 RETRO-REFLECTIVE MATERIAL

"Retro-reflective material for temporary signs shall comply with the requirements of SABS 1519-1 for weathered material. Tests shall be carried out with a field retro-reflectometer and the testing procedure and classification are described in Clause B 8118. The value of the coefficient of Retro-Reflection shall be at least 60% of the values indicated in Table B 8118/1."

B1518 MEASUREMENT AND PAYMENT

Renumber item 15.01 as B15.01 and add the following:

"The tendered rate shall also include for all measures necessary to safeguard traffic on temporary deviations during blasting operations as well as all temporary traffic-control facilities for temporary deviations."

Delete all references to half width construction under payment item 15.01. Half width construction will be measured under payment item 15.10.

Renumber item 15.03 as B15.03 and add the following

"This sections provides only for additional traffic-control facilities as and when required on instruction by the Engineer and does not provide for facilities already included under payment item B15.01"

Add the following sub-item:

"ITEM		UNIT
B15.02	**Temporary traffic control facilities**	
(n)	Provision of high visibility safety jackets and safety hats	number (No)

The unit of measurement shall be the number of safety jackets supplied to the supervisory staff.

The tendered rate shall include full compensation for providing and maintaining hats and the jackets equipped with high visibility retro-reflective and/or fluorescent panels in red, yellow and white for the duration of the contract".

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 road side 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.

Payment for gabion boxes and mattresses which have to be removed and the material sorted and stacked shall be made under section 5200"

B1703 EXECUTION OF 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."

B1704 MEASUREMENT AND PAYMENT

Change item 17.01 to read as follows:

ITEM		UNIT
B17.01	**Clearing and grubbing of:**	
	Clearing and grubbing	hectare (ha)

Measurement and payment for item B17.01 shall be as specified for item 17.01 of the standard specifications.

SECTION 1800 : DAYWORK SCHEDULE

Note: This is a new section added to the Standard Specifications.

Add the following:

B1801 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.

B1802 ORDERING OF DAYWORK

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

B1803 MEASUREMENT AND PAYMENT

The engineer may order the following daywork items:

ITEM	DESCRIPTION	UNIT
B18.01	(a) Normal hours of duty of:	
	(i) Unskilled	Hour (h)
	(ii) Semi-skilled	Hour (h)
	(iii) Skilled	Hour (h)
	(iv) Foreman	Hour (h)
B18.02	Hire of construction equipment	
	(a) Excavator 22 –30 ton	Hour (h)
	(b) TL Backactor	Hour (h)
	(c) Front end loader	Hour (h)
	(d) Platform truck	Hour (h)
	(e) Tip truck	Hour (h)
	(f) Grader (CAT 140G or similar)	Hour (h)
	(g) Walk behind roller *(Bomag BW90 or similar)*	Hour (h)
	(h) Mechanical Broom	Hour (h)
	(i) D6 Dozer	Hour (h)
	(j) Compressor	Hour (h)
	(k) Submersible dewatering pump	Hour (h)

The unit of measurement shall be the actual number of hours worked by labourers or foremen or an item of plant.

The tendered rates shall include full compensation for all cost items including overheads, head-office expenses and profits as described in sub-clause 6.5 of the general conditions of contract and shall be subject to contract price adjustment as provided for in the contract.

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.”

SECTION 2100 : DRAINS

B2103 BANKS AND DYKES

Add the following:

"Mitre banks at culvert inlets should be considered at such a skew angle that it guides the water into the inlet with a minimum loss of velocity (energy)."

B2104 SUBSOIL DRAINAGE

(a) Materials

(i) Pipes

Delete the last sentence of the fifth paragraph and substitute it with the following:

"Perforation for 100mm pipes shall be spaced in two rows, one on each side of the vertical centre line of the pipe, and at one third of the circumference. The perforation for the 150mm pipes shall be spaced in four rows, two as described for 100mm pipes, and the other two rows at two thirds of the circumference."

(ii) Synthetic-fibre filter fabric

Add the following:

"All filter fabric shall be a non-woven needle punched type material and must be approved by the engineer. Filter fabrics shall have a minimum co-efficient of permeability of 3 x 10-3 m per second."

B2107 MEASUREMENT AND PAYMENT

Add the following new items:

"ITEM		UNIT
B21.20	**Galvanised wire mesh 250 x 250mm, at the outlets of subsoil drainage systems. Mesh 10mm x 2,5mm wire diameter**	Number (No)

The unit of measurement shall be the number of 250mm x 200mm pieces of wire mesh, with a 10mm x 10mm mesh and 2,5mm wire diameter built into the subsurface drain outlet structure as shown on the drawings.

The tendered rate shall include for procuring, furnishing and installing the material, cutting, waste and keeping the mesh in the pipe opening clean during installation.

ITEM		UNIT
B21.21	**Subsoil drainage markers**	Number (No)

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

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

B2210(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.”

B2218 MEASUREMENTS AND PAYMENT

Add the following to pay item 22.05:

"In addition to the requirements for measuring concrete backfill to rectangular culverts as specified for item 22.08, the following shall apply:

Concrete backfill shall be measured to the actual dimensions of the precast units, i.e. actual volumes between ribs and haunches shall be taken into account. For the purpose of calculating concrete backfill quantities, the horizontal dimensions of the concrete backfill on the outside of the culvert(s) (closest to excavated face), shall be taken as 100mm maximum irrespective of what type or make of precast portal is used or the actual width of the excavation.

The width of the concrete backfill between portals in the case of multiple culverts, shall be taken as 80mm for precast units with a leg height of 1500mm and 100mm for precast units with a leg height exceeding 1500mm. The vertical dimensions, in both cases, shall be equal to the height of the portal".

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

B2301 SCOPE

Add the following:

"The position and length of the following types of concrete kerbs and channels are indicated on the geometric layout plans, typical drawings and on the drainage plans.

Type A	:	In situ concrete channel, 0,8m wide on fills
Type B	:	Precast concrete kerbing, semi-mountable (SABS 927-1969)
Type C	:	In situ concrete kerbing at intersections
Edge beam	:	In situ concrete kerbing at farm access and bus stops
Type E, F1 & F2	:	In situ concrete "V"-shaped channels in side drains and open drains."

B2302 MATERIAL

Add the following new sub-clauses:

(e) Metal pipes

"Metal pipes down side slopes shall comply with the requirements of clause 2203 of the standard specifications."

B2304 CONSTRUCTION

(d) Slip form kerbing

Add the following:

"Slip-form kerbing shall under no circumstances be allowed."

(e) Cast in situ kerbs and channels

Add the following:

"Forming and templates used to form joints between alternate sections shall be of steel plate of which the thickness shall not be less than 5mm."

Add the following new sub-clauses:

(i) Construction sequence

Replace paragraphs (i), (ii) and (iii) with the following:

"In all cases where kerbing and/or channelling adjoin the bituminous surface of the road, the kerbing and/or channelling may only be constructed after the bituminous surface has been completed.

Before commencing with the kerbing and/or channelling, the surfacing and the base, shall be accurately cut to line with a mechanical saw to a minimum depth of 75mm. After excavation the concrete shall then be cast against the cut surface without formwork. All material outside the cut line must be carefully removed to the required thickness of concrete without damaging the edge before commencing with the casting of the concrete. No payment shall be made for repair work as instructed by the engineer to damage caused by the cutting/excavating process of surfacing and base layers. Any concrete spilt onto the surfacing shall immediately be removed and cleaned. Where so required by the engineer, the contractor shall, without any additional compensation, paint emulsion over the stained surface.

Add the following sub-clause:

(k) Formwork and finish

“Formwork and finish of concrete kerbs shall comply with the requirements of section 6200. All visible edges on the sides or at joints of cast in situ concrete kerbs or channels shall be rounded with a rounding tool.”

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.”

(b) Use of borrow materials

Add the following to the second paragraph of this sub-clause:

“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 each borrow pit or pits shall be provided with fencing around the perimeters, including a access gate, of the borrow areas, including the supply of danger warning signage fixed to the fencing, visible at all sides approaching the borrow pit area. The fencing shall be erected prior to entering the land for borrowing purposes and shall on final finishing of the borrow areas as specified by the employer, be dismantled and removed or left in-place as instructed by the employer. Payment for fencing around borrow pits shall be made in accordance with the stipulations of section 5500 in these specifications."

In addition to fencing, Security Guards shall be supply on a 24 hour, 7 days a week basis, with full time communication to the Site Manager or site camp for the duration of the contract and activities at the borrow pits.”

Add the following new sub-clause:

“(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."

B3108 MEASUREMENT AND PAYMENT

Change item 31.01 to read as follows:

"ITEM		UNIT
B31.01	**Excess overburden :**	
(a)	Depth up to and including 0,5m	cubic meter (m^3)
(b)	Depth exceeding 0,5m and up to 1,0m	cubic meter (m^3)

Measurement and payment shall be as specified for item 31.01 of the standard specifications with the abovementioned depth ranges applicable."

Add the following new item:

SECTION 3300 : MASS EARTHWORKS

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".

(c) 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 sub-clause 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.”

B3308 FINISHING THE SLOPES

(d) General

Add the following:

“Where existing cut and fill slopes are excessively eroded or where slippages occurred in slopes, the slopes are to be reinstated by means of backfilling with suitable gravel material. All loose material and vegetation shall first be removed from the eroded cut and fill slopes before backfilling may commence from the bottom of the cut or fill. The backfill material shall be benched into the existing slopes and compacted to 90% of modified AASHTO density, using suitable small compaction equipment e.g. Bomag walk-behind rollers or hand-held compaction tools. Benching shall be executed to the dimensions shown on the drawings. Upon completion of the backfilling operation the cut and fill slopes shall be neatly finished as specified.”

SECTION 3400 : PAVEMENT LAYERS OF GRAVEL MATERIAL

B3402 MATERIALS

(a) General

Add the following:

"Material requirements for gravel pavement layers are in accordance with TRH4 and shall be indicated on the drawings."

B3405 CONSTRUCTION TOLERANCES

(e) Cross-section

Delete the second paragraph and replace with the following:

"The normal crossfall of the road wearing course where the road is in a straight horizontal alignment, is specified as 2% as shown on the drawings.

At any cross-section the measured crossfall between any two points shall at least be 2,% and not more than 3,5%. At any cross-section the actual level at any point shall not be higher than 10mm above the computed level from the cross-section as specified and the actual level, if lower than the computed level, shall not be lower by more than that derived from the specifications for longitudinal grade and crossfall deviations."

(f) Surface regularity

Add the following:

"Where transverse construction joints in base layers are made between newly and previously constructed sections, the contractor shall exercise level control at such joints by installing level poles at 5m intervals on either side of the joint of the layer covering at least a 30m length into the newly constructed section.

B3406 QUALITY OF MATERIALS AND WORKMANSHIP

Add the following:

"Test results and measurements shall be assessed by the engineer according to the provisions of Section 8300 of the standard specifications".

SECTION 3500 : STABILISATION

B3503 CHEMICAL STABILISATION

(a) Preparing the layer

Add the following:

Breaking-down and removal of oversize material and addition of material to make to required thickness shall be completed before stabilising agent shall be added."

(h) Curing the stabilised work

Add the following:

"It is the intention of this contract that curing of chemically stabilised layers shall be undertaken in accordance to protection method (ii) as specified. Any other method of curing shall only be allowed in special circumstances as decided upon by the engineer, but no additional payment whatsoever over and above that allowed for in item 35.05 will be made."

(i) Construction limitations

In table 3503/1, replace "8 hours" with "6 hours."

B3506 TOLERANCES

(b) Uniformity of mix (chemical stabilisation)

Add the following:

"All pavement layers, especially layers which are to be chemically stabilised, shall, apart from the application of other mixing equipment, include at least two motor grader blade mixing operations to the full depth of the layer.

The in-place mixing of chemical stabilising agents with gravel materials shall be executed in such a manner that the coefficient of variation in the uniformity of the mix shall not exceed 30% when the stabilised layer is subjected to the chemical titration test, TMH1 method A15d. For plant-mixed stabilised materials the coefficient of variation shall not exceed 20%.

The coefficient of variation, C_v, is calculated by the formula:

$$C_v = \frac{S_n \times 100}{X_n} \text{ where,}$$

S_n = standard deviation of n determinations of stabilising agent content

X_n = mean percentage of n determinations of stabilising agent content with n = 4 minimum."

B3509 QUALITY OF MATERIALS AND WORKMANSHIP

Add the following:

"The preparation of chemically stabilised material for the determination of the modified AASHTO density of the material shall be executed in accordance with TMH1 test method A16T and compaction thereof in accordance with TMH1 test method A7."

SECTION 3600 : CRUSHED-STONE BASE

B3601 SCOPE

Add the following paragraph at the end of this clause:

"The base shall be obtained from commercial quarry.

B3602 MATERIALS

Add the following paragraph at the end of this sub-clause:

"A G2 base compacted to a specified density of 85% of Bulk Relative Density shall be used, as ordered by the Engineer.".

Add the following new sub-clauses of this clause:

"**(e) Material from commercial sources**

The following additional requirements shall apply:

(i) The use of aggregate derived from arenaceous or argillaceous rock groups will not be permitted.

(ii) The aggregate shall be subjected to the tests and their frequencies specified in Table 3602/5. The material may only be placed on the road when all of the specified tests have been completed and have passed.

Test Desciption	Frequency (test / m³ of compacted base)
Aggregate Crushing Values (10% Fact)	5 000
+ Ethylene glycol durability testing *	5 000
x Atterberg Limits	
PI –0,425	1 000
PI –0,075	2 000
+ Soluble salts	10 000
Grading	10 000
+ Ball mill	5 000

* Test method B8117 durability index shall not exceed 1 (one).
x Pi -0,424 = Plasticity Index determination on - 0,425 mm material.
Pi -0,075 = Plasticity Index determination on - 0,075 mm material.
\+ The cost of these tests is for the Contractor's account.

Add the following sub-clause:

"(e) Durability

The durability property of aggregates derived from the basic crystalline group shall be assessed by means of the Ethylene Glycol Durability Index. When tested in accordance

with the method prescribed in B 8105 (g) the Durability Index shall not exceed four. In addition, the 10% FACT value obtained after soaking in ethylene glycol for four days shall not be less than 70% of that obtained on the unsoaked sample. Where any values are obtained that fall outside the above requirements, a detailed assessment of the quarry shall be undertaken together with a specialist mineralogical evaluation of both the coarse as well as fine fractions in order to assess the long-term durability properties of the material.

For Basic crystalline rocks, Arenaceous rocks, Argillaceous rocks and Diamictites the Durability Mill Index (DMI) shall be less than 125. For all other rock types the Durability Mill Index (DMI) shall not be more than 420, subject to the % passing the 0,425mm sieve not increasing by more than 8 percentage points during the Durability Mill test."

Add

B3602 MATERIALS

"Crushed stone drainage blanket to Table B3602/4. The crushed stone drainage blanket shall be coarse graded (37,5mm nominal size) and shall conform to the following requirements as detailed in Table B3602/4 below.

Table B3602/4

Gradation envelope for drainage material	
SIEVE SIZE mm	**GRADATION ENVELOPE Percentage passing by mass**
53	100
37.5	75 – 100
19.0	48 – 84
13.2	40 – 62
9.5	34 – 54
4.75	24 – 35
2.0	18 – 21
0.425	6 – 10
0.075	0 – 5

B3604 CONSTRUCTION

(a) Spreading and mixing

Add the following to this Sub-clause:

"Level control for the construction of the base layer shall be installed at 10 m intervals. Level control during construction may be done at every second control position (20 m intervals) as long as the starting position is alternated to ensure all control positions are utilized during the construction of the layer.

No additional payment shall be made for the installation or use of level control at 10 m intervals."

(b) Compaction

Add the following at the end of the first paragraph of this Sub-clause:

"The specified density shall also be obtained in the upper 50mm of the layer.

(c) Surface preparation of the base

Sub-clause (i) shall be applicable to surface preparation of the base.

(h) Joints between existing layers and new or reconstructed layers

Add the following at the end of the first paragraph of this Sub-clause:

"During the working of the first half-width, the surface of the base layer shall be constructed a minimum of 200 mm past the centre longitudinal joint position in order to obtain proper compaction on the joint position.

During the working of the second half-width, the centre longitudinal joint between any reworked or new layer shall be cut back at least 100 mm into the first half-width to remove any loose or disturbed material and to ensure a sound longitudinal joint between the two half-width sections.

The Contractor shall ensure that any gravel, crushed stone or fines carried onto the surfaced half width accommodating traffic during the working of the pavement layer is removed immediately by hand brooming. In addition, all soil fines arising from the slushing of the base and carried on to the surfacing of the first half width shall be removed before the second half width is primed.".

B3605 PROTECTION AND MAINTENANCE

Add the following to the end of the second sentence of this Clause:

“as determined according to TMH 1 method A7.”

B3607 QUALITY OF MATERIALS AND WORKMANSHIP

Replace the last paragraph of this Clause with the following:

"Test results and measurements shall be assessed in accordance with the provisions of Section 8200. (Ls = 88,0 or 89 % as ordered).".

B3608 MEASUREMENT AND PAYMENT

"**Item**

Unit

B36.01 Crushed Stone Base

Add the following item

(a) Crushed stone drainage blanket..... cubic metre (m^3)"

SECTION 4100 : PRIME COAT

B4102 MATERIAL

(a) Priming material

Add the following:

"The priming material may not be a tar-based product.".

(b) Aggregate for blinding

Add the following sentence to this Subclause:

“Blinding of the primed surface with aggregate shall only be permitted to facilitate vehicular access to adjoining properties.”.

B4104 WEATHER AND OTHER LIMITATIONS

Delete paragraph (g) and replace with the following:

“When the moisture content of the upper 50mm of the layer is higher than 50% of the optimum moisture content determined according to TMH 1, Method A7.".

B4106 APPLICATION OF THE PRIME COAT

Add the following to Sub-clause (c) of this Clause:

"The nominal rate of application of the prime coat shall be 0,7 ℓ/m². Unless directed otherwise by the Engineer or indicated on the drawings, the width of the primed surface shall be 600 mm wider than the edges of the surfacing on each side.”.

Add the following sub-clause:

"(j) Application in areas treated by reworking and construction of a new base shall be primed using a mechanical distributor complying with Subclause 4103(a). The edges of the previously constructed or existing surfacing shall be adequately protected by approved means to ensure that an overlap of prime not exceeding 50 mm is sprayed onto the previously constructed of existing surfacing.".

B4108 TOLERANCES

Delete the first paragraph and replace with the following:

"The actual spray rates measured at spraying temperature shall not deviate by more than 8,0% from that ordered by the Engineer. The Engineer may, at his discretion, conditionally accept application rates falling outside this tolerance at reduced payment in accordance with Table B4108/1.

Any deviation outside these limits shall not be paid for; however, the Engineer shall have the right to instruct the Contractor to make up any deficiency, or blind excessive prime without additional payment. Where so instructed, the material for blinding shall consist of approved, screened 4,75 mm nominal single size aggregate.

The use of crusher dust for blinding shall not be permitted. If under-spraying occurs, and it is accepted by the Engineer, only the actual quantities applied shall be paid for.”.

B4109 TESTING

Add the following to this Clause:

“No payment shall be made if this condition is not adhered to. The Contractor shall, at his cost, provide to the Engineer representative samples of every batch of prime delivered onto site.”.

B4110 MEASUREMENT AND PAYMENT

"Item **Unit**

B41.01

Add the following item

(f) Bitumen emulsion primer (Eco-primes).....litre (l)"

SECTION 4200 : ASPHALT BASE AND SURFACING

B4202 MATERIALS

(a) Bituminous binders

(i) Conventional binders

Add the following:

"The binders to be used shall be as follows:
(a) Continuously graded surfacing course: A-E2 modified binder
(b) Continuously graded base: A-P1 modified binder".

(ii) Non-homogeneous (heterogeneous) modified binders"

Replace the last sentence with the following:

"The bitumen-rubber binder shall be manufactured according to the guidelines contained in"Technical Guideline: The use of Modified Bituminous Binders in Road Construction (TG 1-2007) Asphalt Academy"

(3) *Extender oil*

Delete "Table 4202/2*" in the first sentence and replace with* "Table B4202/2"

TABLE B4202/2: REQUIREMENTS FOR EXTENDER OIL

Property	Limits
Flash Point	180°C (min)
Percentage by mass of saturated hydrocarbons	25% (max)
Percentage by mass of aromatic unsaturated hydrocarbons	55% (min)

(iii) Homogeneous modified binders

Replace the last sentence with:

"The modified binder to be used on this project shall be A-E1/A-P1

The homogeneous modified binder shall be manufactured according to the guidelines contained in latest review (2nd edition) of "Technical Guideline: The use of Modified Bituminous Binders in Road Construction (TG 1- November 2007): Asphalt Academy". The base bitumen shall conform to SABS 307, or a blend of SABS 307 grades. The type as well as percentage of modifier is not prescribed, however the contractor shall indicate in the Pricing Schedule what polymer he shall be using. The properties of the homogeneous modified binder shall comply with the relevant requirements for binder class A-E1/ A-P1 as listed in table B4202/12.

TABLE B4202/12: PROPERTIES OF POLYMER-MODIFIED BINDER FOR HOT-MIX ASPHALT

Property	Unit	Min/Max	Test Method	Binder Class		
				A-E1	A-E2	A-P1
Softening Point	°C	Min	MB-17	55-65	65-85	63-73
Dynamic Vicosity@165°C	Pa.s	Max	MB-18	0.6	0.6	0.75
Dynamic Viscosity @ 165°C	Pa.s	-	MB-18	≤ 0.6	≤ 0.6	≤ 0.55
Ductility @ 15°C	cm	Min	MB-19	75	50	30
Force Ductility @ 5°C	N		EN 13703	Report[3]	Report[3]	Report[3]
Elastic Recovery @ 15°C	%	Min	MB-4	>50	>60	>30
Torsional Recovery @ 25°C	%	-	MB-5	Report	Report	Report
Storage Stab @ 160°C)	°C	Max	MB-6	≤5	≤5	≤5
Flash Point	°C	Min	ASTM: D93	>230	>230	>230
Complex shear modulus: G*Sin δ @10 rad/s	°C	-	AASHTO:TP5	Report	Report	Report
Creep Stiffness	MPa	-	AASHTO:TP1	Report	Report	Report
Properties after ageing (RTFOT)			MB-3			
Diff in Softening Point	°C	-	MB-17	-2 to +8	-2 to +8	-2 to +8
Elastic Recovery @ 15°C	%	Min	MB-4	>40	>50	Report[2]
Mass change	%	Max	MB-3	1.0	1.0	1.0
Torsional Recovery @ 25°C	%	-	MB-5	Report	Report	Report
Dynamic Viscosity @ 165°C	Pa.s		MB-18	Report[2]	Report[2]	Report[2]

Notes:

1. The prescribed test method is based on not using stirrers although it has been reported that the use of stirrers has shown no difference in test results. For referencing purposes no stirrers should be used.
2. No limits are given and the values should be recorded for reporting purposes only as they may be used in future specifications.
3. No values given but the test can be used to rank various binders according to their low temperature cohesion properties

(b) Aggregates

Add the following paragraph to the introductory description:

"Asphalt mixes shall be manufactures using different individual single size coarse aggregates fractions and crushed fine aggregates blended to conform to the specified grading requirements. The use of natural sands shall only be permitted if approved by the engineer and shall be limited to a maximum of 5% for continuously graded mixes. All aggregate in excess of 4,75mm shall consist of individual nominal

single sized aggregate. For stone mastic asphalt mixes all aggregate fractions in excess of 2,36 shall consist of individual single size fractions. Contractors shall note that commercial suppliers may not be able to supply all the required single size aggregates, in which instance arrangements will have to be made for additional on site screening. No additional payment shall be made for screening aggregate. The use of run of crusher type materials shall not be permitted."

(v) Absorption

Add the following sentence:

"In addition, the total binder absorption of the combined coarse and fine aggregate blend shall not exceed 0,5%"

(viii) Grading

Delete the second paragraph commencing with "The target grading…" *and add the following paragraphs*:

"The grading limits for the combined aggregate grading for the asphalt base shall be as specified in table 4202/6: Continuously graded 26,5m maximum.

The grading limits for the combined aggregate grading for the asphalt surfacing shall be as specified in table 4202/7: Continuously graded medium grade.

(c) Fillers

Delete the second last sentence of the first paragraph and replace with:

"With the exception of stone mastic asphalt, in no instance shall more than 2% by mass of active filler be used in the mixes."

Add the following after the last paragraph:

"For tender purposes the active filler shall be hydrated lime"

(h) General

Add the following after the second paragraph:

"Sufficient aggregate for a minimum of 3 days production shall be separately stockpiled and tested for conformance and uniformity prior to use. The test results shall be presented to the engineer"

B4203 COMPOSITION OF ASPHALT BASE AND SURFACING MIXTURES

In the first paragraph, third last line, after "or active filler content" *add*:

"or aggregate content"

Replace the fifth paragraph with the following:

"The design of the asphalt mixes shall be in accordance with "Interim Guidelines For The Design Of Hot-Mix Asphalt In South Africa (June 2001)", and appropriate research results. The mix properties and requirements shall be as specified in the project specifications"

The relevant asphalt mixes for the base and surfacing layers shall comply with the requirements in table B4203/2.

TABLE B4203/2: ASPHALT MIX REQUIREMENTS: BASE AND SURFACING

Property	Continuously graded base mixes	Continuously graded surfacing mixes
Marshall Stability (kn)	8 – 18	8 – 18
Marshall Flow (mm)	2 – 6	2 – 6
Stability /Flow (kN/mm)	>2,5	> 2,5
VMA (%)	> 14	> 15
VFB (%)	65 – 75	65 – 75
Air voids (%)	4 – 6	4 – 6
Indirect tensile strength @ 25°C (kPa)	> 1000	> 1000
Dynamic Creep Modules @ 40°C (MPa)	> 20	> 20
Modified Lottmann* (TSR)	> 0,7	> 0, 8
Air permeability @ 7% voids (cm^2)	< 1 x 10 –8	< 1 x 10 –8
Binder film thickness (microns)	5,5 – 8,0	5,5 – 8,0
Filler bitumen ratio	1 – 1,5	1 – 1,5
Immersion index (%)	-	-

* At 7% voids

B4205 GENERAL LIMITATIONS AND REQUIREMENTS AND THE STOCKPILING OF MIXED MATERIAL

(b) Moisture

Add the following at the end of the second last paragraph after "engineer":

"even if the underlying layer has been previously primed."

(c) Surface Requirements

(iii) Tack Coat

Add the following paragraph:

"Hand spraying shall only be permitted on areas approved by the engineer. The binder distributor shall be capable to apply the binder evenly over the full area. The equipment shall comply with clause 4103. Tack coat shall be applied to all transverse and longitudinal joints by hand utilizing a paint brush."

B4206 PRODUCING AND TRANSPORTING THE MIXTURE

(b) Production of the mixture

(ii) Using drum-type mixer plants

Add the following:

"Pre blending of aggregate fractions shall not be permitted and the contractor shall ensure that sufficient cold-feed bins are installed to accommodate each individual aggregate fraction, including the filler."

(c) Transporting the mixture

Add the following paragraph:

"Special precautions shall be taken by the contractor to ensure that the temperature of the total mass of asphalt does not decrease by more than 10°C from point of dispatch to the point where it is to be paved. The use of the thermal blankets is obligatory.

The contractor shall ensure that trucks used to haul asphalt are not overloaded and the legal axle loads are not exceeded. Before any asphalt can be transported, the contractor must provide the engineer with the certified carrying capacity of each truck intended for the purpose of transporting the mix. The contractor shall provide the engineer with a weighbridge ticket before discharging into the paver hopper.

ANY truck that is overloaded shall not be allowed to discharge its load and shall return to the depot/batching plant for adjustment of the load. In addition a penalty shall be applied for the overload."

Add the following sub-clause:

"**(f) Approval of asphalt mixture**

Before any asphalt is placed on the road, the engineer shall approve the mix design. The approval process shall be as follows:

The contractor shall prepare and submit a laboratory design mix with test results at four different bitumen contents. The design mix shall be submitted on the prescribed form D3 of TMH 10: "Instruction for the Completion of As-Built Materials Data Sheets" with all the necessary test results completed.
In addition, the proposed asphalt mixture shall be subjected to gyratory testing. All the expenses in preparing and submitting the laboratory design mix shall be to the contractor's cost.

Samples of all aggregate and bitumen shall be submitted with the laboratory design mix to enable the engineer to carry out check design testing as necessary. The above design and aggregate shall be submitted to the engineer at least six weeks before it is intended to commence with any asphalt production.

After approval is obtained for the laboratory design mix, a plant mix at varying binder contents of approximately 5 to 10 tons each shall be produced. The purpose of the plant mix is for the contractor to prove that the laboratory design mix can be produced

successfully. The engineer shall conduct the necessary testing on the plant mix. The plant mix shall not be placed on the road. During the production of the plant mix, the engineer shall be afforded the opportunity to inspect the asphalt plant.

After the plant mix is approved, permission shall be given for laying a trial section at varying binder contents in accordance with the requirements of section 4211 of the specifications. The engineer may require that the mix be further assessed by means of CSIR Wheel Tracking or MMLS testing, the cost of which will be borne by the Employer. Mass production of asphalt shall only commence after approval of the trial section, which should be given within a maximum of ten days.

The engineer may instruct the contractor at any time to halt his paving process and to review the whole or part of the above process should a change of aggregate properties occur, the specified asphalt requirements not being met and/or a consistent asphalt mixture not be produced."

B4208 JOINTS

Add the following to this clause:

"Where the difference in level between the new work and the existing road surface exceeds 25mm, joints shall be treated as follows:

Transverse steps at the end of a day's work shall be tapered off at a slope of 1 vertical to 20 horizontal (1:20) to tie in with the existing surface. The tapered section shall be removed before surfacing is recommenced and a joint formed in accordance with clause 4208 of the specification.

Longitudinal joints exposed to traffic shall be provided with a taper of compacted asphalt material over the full length of the exposed joint. The width of the taper shall be at least 5 times the difference in level between the old and new work.

All costs involved in the provision and removal of these temporary ramps shall be deemed to have been included in the rates tendered for the relevant asphalt payitem."

B4209 PRE-COATED CHIPPINGS FOR ASPHALT SURFACING

In the first sentence of the fifth paragraph, delete "6-8 kg/m^2" and "7-9kg/m^2" *respectively and replace with*:

"3-4 kg/m^2 and 5-6 kg/m^2"

In the last sentence of the fifth paragraph, delete "between 0,6 and 1,0mm" *and replace with*:

"between 0,8 and 1,2mm"

B4213 CONSTRUCTION TOLERANCES AND FINISH REQUIREMENTS

(a) Construction tolerances

(v) Surface regularity

Delete this sub-clause and replace with:

"Roughness of the surfacing will be determined by using a profilometer capable of producing a Class 1 vertical measurement resolution, and a Class 3 longitudinal sampling distance as defined in ASTM standard (E950-94). Prior to using the profilometer it shall have successfully completed a validation trail against the instrument of Reference (Face Dipstick ®) used by the South African National Roads Agency Limited.

The profilometer shall be used to record the longitudinal profile in both wheel tracks of the traffic lanes. The two wheel tracks shall be 1.75m apart, and the Engineer shall indicate the exact position of the wheel tracks. Should the two wheel tracks not be measured simultaneously during the same pass, then procedures shall be implemented to ensure that the longitudinal profile data recorded for the two wheel tracks are at the same longitudinal location on the road. The measured longitudinal profiles will then be processed using the Quarter-Car simulation model with parameter values as defined in ASTM standard (E1170-92) for Ride Meter-Vehicle Mounted. The simulated suspension mentioned with then be linearly accumulated and divided by the length to yield 100m IRI (International Roughness Index) values in units of mm/m or m/km for each wheel track. The last 50 metres, and the joining first 50 metres of adjacent sections will be evaluated as a 100m section in the direction of vehicle travel.

The left and the right 100m IRI values will then be averaged to produce the Average IRI as follows:

$$\text{Average 100m IRI} = \frac{\text{100m IRI (Left Wheel Track)} + \text{100m IRI (Right Wheel Track)}}{2}$$

The average 100m IRI for surfacings placed on layers which have been milled, or constructed, by the contractor shall be judged differently from surfacings placed as an overlay on existing surfacing.

(1) The average 100mm IRI for surfacing placed on layers that have been milled or constructed by the contractor shall be evaluated and judged according to Table B4213/2 to determine whether the 100m section needs corrective work or payment adjustment.

(2) For surfacing placed as an overlay on existing surfacing the average 100m IRI values for the new surfacing and the average 100m IRI values of the existing surfacing shall both be used in Table B4213/2 to determine whether the 100m section needs corrective work or payment adjustment. For this surfacing the payment adjustment factor applicable shall be the difference between the payment adjustment factors applicable to the new surfacing and the existing surfacing plus 1.0.

TABLE B4213/2: PAYMENT ADJUSTMENT

100m IRI Values (mm/m or ,/km)*	Payment Adjustment Factor
<0.90	1.050
0.91 to 0.95	1.040
0.96 to 1.00	1.030
1.01 to 1.05	1.020
1.06 to 1.10	1.010
1.11 to 1.20	1.000
1.21 to 1.30	0.990
1.31 to 1.40	0.975
1.41 to 1.50	0.955
1.51 to 1.60	0.930
1.61 to 1.70	0.900
>1.70	Not acceptable

* This is the Average 100m IRI per lane

For overlay work on existing surfacings, the limits for payment adjustment factors shall be 1.050 and 0.900.

On sections where the average 100m IRI on the existing surfacing is <1.20 and the average 100m IRI on the new surfacing does not worsen to >1.20 no payment adjustment factor will be applicable. Should the average 100m IRI value on the new surfacing worsen to >1.20 payment adjustments will be applicable. Should the average 100m IRI value on the new surfacing worsen to >1.70 corrective work will be necessary.

Any corrective work required shall be made by the removal, through milling of the total asphalt layer width placed during a single pass of the paver over the 100m section in question, followed by reinstatement. The contractor shall submit his method statement for any corrective work to the engineer for approval, prior to commencing with any corrective work. Corrective work shall be done at the contractor's expense and shall be completed prior to determining pavement thickness. After completion of the corrective work, the 100m sections shall be re-evaluated according to the abovementioned procedure.

Any adjustment in the payment of asphalt surfacing will be made by multiplying the full payment for item B42.11 at contract rates (including pore-coated chippings where relevant) by the payment adjustment factor in or derived from Table B4213/2. The payment adjustment shall apply to the total asphalt layer width placed during a single pass by the paver of the 100m sections in question.

The longitudinal profile and the 100m IRI values shall be determined using a profilometer furnished and operated by the contractor or on his behalf in the presence of the engineer.

Profile tests done on all lanes during February 2004 will be made available to the contractor. As an absolute minimum, measurement shall be provided to the engineer after 10%, 50% and 100% of the surfacing area of the project has been completed. The contractor will be paid for these measurements under payment item 81.02. No additional payment will be made to the contractor for additional measurement and analysis of profiles."

B4214 QUALITY OF MATERIAL AND WORKMANSHIP

(b) Coring of asphalt layers

Add the following:

"A suitable coring machine shall be available on a daily basis when asphalt paving is taking place. Cores shall only be drilled, when the road temperature is 20°C or less. Core holes shall be filled with hot mix asphalt and compacted, all within 24 hours of the core being drilled. Coring shall be carried out within 48 hours after the paving has been completed and supplied to the engineer. The test results of cores shall be submitted to the engineer within 24 hours after coring."

(c) Routine inspection and tests

Add the following paragraphs:

"The contractor shall keep accurate records of:

(i) The position where every truckload of asphalt is paved (chainage, lane, time and date).
(ii) The temperatures of the asphalt in the trucks both at the mixing plant and at the paving equipment immediately prior to discharging the load.
(iii) The truck and load number from which control samples are taken. All samples taken shall be appropriately numbered.

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

Add the following sub-clause:

(d) Special tests

n-Heptane-Xylene Equivalent (Spot test) (AASHTO-T102)

If the engineer suspects that bitumen or asphalt has been overheated, he may order that the bitumen, or the bitumen recovered from the asphalt, be subjected to the Spot Test. Recovery of binder for use in the Spot Test shall be carried out according to an approved method.

Any bitumen having an n-Heptane-Xylene equivalent in excess of 36, or in excess of the manufacturers test result on the dispatched stock, shall be considered to have been overheated and shall be deemed to be rejected unless proven otherwise."

B4215 MEASUREMENT AND PAYMENT

Amend the following payment item:

Item **Unit**

B42.08 100mm cores in asphalt paving ..... number (no)

Amend the 1st sentence by adding the following after the word "drilled….":

"irrespective of depth of core."

Add the following payment items:

Item **Unit**

B42.21 Aggregate variations ..... ton (t)

The unit of measurement in respect of increases or decreases in the

aggregate content from that specified in the nominal mix shall be the ton.

Payment for variations shall be made as specified for clause 1213.

Item **Unit**

B42.22 Penalty for overloading ..... ton (t)

The unit of measurement for the calculation of the penalty shall be the ton of mix transported in excess of the legal load. The rate applied shall be twice the contractor's tendered rate for placing the mix under B42.01, B42.02 or B42.11.

For the purposes of the calculation, the so called 5% grace shall not be used. The following example is provided:

Tare Weight of vehicle certified by RTI weighbridge	=	6 tons
Maximum carrying capacity certified by RTI weighbridge	=	8 tons
Gross vehicle mass	=	14 tons
Actual Load (Weighbridge ticket)	=	14.6 tons
Overload	=	0.6 tons

Contractors rate tendered under item B42.01 = R350/ton

Penalty = 2 x R350/ton x 0.6 tons = R 420.00 "

SECTION 5100 : PITCHING, STONEWORK AND PROTECTION AGAINST EROSION

B5108 MEASUREMENT AND PAYMENT:

Add the following new item:

Item

Unit

B51.08 Demolition of stone pitching and masonry walls

(a) Stone pitching..... cubic metre (m^3)

(b) Stone masonry walls..... cubic metre (m^3)

The unit of measurement shall be the cubic metre of stone pitching or masonry wall demolished.

The tendered rate shall include full compensation for all labour, plant and equipment required to demolish the existing structure and disposal of the demolition to an approved spoil site within a free-haul distance of 1km. For partial demolition, it shall also include for squaring out the exposed surface and preparing the existing surface for repair or to tie into new construction work."

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.”

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."

B5609 MEASUREMENT AND PAYMENT

ITEM		UNIT
B56.01	Road sign boards with painted or coloured semi-matt background. Symbols, lettering, and borders in diamond grade retro-reflective material, where the sign board is constructed from:	
	Amend the last two lines of the second paragraph to read:	
	"completion, delivery, installation of the road sign board complete as specified, and the removal and disposal of all vegetation obstructing the motorists' view of the new or replaced sign board. Add the following pay items:	

"ITEM		UNIT
B56.10	**Danger plates at culverts/structures**	
(a)	Type A at stormwater culverts (size indicated)	number (No.)
(b)	Type B at bridges (size indicated)	number (No.)

The unit of measurement shall be the number of danger plates provided and erected in accordance with the drawings.

The tendered rate shall include full compensation for all labour and material, painting, posts, excavation, backfilling with soil etc., as may be necessary for completing the work in accordance with the details shown on the drawings."

SECTION 5700 : ROAD MARKINGS

B5706 SETTING OUT THE ROAD MARKINGS

Add the following:

"Where road markings are to be replaced after milling/overlay seal, it is essential that all existing barrier lines and other road marking lines be accurately referenced before commencement of milling or other operations which will obliterate the existing road markings. The position of barrier lines shall be re-assessed on site by the Engineer before the Contractor commences with the road marking."

B5707 APPLYING THE PAINT

Add the following:

"The Contractor's establishment on site and general obligation shall be deemed to fully include the establishment of the road-marking team, irrespective of the number of times the road-marking team is required to be onsite or is required to move within the site."

B5711 GENERAL

Insert the following into the last sentence of the last paragraph between "black paint" and "or chemical paint remover":

", bituminous emulsion, slurry"

Add the following to the last paragraph:

"Where black paint is used, it shall be matt."

Add the following new clause:

"B5715 REMOVAL OF EXISTING ROAD STUDS

The existing road studs shall be removed from the road surface prior to milling."

B5714 MEASUREMENT AND PAYMENT

ITEM		UNIT
B57.06	**Setting out and pre-marking the lines (excluding traffic island markings, lettering and symbols)**	

Add the following:

"Referencing of existing barrier lines and other road marking lines prior to milling and other operations, shall be included in the tendered rate for setting out and pre-marking."

Add the following item:

"Item		Unit
B57.07	Establishment of painting unit during the construction period	Lump sum

The unit of measurement shall be the lump sum to compensate the contractor for the establishment and removal of the painting unit after the retention period.

The tendered lump sum shall include full compensation for the establishment on site and for the removal of all equipment, personnel, etc. as may be required for the application of the road marking.

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

B5902 FINISHING THE ROAD AND ROAD RESERVE

Add the following to the first paragraph:

“The contractor shall pay special attention to the collection and removal of all waste materials originating from the construction activities. All 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 deemed to be incorporated in the tendered rates for item 59.01 of the bill of quantities or such other items as the contractor may decide upon.

The engineer may order additional finishing of the road reserve which will entail the collection and disposal of loose rocks etc. Payment for this work will be made under daywork items included in section 5900 of the bill of quantities as described in section 1800 of these project specifications.”

SECTION 6100 : FOUNDATIONS FOR STRUCTURES

B6105 : EXCAVATIONS

(c) Excavation

Replace first paragraph with the following:

"No concrete to be cast against any excavated earth faces and formwork to be provided for all pile caps/ supports bases. The tendered rate for excavation to include the required working space for forming the net base dimensions and other related activities for constructing the pile caps/ supports bases"

B6106 : FOUNDING

Add the following after the last paragraph:

"If the material at founding level differs from that shown on the drawings, or is not approved,the Engineer shall instruct the Contractor to do one of the following:

- Over-excavate to the depth required by the Project Manager and first compact the in-situ material at the specified depth to 95% MOD AASHTO; thereafter fill the excavated area with good quality imported material in layers not exceeding 150mm and compact to 95% MOD AASHTO for cohesive materials and 100% MOD AASHTO for non-cohesive material.
- Excavate the unapproved material to the depth ordered, and found at this level.
- Excavate the unapproved material to the depth ordered and fill to the level ordered, either with mass concrete or approved backfill, as directed.

Exposed rock founding surfaces shall be roughened to provide sound bond with the foundation, brushed to remove all loose material, and flushed with water if so ordered. Surplus water shall be removed before concreting.

The Engineer shall be notified as soon as possible if suitable material is encountered before reaching the designed level.

Where the Contractor makes the excavations larger or deeper than directed, the Contractor shall replace the over break in the floor of the excavation with concrete of strength as directed or, if authorized, with approved backfill."

B6108 : BACKFILL AND FILL NEAR STRUCTURES

(b) Backfill

Replace "90%" with "95%" in the 6th line of the first paragraph and add the following after the paragraph:

After completion of concrete work, or when so directed, the Contractor shall restore the original ground level by backfilling with approved material.

SECTION 6200 : FALSEWORK, FORMWORK AND CONCRETE FINISH

B6202 : MATERIALS

(b) Formwork

(iii) Void formers

(2) Braced void formers

Replace the following on the 10th line : "2,0m with 0,8m, and 1,0m with 0,8m"

Add the following after the 3rd paragraph:

"Forms must be provided with adequate devices for secure setting so that, when in place, they withstand, without visible spring or settlement, the impact of the vibration of the compacting and finishing equipment.

Forms that are out of tolerance, bent, twisted or broken, or which have battered top surfaces, shall not be used. Forms must at all times kept clean and free from rust and adhesions so as to ensure clean stripping. The use of rough and dirty forms shall not permitted."

Add the following sub-clause

(vi) Service ducts

Void formers to service ducts shall be formed from uPVC pipes. The uPVC pipes shall not leak or be damaged during the course of construction and shall be of such tight construction as to prevent ingress of concrete fines into the duct during construction.

B6205 : CONSTRUCTION

(b) Formwork

(i) General

Add the following paragraphs after the first paragraph:

"The spacing of supports for formwork must be such that the deflection of the formwork under load of wet concrete does not exceed 3 mm. The supports must be adjustable by means of screw jacks or wedges, both of which must be secured.

Unless approved, temporary trusses or beams shall not be used to support formwork for concrete which is to be post-tensioned."
Add the following clause

"(viii) Inspection by the engineer*:*
The alignment and levels of all formwork must be checked and accepted by the Supervisor prior placing concrete."

B6210 : MEASUREMENTS AND PAYMENTS

1/B62.10 Unformed surfaces m^2

The unit of measurement shall be square metre, and only actual area of unformed surfaces requiring the specified finish (U1, U2 or U3) shall be measured. Areas to be coated with concrete setting retarders to receive new concrete shall be measured under U1 class finish.

Item	Unit
1/B2.11 Service ducts : Form permanent voids paid for service ducts in walkway	m

Void formers shall be paid at a through rate per metre for the diameter specified. The tendered rate shall include rates for supply, placing and recurring against displacement during concreting.

SECTION 6300: STEEL REINFORCEMENT FOR STRUCTURES

B6306 : PLACING AND FIXING

Replace second paragraph with the following paragraphs:

“The minimum required concrete cover to all steel reinforcement is as shown on the drawings. Maintenance of this minimum cover during casting of concrete must be strictly adhered to. Concrete, which is cast with insufficient cover to the reinforcement, must be demolished and re-cast at the *contractor’s* cost.

Cover blocks used to ensure the cover to reinforcement must be made of cement mortar. They must be dense and have a minimum 28 days crushing strength of 50 MPa, and cured in water for at least 14 days before being used. Spacer blocks made of plastic will not be permitted.”

SECTION 6400 : CONCRETE FOR STRUCTURES

B6402 : MATERIALS

(a) Cements

Add the following paragraphs after the last paragraph:

"All cements used for concrete work shall comply with SANS ENV 197-1. All cement extenders used for concrete work shall comply with SANS 1491. On no account shall masonry cements be used for concrete work, even if the strength designations are the same as for common cements."

(a) Curing agents

Replace paragraph with the following:

"In all cases where a concrete curing compound is specified, the curing compound shall be grey or white-pigmented membrane forming material complying with ASTM specification C309, except that the maximum permissible water loss within 72 hours shall not exceed 0.40 kilograms per square metre.

Before any curing compound is used, the Contractor must submit a one-litre sample of the compound, with full technical details, to the Supervisor for approval. Technical details referred to shall include a recent SANS report showing the following:

(i) Compliance with ASTM C-309.
(ii) The relative density of the compound.
(iii) The infrared spectrum of the compound.

Alternatively, the concrete curing compound shall be acceptable if the treated concrete retains 90% or more of its mixing water when subject to the test set out in BS 8110: Part 1, clause 6.6(c)."

B6404 : CONCRETE QUALITY

(c) Prescribed-mix concrete

Replace clause with the following:

"The contractor shall submit samples of every constituent of the concrete in accordance with appropriate provisions of sections 8200 and 8300 and sub-clause 6404(b) for approval.

In order to enhance durability, and notwithstanding strength considerations, the concrete mixes shall satisfy one of the mixes given in the table below. Prior written approval for the mix shall be obtained from the Project Manager.

CONCRETE MIXES

CONCRETE TYPE	CEMENT TYPE AND % CONTENT	EXTENDER TYPE AND % CONTENT	MINIMUM CEMENT PLUS EXTENDER CONTENT kg/m³	MAXIMUM WATER/ CEMENT RATIO
Steel reinforced	CEM 1 50% - 60%	GGBS 40% - 50%	420	0.40
Steel reinforced	CEM 1 70% - 75%	FA 25% - 30%	420	0.40
Plain	CEM 1 100%	Nil	340	0.50
Plain	CEM 1 75%	FA < 25%	340	0.50
Plain	CEM 1 35% - 65%	GGBS 35% - 65%	340	0.50
Plain	CEM 1 65% - 74%	FA 26% - 35%	300	0.55

Note:

1. CEM 1 may be CEM 1 42,5 or 42,5 R
2. GGBS – Ground Granulated Blast furnace Slag
3. FA – Fly Ash
4. Factory blended cements (CEM 11/B-V, CEM 11/B-W or CEM 111/A) are accepted provided that they conform to one of the blends specified in the table. The Contractor must supply certification thereof.

Water-reducing admixtures may be used to improve workability (see also clause 3.3 above). The water cement ratio includes the water content of admixtures.

Blends of CEM 1 and Condensed Silica Fume (CSF) are not acceptable for steel reinforced concrete. Ternary blends such as CSF with CEM 1 and FA or GGBS may be considered provided that they are shown to be equivalent in durability to the mixes given. The onus is on the Contractor to prove to the Project Manager the adequacy of the blend.

HEAT GENERATION – LIMITING CEMENT CONTENTS

Measures, subject to the approval of the Project Manager, must be applied to reduce heat development in concrete of which the minimum dimension to be placed during a single pour is larger than 600 mm, and the cement content exceeds the values given in table below.

STRUCTURAL ELEMENT	CEMENT TYPES I AND III/A (kg/m^3)	CEMENT TYPES II/B-V AND II/B-W (kg/m^3)
Reinforced Concrete	400	450
Prestressed Concrete	500	550

SECTION 6600 : NO-FINES CONCRETE, JOINTS, BEARINGS, BOLT GROUPS FOR ELECTRIFICATION, PARAPETS AND DRAINAGE FOR STRUCTURE

B6603 : JOINTS IN STRUCTURES

Add the following subclauses:

"(h) Silicone joint sealant

(i) Description

This work shall consist of furnishing labour, equipment, technical assistance and materials necessary to install the silicone joint sealer as shown on the plans and specified herein.

(i) Materials

(1) Silicone joint sealant

The silicone joint sealant shall be rapid cure, self leveling, cold applied, two component silicone. The sealant, upon curing shall be resilient, flexible and resistant to moisture and puncture. The sealant shall also demonstrate excellent adhesion to Portland cement concrete and steel over arrange of temperature from-34º to 34ºC, while maintaining a watertight seal. The sealant shall not contain any solvents or dilatants that cause shrinkage or expansion during curing. Acid cure sealants are not acceptable. The manufacturer shall certify that the sealant meets or exceeds the following test requirements before installation begins:

Physical Properties:

Specific Gravity (ASTM D1475)	1.2 – 1.4
Extrusion Rate (ML-5-8802)	200-600g/min
Flow	Self leveling
Durometer Hardness, Shore (ASTM D2240)	40-80
Ozone and UV Resistance (ASTM C793)	No chalking, cracking Or bond loss after 5 hrs

After mixing

Tack Free Time (ASTM C679)	60 min max
Joint Cure Rate (% of total cure)	50% within 4-6 hrs 75% within 24 hrs 100% within 48-160 hrs

Upon Complete Cure:

Joint Elongation (Adhesion to concrete)	600% min
Joint Modulus	21-103 kPa @ 100% elongation

(2) Backing Rod

Backing rod to conform to STM D5249 Type 3

(iii) Construction Procedure

(1) General

Technical assistance provided by the manufacturer during surface preparation and installation shall be furnished to the engineer. The Contractor shall furnish the engineer with the manufacturer's written product information and installation procedure. The Contractor, the manufacturer's representative and the engineer shall meet to clarify installation procedure, prior to starting the work. A technical representative must be present for the start of surface preparation and installation, for at least one day.

When placing the silicone against concrete, the concrete surface shall be dry.

(2) Surface preparation

Sandblasting:

Both faces of joint shall be sandblasted. A separate pass for each face for the full length of the joint and to the depth of the centre of the backer rod will be required. The nozzle shall be held at an angle of 30º-90º to the joint face, and at a distance of 25 – 50mm.

After sandblasting, the joint shall be cleaned of debris using compressed air at a pressure of 620kPa. The air shall be equipped with traps to prevent the inclusion of water and/or oil in the air line.

Priming:

Priming will immediately follow sandblasting and cleaning and will only be permitted for air and substrate temperatures at least 5ºC and rising. Sandblasting, priming and sealing must be performed in the same day for a particular joint. The primer shall be brush applied and be allowed to dry for at least one hour or more, but shall be thoroughly dry before proceeding.

(3) Joint Installation:

Backing rod placement:

The backer rod shall be installed to a uniform depth as specified on the drawing and as recommended by the manufacturer. All spices in the backer rod shall be taped to prevent material loss during sealing. The backing rod shall be installed within 3mm tolerance.

Placement of sealant:

The sealant shall be 13mm thick, within tolerance, as measured in the centre of the joint, at the thinnest position and shall be monitored during installation at 600mm centers, with adjustment if required, implemented immediately before sealant begins to harden. Sealant placement will only be allowed when air and substrate temperatures are above 5º C, and 2.8º C above the dew point. The joint must be kept clean and dry during sealing.

Sealing shall be performed using a pneumatic gun, approved by the sealant manufacturer and shall be operated at the recommended pressure. The pneumatic gun shall demonstrate proper mixing action of the sealant. All unmixed sealant found in the joint, shall be removed and replaced at the contractor's expense."

B6603 : JOINTS IN STRUCTURES

(a) Materials

(3) Backup material

Add the following paragraph:

"In instances where the contract specifies the Neoprene compression seal as detailed on the drawing, the compression seal shall comply with the requirements of ASTM 1056, Type 2, Class B, Grade 2 or AASHTO T-4—84 Modified."

B6604 : BEARINGS FOR STRUCTURES

(e) Proprietary bearings

(vi) Inspection and testing

Add the following paragraph after the third paragraph:

"The Contractor must notify the Supervisor after each consignment of mechanical bearings has been delivered on site."

C3.4.3 PROJECT SPECIFICATIONS: ADDITIONAL SPECIFICATIONS

CONTENTS

C3.4.3.1 REQUIREMENTS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT REGULATIONS

C3.4.3.2 ENVIRONMENTAL MANAGEMENT PLAN

C3.4.3.3 PROVISION OF STRUCTURED TRAINING

C3.4.3.4 PROVISION OF THE TEMPORARY WORKFORCE

C3.4.3.1 OCCUPATIONAL HEALTH AND SAFETY ACT 1993 : HEALTH AND SAFETY SPECIFICATION

CONTENTS

C3.4.3.1.1 INTRODUCTION

C3.4.3.1.2 SCOPE

C3.4.3.1.3 GENERAL OCCUPATIONAL HEALTH AND SAFETY PROVISIONS

C3.4.3.1.4 OPERATIONAL CONTROL

ANNEXURE 1: MEASURING INJURY EXPERIENCE

ANNEXURE 2: EXECUTIVE SHE RISK MANAGEMENT REPORT

ANNEXURE 3: LIST OF RISK ASSESSMENTS

C3.4.3.1.1 Introduction

In terms of the Construction Regulation 4(1) (a) of the Occupational Health and Safety Act, No. 85 of 1993, Thulamela Local Municipality, as the Client, is required to compile a Health & Safety Specification for any intended project and provide such specification to any prospective tenderer.

The Client's further duties are as in C3.5.1.3.1.1. below and in the Construction Regulations, 2003.

This specification has as objective to ensure that Principal Contractors entering into a Contract with the Thulamela Local Municipality achieve an acceptable level of OH&S performance. This document forms an integral part of the Contract and Principal and other Contractors should make it part of any Contracts that they may have with Contractors and/or Suppliers.

Compliance with this document does not absolve the Principal Contractor from complying with minimum legal requirements and the Principal Contractor remains responsible for the health & safety of his employees and those of his Mandataries.

C3.4.3.1.2 Scope

Development of a health & safety specification that addresses all aspects of occupational health and safety as affected by the abovementioned contract work.

The specification will provide the requirements that Principal Contractors and other Contractors will have to comply with in order to reduce the risks associated with the abovementioned contract work that may lead to incidents causing injury and/or ill health, to a level as low as reasonably practicable.

C3.4.3.1.3 General Occupational Health & Safety Provisions

(a) Hazard Identification & Risk Assessment (Construction Regulation 7)

(i) Risk Assessments

Annexure 3 contains a list of Risk Assessment headings that have been identified by Thulamela Local Municipality as possibly applicable to the abovementioned contract work. It is, by no means, exhaustive and is offered as an assistance to Contractors intending to tender.

Based on the Risk Assessments, the Principal Contractor must develop a set of site-specific OH&S rules that will be applied to regulate the OH&S aspects of the construction.

The Risk Assessments, together with the site-specific OH&S rules must be submitted to the Thulamela Local Municipality before mobilisation on site commences.

Despite the Risk Assessments listed in Annexure 3, the Principal Contractor is required to conduct a baseline Risk Assessment and the aforesaid listed Risk Assessments must be incorporated into the base-line Risk Assessment. The baseline Risk Assessment must further include the Standard Working procedures (SWP) and the applicable Method Statements based on the Risk Assessments

All out-of-scope work must be associated with a Risk Assessment.

(ii) Review of Risk Assessments

The Principal Contractor is to review the Hazard Identification, Risk Assessments and SWP's at each Production Planning and Progress Report meeting as the Contract work develops and progresses and each time changes are made to the designs, plans and construction methods and processes.

The Principal Contractor must provide the Client, other Contractors and all other concerned-parties with copies of any changes, alterations or amendments as contemplated in above.

(b) Legal Requirements

All Contractors entering into a Contract with the Thulamela Local Municipality shall, as a minimum, comply with the

- Occupational Health & Safety Act and Regulations (Act 85 of 1993). A current, up-to-date copy of the OHS Act must be available on site at all times
- Compensation for Occupational Injuries & Diseases Act (Act 130 of 1993). The principal Contractor will be required to submit a letter of Registration and "good-standing" from the Compensation Insurer before being awarded the Contract. A current, up-to-date copy of the COID Act must be available on site at all times.
- Where work is being carried out on mines' premises the Contractor will have to comply with the Mine Health & Safety Act and Regulations (Act. 29 of 19960 and any other OH&S requirements that the mine may specify. A current, up-to-date copy of the OHS Act must be available on site at all times.

(c) Structure and Responsibilities

(i) Overall Supervision and Responsibility for OH&S

* It is a requirement that the Principal Contractor, when he appoints Contractors (Sub-contractors) in terms of Construction Regulations 5(3), (5), (9), (10) and (12)

he includes an OHS Act Section 37(2) agreement: “Agreement with Mandatary” in his agreement with such Contractors.

* Any OH&S Act (85/1993), Section 16(2) appointee/s as detailed in his/her/their respective appointment forms

(ii) Further (Specific) Supervision Responsibilities for OH&S

The Contractor shall appoint designated competent employees and/or other competent persons as required by the Act and Regulations. Below is a list of identified appointments and may be used to select the appropriate appointments for the current contract:

	Ref. Section/Regulation in OHSAct
Batch Plant Supervisor	(Construction Regulation 6(1)
Construction Vehicles/Mobile Plant/Machinery Supervisor	(Construction Regulation 21)
Demolition Supervisor	(Construction Regulation 12)
Drivers/Operators of Construction Vehicles/Plant	(Construction Regulation 21)
Electrical Installation and Appliances Inspector	(Construction Regulation 22)
Emergency/Security/Fire Coordinator	(Construction Regulation 27)
Excavation Supervisor	(Construction Regulation 11)
Explosive Powered Tool Supervisor	(Construction Regulation 19)
Fall Protection Supervisor	(Construction Regulation 8)
First Aider	(General Safety Regulation 3)
Fire Equipment Inspector	(Construction Regulation 27)
Formwork & Support work Supervisor	(Construction Regulation 10)
Hazardous Chemical Substances Supervisor	(HCS Regulations)
Incident Investigator	(General Admin Regulation 29)
Ladder Inspector	(General Safety Regulation 13A)
Lifting Equipment Inspector	(Construction Regulation 20)
Materials Hoist Inspector	(Construction Regulation 17)
OH&S Committee	(OHS Act Section 19)
OH&S Officer	(Construction Regulation 6(6)
OH&S Representatives	(OHS Act Section 17)
Person Responsible for Machinery	(General Machinery Regulation 2)
Scaffolding Supervisor	(Construction Regulation 14)
Stacking & Storage Supervisor	(Construction Regulation 26)
Structures Supervisor	(Construction Regulation 9)
Suspended Platform Supervisor	(Construction Regulation 15)
Tunneling Supervisor	(Construction Regulation 13)
Vessels under Pressure Supervisor	(Vessels under Pressure Regulations)
Working on/next to Water Supervisor	(Construction Regulation 24)
Welding Supervisor	(General Safety Regulation 9)

The appointments must be in writing and the responsibilities clearly stated together with the period for which the appointment is made. This information must be communicated and agreed with the appointees.

Copies of appointments must be submitted to the Thulamela Local Municipality together with concise CV’s of the appointees. All appointments must be officially approved by Thulamela Local Municipality. Any changes in appointees or appointments must be communicated to Thulamela Local Municipality forthwith.

The Principal Contractor must, furthermore, provide Thulamela Local Municipality with an organogram of all Contractors that he/she has appointed or intends to appoint and keep this list updated on a weekly basis.

In addition Thulamela Local Municipality may require that a Traffic Safety Officer be appointed for any project.

(iii) Designation of OH&S Representatives (Section 18 of the OHS Act)

OH&S Representatives have to be designated in writing and the designation must include the area of responsibility of the person and term of the designation.

(iv) Duties and Functions of the OH&S Representatives (Section 19 of the OHS Act)

The Principal Contractor must ensure that the designated OH&S Representatives conduct a minimum monthly inspection of their respective areas of responsibility using a checklist and report thereon to the Principal Contractor

OH&S representatives must be included in accident/incident investigations

OH&S representatives must attend all OH&S committee meetings.

(v) Appointment of OH&S Committee (Section 20 of the OHS Act)

The Principal Contractor must establish an OH&S Committee consisting of all the designated OH&S Representatives together with a number of management representatives that are not allowed to exceed the number of OH&S representatives on the committee and a representative of the Client who shall act as the chairman without a vote. The members of the OH&S committee must be appointed in writing.

The OH&S Committee must meet minimum monthly and consider, at least, the following Agenda:

1. Opening & Welcome
2. Present/Apologies/Absent
3. Minutes of previous Meeting
4. Matters Arising from the previous Minutes
5. OH&S Reps Reports
6. Incident Reports & Investigations
7. Incident/Injury Statistics
8. Other Matters
9. Endorsement of Registers and other statutory documents by a representative of the Principal Contractor
10. Close/Next Meeting

(d) Administrative Controls and the Occupational Health & Safety File

(i) The OH&S File (Construction Regulation 5 (7))

As required by Construction Regulation 5(7), the Principal Contractor and other Contractors will each keep an OH&S File on site containing the following documents as a minimum:

* Notification of Construction Work (Construction Regulation 3.)
* Copy of OH&S Act (updated) (General Administrative Regulation 4.)
* Proof of Registration and good standing with a COID Insurer (Construction Regulation 4 (g))
* OH&S Programme agreed with the Client including the underpinning Risk Assessment/s & Method Statements (Construction regulation 5 (1))
* Copies of OH&S Committee and other relevant Minutes
* Designs/drawings (Construction Regulation 5 (8))
* A list of Contractors (Sub-Contractors) including copies of the agreements between the parties and the type of work being done by each Contractor (Construction Regulation 9)
* Appointment/Designation forms as per (a)(i) & (ii) above.
* Registers as follows:
* Accident/Incident Register (Annexure 1 of the General Administrative Regulations)
* OH&S Representatives Inspection Register
* Asbestos Demolition & Stripping Register
* Batch Plant Inspections
* Construction Vehicles & Mobile Plant Inspections by Controller
* Daily Inspection of Vehicles. Plant and other Equipment by the Operator/ Driver/User
* Demolition Inspection Register
* Designer’s Inspection of Structures Record
* Electrical Installations, -Equipment & -Appliances (including Portable Electrical Tools)
* Excavations Inspection
* Explosive Powered Tool Inspection, Maintenance, Issue & Returns Register (incl. cartridges & nails)
* Fall Protection Inspection Register
* First Aid Box Contents
* Fire Equipment Inspection & Maintenance
* Formwork & Support work Inspections
* Hazardous Chemical Substances Record
* Ladder Inspections
* Lifting Equipment Register
* Materials Hoist Inspection Register
* Machinery Safety Inspection Register (incl. machine guards, lock-outs etc.)

* Scaffolding Inspections
* Stacking & Storage Inspection
* Inspection of Structures
* Inspection of Suspended Platforms
* Inspection of Tunnelling Operations
* Inspection of Vessels under Pressure
* Welding Equipment Inspections
* Inspection of Work conducted on or Near Water
* All other applicable records

Thulamela Local Municipality will conduct an audit on the OH&S file of the Principal Contractor from time-to-time.

(e) OH&S Goals & Objectives & Arrangements for Monitoring & Review of OH&S Performance

The Principal Contractor is required to maintain a CIFR of at least 8 (See Annexure 1. to this document: “Measuring Injury Experience) and report on this to Thulamela Local Municipality on a monthly basis

(f) Notification of Construction Work (Construction Regulation 3.)

The Principal Contractor must, where the Contract meets the requirements laid down in Construction Regulation 3, within 5 working days, notify the Department of Labour of the intention to carry out construction work and use the form (Annexure A in the Construction Regulations) for the purpose. A copy must be held on the OH&S File and a copy must be forwarded to Thulamela Local Municipality for record keeping purposes.

(g) Training, Awareness and Competence

The contents and syllabi of all training required by the Act and Regulations are to be included in the Principal Contractor’s OH&S Plan.

(i) General Induction Training

All members of Contractor’s Site management as well as all the persons appointed as responsible for OH&S in terms of the Construction and other Regulations will be required to attend a general induction session by the Client

All employees of the Principal and other Contractors to be in possession of proof of General Induction training.

(ii) Site Specific Induction Training

The Principal Contractor will be required to develop Contract work project specific induction training based on the Risk Assessments for the Contract work and train all employees and other Contractors and their employees in this.

All employees of the Principal and other Contractors to be in possession of proof of Site Specific OH&S Induction training at all times.

(iii) Other Training

All operators, drivers and users of construction vehicles, mobile plant and other equipment to be in possession of valid proof of training.

All employees in jobs requiring training in terms of the Act and Regulations to be in possession of valid proof of training as follows:

OH&S Training Requirements: (as required by the Construction Regulations and as indicated by the OH&S Specification & the Risk Assessment/s):

* General Induction (Section 8 of the Act)
* Site/Job Specific Induction (also visitors) (Sections 8 & 9 of the Act)
* Site/Project Manager
* Construction Supervisor
* OH&S Representatives (Section 18 (3) of the Act)
* Training of the Appointees indicated above
* Operators & Drivers of Construction Vehicles & Mobile Plant (Construction Regulation 21)
* Basic Fire Prevention & Protection (Environmental Regulations 9 and Construction regulation 27)
* Basic First Aid (General Safety Regulations 3)
* Storekeeping Methods & Safe Stacking (Construction Regulation 26)
* Emergency, Security and Fire Co-coordinator

(iv) Awareness & Promotion

The Principal Contractor is required to have a promotion and awareness scheme in place to create an OH&S culture in employees. The following are some of the methods that may be used:

- Toolbox Talks
- OH&S Posters
- Videos
- Competitions
- Suggestion schemes
- Participative activities such as OH&S Safety circles.

(v) Competence

The Principal Contractor shall ensure that his and other Contractors personnel appointed are competent and that all training required to do the work safely and without risk to health, has been completed before work commences

The Principal Contractor shall ensure that follow-up and refresher training is conducted as the contract work progresses and the work situation changes.

Records of all training must be kept on the OH&S File for auditing purposes.

(h) Consultation, Communication and Liaison

OH&S Liaison between the Client, the principal Contractor, the other Contractors, the Designer and other concerned parties will be through the OH&S committee as contemplated in above.

In addition to the above, communication may be directly to the Client or his appointed Agent, verbally or in writing, as and when the need arises.

Consultation with the workforce on OH&S matters will be through their Supervisors, OH&S Representatives, the OH&S committee and their elected Trade Union Representatives, if any.

The Principal Contractor will be responsible for the dissemination of all relevant OH&S information to the other Contractors e.g. design changes agreed with the Client and the Designer, instructions by the Client and/or his/her agent, exchange of information between Contractors, the reporting of hazardous/dangerous conditions/ situations etc.

The Principal Contractor will be required to do Site Safety Walks with Thulamela Local Municipality at least on a basis to be determined between the two parties.

The Principal and other Contractors will be required to conduct Toolbox Talks with their employees on a weekly basis and records of these must be kept on the OH&S File. Employees must acknowledge the receipt of Toolbox Talks which record must, likewise be kept on the OH&S File.

The Principal Contractors most senior manager on site will be required to attend all Thulamela Local Municipality OH&S meetings and

a list of dates, times and venues will be provided to the Principal Contractor by Thulamela Local Municipality.

(i) Checking, Reporting and Corrective Actions

(i) Monthly Audit by Client (Construction Regulation 1(d))

Thulamela Local Municipality will be conducting a Monthly Audit to comply with Construction Regulation 4(1)(d) to ensure that the principal Contractor has implemented and is maintaining the agreed and approved OH&S Plan.

(ii) Other Audits and Inspections by Thulamela Local Municipality:

Thulamela Local Municipality reserves the right to conduct other ad hoc audits and inspections as deemed necessary. This will include Site Safety Walks.

(iii) Conducting an Audit

A representative of the Principal Contractor must accompany Thulamela Local Municipality on all Audits and Inspections and may conduct his/her own audit/inspection at the same time. Each party will, however, take responsibility for the results of his/her own audit/inspection results.

(iv) Contractor’s Audits and Inspections

The Principal Contractor is to conduct his own monthly internal audits to verify compliance with his own OH&S Management system as well as of with this specification.

(v) Inspections by OH&S Representative’s and other Appointees

OH&S Representatives must conduct weekly inspections of their areas of responsibility and report thereon to their foreman or supervisor whilst other appointees must conduct inspections and report thereon as specified in their appointments e.g. vehicle, plant and machinery drivers, operators and users must conduct daily inspections before start-up.

(vi) Recording and Review of Inspection Results

All the results of the abovementioned inspections to be in writing, reviewed at OH&S committee meetings, endorsed by the chairman of the meeting and placed on the OH&S File.

(vii) Reporting of Inspection Results

The Principal Contractor is required to provide the Client with a monthly report in the format as per the attached Annexure 2: “SHE Risk Management Report”

(j) Incident Reporting and Investigation

Reporting of Accidents and Incidents (Section 24 and General Administrative Regulation 8 of the OHS Act)

The Principal Contractor must report all incidents where an employee is injured on duty to the extent that he/she:

* dies
* becomes unconscious
* loses a limb or part of a limb
* is injured or becomes ill to such a degree that he/she is likely either to die or to suffer a permanent physical defect or likely to be unable for a period of at least 14 days either to work or continue with the activity for which he/she was usually employed

OR where:

* a major incident occurred
* the health or safety of any person was endangered
* where a dangerous substance was spilled
* the uncontrolled release of any substance under pressure took place
* machinery or any part of machinery fractured or failed resulting in flying, falling or uncontrolled moving objects
* machinery ran out of control

to Thulamela Local Municipality within two days and to the Provincial Director of the Department of Labour within seven days (Section 24 of the Act & General Administrative Regulation 8.) EXCEPT that, where a person has died, has become unconscious for any reason or has lost a limb or part of a limb or may die or suffer a permanent physical defect, the incident must be reported to both Thulamela Local Municipality and the Provincial Director of the Department of Labour forthwith by telephone, telefax or E-mail.

The Principal Contractor is required to provide Thulamela Local Municipality with copies of all statutory reports required in terms of the Act within 7 days of the incident occurring.

The Principal Contractor is required to provide Thulamela Local Municipality with copies of all internal and external accident/incident investigation reports including the reports contemplated below within 7 days of the incident occurring.

Accident and Incident Investigation (General Administrative Regulation 9)

The Principal Contractor is responsible for the investigation of all accidents/incidents where employees and non-employees were injured to the extent that he/she/they had to be referred for medical treatment by a doctor, hospital or clinic

The results of the investigation to be entered into the Accident/Incident Register listed in above.

The Principal Contractor is responsible for the investigation of all minor and non-injury incidents as described in Section 24 (1) (b) & (c) of the Act and keeping a record of the results of such investigations including the steps taken to prevent similar accidents in future.

The Principal Contractor is responsible for the investigation of all road traffic accidents and keeping a record of the results of such investigations including the steps taken to prevent similar accidents in future.

The Thulamela Local Municipality reserves the right to hold its own investigation into an incident or call for an independent external investigation.

C3.4.3.1.4 Operational Control

(a) Emergency Preparedness, Contingency Planning and Response

The Principal Contractor must appoint a competent person to act as Emergency Controller/Coordinator.

The Principal Contractor must conduct an emergency identification exercise and establish what emergencies could possibly develop. He/she must then develop detailed contingency plans and emergency procedures, taking into account any emergency plan that Thulamela Local Municipality may have in place.

The Principal Contractor and the other Contractors must hold regular practice drills of contingency plans and emergency procedures to test them and familiarise employees with them.

(b) First Aid (General Safety Regulation 3)

The Principal Contractor must provide First Aid equipment (including a stretcher) and have qualified First Aider/s as required by General Safety Regulation 3 of the OHS Act.

The Contingency Plan of the Principal Contractor must include the arrangements for speedily and timeously transporting injured/ill person/s to a medical facility or of getting emergency medical aid to person/s that may require it.

The Principal Contractor must have firm arrangements with his other Contractors in place regarding the responsibility of the other Contractors injured/ill employees

(c) Security

The Principal Contractor must establish site access rules and implement and maintain these throughout the construction period. Access control must include the rule that non-employees will not be allowed on site unaccompanied.

The Principal Contractor must develop a set of Security rules and procedures and maintain these throughout the construction period

(d) Fall Protection (Working in Elevated Positions (Construction regulation 8.)

A pre-emptive Risk Assessment will be required for any work to be carried out above two metres from the ground or any floor level and will be classified as “Work in Elevated Positions”.

As far as is practicable, any person working in an elevated position will work from a platform, ladder or other device that is at least as safe as if he/she is working at ground level and whilst working in this position be wearing a single belt with lanyard that will be worn to prevent the person falling from the platform, ladder or other device utilised. This safety belt will be, as far as is possible, secured to a point away from the edge over which the person might fall and the lanyard must be of such a length that the person will not be able to move over the edge.

Alternatively any platform, slab, deck or surface forming an edge over which a person may fall may be fitted with guard rails at two different heights as prescribed in SABS 085: Code of Practice for the Design, Erection, Use and Inspection of Access Scaffolding.

Where the requirement in is not practicable, the person will be provided with a full body harness that will be worn and attached above the wearer’s head at all times and the lanyard must be fitted with a shock absorbing device OR the person must be attached to an approved, by Thulamela Local Municipality, fall arrest system.

Where the requirements are not practicable, a suitable catch net must be erected.

Workers working in elevated positions must be trained to do this safely and without risk to health

Where work on roofs is carried out, the Risk Assessment must take into account the possibility of persons falling through fragile material. Skylights and openings in the roof.

C3.4.3.1.5 Measurement and Payment

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.

Item		Unit
B1.1	**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
B1.2	**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 which are mainly a function of time. This includes inter alia payment of all costs for the appointment of all staff contemplated in the construction regulations and the transport of employees on site. Payment will be monthly only after payment for Item **B1.1** has been made.

Item		Unit
B1.3	**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.

C3.4.3.1.6 Project/Site Specific Requirements

See Annexure 3

Annexure 1: Measuring Injury Experience

Annexure 2: SHE Risk Management Report

Annexure 3. List of Risk Assessments

ANNEXURE 1: MEASURING INJURY EXPERIENCE

Injury experience has traditionally been measured by the use of a disabling injury frequency rate, the so-called “DIFR”. The DIFR is calculated by multiplying the number of disabling injuries by 1 million and dividing by the number of man-hours worked.

Lately the DIFR has been replaced internationally with a DIIR: disabling injury incidence rate. The only difference between the two rates are that the 10 million in the calculation is replaced with 200 000. (200 000 purported to be the number of hours and average person works in a lifetime.)

The use of the two rates above has proved to be somewhat problematical as they are open to manipulation and disabling injuries are often “hidden” by returning the injured employee to the workplace so as not to lose a shift and therefore having to register a disabling injury.

The Construction Industry recently decided to promote the use of a new frequency rate based on the number of compensation injury claims as these are more difficult to hide or manipulate because the reporting of compensable injuries is a legal requirement.

The industry is hoping that adoption of this new measurement of injury experience will enable the industry to monitor itself as far as work related injuries are concerned.

Below follows an explanation of this new rating system.

COMPENSATION INCIDENCE FREQUENCY RATE (CIFR)

FORMULA

No. of Compensation Claims X 200 000 /

*220 man hours X No. of Employees

DEFINITIONS

No. of Compensation

Claims: **The number of claims lodged with the COID insurer for the period under review**

200 000: The fixed factor to align the rate with other rates used internationally

Manhours Worked

Include:
* Hourly Paid Employees
* Sub-contactors (No. of Employees X *220 each)
* Staff (No. of Employees X *220 hours each)

220 manhours: The *average number of hours worked by one employee in one month in the Construction industry.

* Overtime, absence on leave or sick leave, unrecorded after hours time worked by senior and middle management factored into this average.

No. of Employees: The actual or average number of employees employed for the period under review.

2002/03CIFRSystem

ANNEXURE 2: EXECUTIVE SHE RISK MANAGEMENT REPORT

The SAFCEC OH&S committee recently developed the following report in an attempt to standardise on reporting and assist contractors in obtaining a clear picture of their SHE Risk Management performance. It is hoped that clients will also accept this standardised report. Your comments/suggestions for improvement is invited.

EXAMPLE ONLY: ALL INFORMATION IS FICTITIOUS

Xyz construction

*SHE RISK MANAGEMENT REPORT

PERIOD JANUARY TO MARCH 2002

*(SHE = Safety, Health & Environment)

1. Introduction

We hope that this new format of quarterly SHE Risk Management reporting will provide a clear picture of the company's performance as far as occupational health & safety is concerned.

The first quarter of 2002 generally reflected an improvement in injury experience and shows a decline in the number of injuries. Although Building was the only division where there was an increase in compensation claims, figures are still well down from the average 2001 figures. A sub-contractor experienced one fatality.

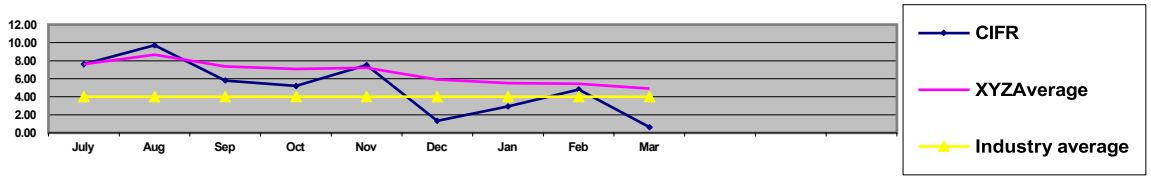
All divisions are eagerly awaiting the final implementation in May of the new electronic SHE Management system that will make the tools to implement the SHE programme available to all management and supervisory staff.

2. Incident Statistics

Compensation Incident Frequency Rate (CIFR)

CIFR = Total No. of Claims against the Workmen's Compensation Fund X 200 000

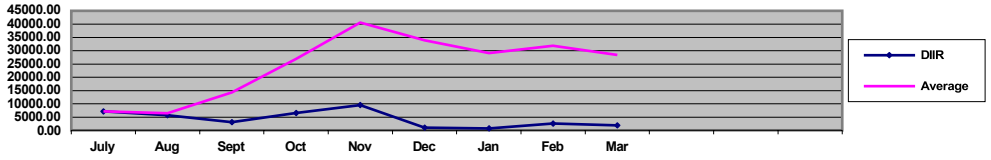
Manhours worked



2.2.

Disabling Injury Incidence Rate (DIIR)

DIIR = No. Disabling Injuries X 200 000
Manhours worked



2.3. Other Major Incidents

Three other major incidents were experienced in the period under review:

2.3.1. A major trench collapsed at Job. 00123: XYZ Head Office, Bochum: No personnel injured, extensive damage to foundations: 3 days delay.

2.3.2. A concrete dumper ran away when its brakes failed. It smashed into the glass façade of the building on Job 00332: McDonalds, Polokwane. The driver jumped off and was not injured. Cost of damage to façade: R45 000.

2.3.3. A storage hut on Job 00567: BP Petrol Station, Swartruggens was demolished by fire when the night watchman made a fire inside the storage hut which contained concrete vibrators and levelling machines. Cost of replacing the hut and machines: R30 000

3. RISK AREAS

The following items of concern need priority consideration by management:

3.1. New employees must undergo pre-employment medical examinations to:

- protect XYZ from claims at a later stage
- ensure that only healthy persons are employed
- prevent injuries and illness in the workplace
- enhance XYZ image

3.2. Vehicle drivers and plant operators must be instructed to inspect their vehicles daily before start-up using the prescribed checklists to ensure that these are safe to operate and in good condition.

4. AUDITS

Three SHE audits were conducted in February and March:

4.1.	Job 00432:	Gillooly's Mall	Compliance: 56%(*)
	Job 00786:	Cullinan Head Office	Compliance: 83%(****)
	Job 00589:	Cleveland Station	Compliance: 76%(***)

5. TRAINING

One hundred and forty two employees, representing 7% of employees, attended nine training courses. *Our objective is to train 5,5% of employees quarterly.

Month	No. of Employees Trained	Course	Source
January	26 15 3	Induction OH&S Reps Crane Drivers	Internal Consultant External
February	23 17	Induction OH&S Reps	Internal Consultant
March	43 9 3 3	Induction OH&S Reps Bomag Rollers First Aiders	Internal Consultant Supplier St. John's

6. LEGAL ISSUES

6.1. An inspector of the Department of Labour issued an improvement notice on Job 00987: Gillooly's Mall. The notice requires that all scaffolding comply with the SABS standards for the Erection and Maintenance of Access Scaffolding (SABS 085). This is currently being attended to and the inspector will return on 15 April 2002 to ascertain if the notice has been complied with.

8. OCCUPATIONAL AIND OTHER HEALTH MATTERS

8.1. HIV Aids

The proposed SAFCEC clinic will soon be operational and we will then be able to send our employees who have tested positive to the clinic for counselling and eventual treatment when necessary

The mobile clinic saw and tested fifty employee volunteers at 3 sites this month. Eighteen of them tested positive.

8.2. Tuberculosis

The mobile clinic will be calling at Gillooly's Mall and Cleveland Station on 15 and 16 October respectively to screen employees for TB.

8.3. Noise

All suspected noise pollution areas have been tested and the results are awaited. Employees working in areas testing over 85dBa will be issued with suitable hearing protectors.

9. ENVIRONMENTAL MEASURES

Inspectors from the Botswana Department of the Environment visited Djwaneng and inspected the site and yard. They gave it a "clean bill of health" and advised that we should increase the dust control measures by spraying roads three times per day instead of the present twice per day.

10. ACHIEVEMENTS/AWARDS

10.1. The client at Djwaneng (Job 00786) awarded the XYZ site first position in the housekeeping competition conducted bi-monthly by the client's SHE managers. The project manager and his team are to be congratulated for this sterling effort.

10.2. Job 0987: Refurbishment of Pretoria Main Railway Station has just completed 1million compensation claim free days. This was no easy achievement if we consider the conditions being worked under after the extensive fire that caused major damage.

SHE Risk Manager

2002.09.27

ANNEXURE 3: LIST OF RISK ASSESSMENTS

* Clearing & Grubbing of the Area/Site
* Site Establishment including:
  - Office/s
  - Secure/safe storage for materials, plant & equipment
  - Ablutions
  - Sheltered eating area
  - Maintenance workshop
  - Vehicle access to the site
* Dealing with existing structures
* Location of existing services
* Installation and maintenance of temporary construction electrical supply, lighting and equipment
* Adjacent land uses/surrounding property exposures
* Boundary and access control/Public Liability Exposures (NB: the Employer is also responsible for the OH&S of non-employees affected by his/her work activities.)
* Health risks arising from neighbouring as well as own activities and from the environment e.g. threats by dogs, bees, snakes, lightning etc.
* Exposure to noise
* Exposure to vibration
* Protection against dehydration and heat exhaustion
* Protection from wet & cold conditions
* Dealing with HIV/Aids and other diseases
* Use of Portable Electrical Equipment including
  - Angle grinder
  - Electrical drilling machine
  - Skill saw
* Excavations including
  - Ground/soil conditions
  - Trenching
  - Shoring
  - Drainage of trench
* Welding including
  - Arc Welding
  - Gas welding
  - Flame cutting
  - Use of LP gas torches and appliances
* Loading & offloading of trucks
* Aggregate/sand and other materials delivery
* Manual and mechanical handling
* Lifting and lowering operations
* Driving & operation of construction vehicles and mobile plant including
  - Trenching machine
  - Excavator
  - Bomag roller
  - Plate compactor
  - Front end loader
  - Mobile cranes and the ancillary lifting tackle
  - Parking of vehicles & mobile plant

- Towing of vehicles & mobile plant

* Use and storage of flammable liquids and other hazardous substances
* Layering and bedding
* Installation of pipes in trenches
* Pressure testing of pipelines
* Backfilling of trenches
* Protection against flooding
* Gabion work
* Use of explosives
* Protection from overhead power lines
* As discovered by the Principal Contractor's hazard identification exercise
* As discovered from any inspections and audits conducted by the Client or by the Principal Contractor or any other Contractor on site
* As discovered from any accident/incident investigation.

C3.4.3.2 ENVIRONMENTAL MANAGEMENT PLAN

CONTENTS

C3.4.3.2.1 SCOPE
C3.4.3.2.2 DEFINITIONS
C3.4.3.2.3 IDENTIFICATION OF ENVIRONMENTAL ASPECTS AND IMPACTS
C3.4.3.2.4 LEGAL REQUIREMENTS
C3.4.3.2.5 ADMINISTRATION OF ENVIRONMENTAL OBLIGATIONS
C3.4.3.2.6 TRAINING
C3.4.3.2.7 ACTIVITIES/ASPECTS CAUSING IMPACTS
C3.4.3.2.8 ENVIRONMENTAL MANAGEMENT OF CONSTRUCTION ACTIVITIES
C3.4.3.2.9 RECORD KEEPING
C3.4.3.2.10 COMPLIANCE AND PENALTIES
C3.4.3.2.11 MEASUREMENT AND PAYMENT

C3.4.3.2.1. 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 Thulamela 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.

C3.4.3.2.2. 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 Limpopo Department of Economic Development, Environment and Tourism, 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.

C3.4.3.2.3. 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

C3.4.3.2.4. LEGAL REQUIREMENTS

a) 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.

b) 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.

C3.4.3.2.5. ADMINISTRATION OF ENVIRONMENTAL OBLIGATIONS

a) 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.

b) 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.

c) Good Housekeeping

The Contractor shall undertake "good housekeeping" practices during construction as stated in clause 1217 of the COLTO Standard Specifications for Roads and Bridges and subclauses 4.3.1 and 4.3.2 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.

C3.4.3.2.6. 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.

C3.4.3.2.7. 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.

C3.4.3.2.8. ENVIRONMENTAL MANAGEMENT OF CONSTRUCTION ACTIVITIES

a) Site Establishment

i) 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).

ii) 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.

iii) 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.

iv) 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.

v) 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.

b) 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.

c) 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.

i) 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).

ii) 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 behavior 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)).

iii) 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.

d) 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).

i) 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.

ii) 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.

iii) 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.

iv) 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.

e) 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.

f) Soil Management

i) 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 6

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.

ii) 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.

g) 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) 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.

i) 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).

ii) 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)

iii) 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.

iv) 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).

v) 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.

i) 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

j) 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.

k) 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.

i) 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 South African Heritage Research Agency (SAHRA) 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).

ii) 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. SAHRA should be contacted and in the case of graves, arrangements made for an undertaker to carry out exhumation and reburial. The Employer will 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 Sub-clause 4.24 as amended by Particular Condition).

l) 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.

m) 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.

n) 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.

C3.4.3.2.9. 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.

C3.4.3.2.10. 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:

a) Unnecessary removal or damage to trees

- 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

b) Serious violations:

- 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.

c) Less serious violations:

- 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 calculation shall include allied construction activities in the same way as the calculation of reduced payments under section 8200. 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.

C3.4.3.2.11. MEASUREMENT AND PAYMENT

The cost of complying to this specification shall be deemed to be included in the rates tendered for this project.

Item			Unit
B100.01		**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 C3.5.2.10.

Item			Unit
B100.02		**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 B100.02 (a) to (f) shall be the number of serious violation incidents. The penalty rates to be applied shall be those stated in clause C3.5.2.10.

Item		Unit
B100.03	**Penalty for less serious violations**	
•	Littering on site	number (No)
•	Lighting of illegal fires on site	number (No)
•	Persistent or un-repaired fuel and oil leaks	number (No)
•	Excess dust or excess noise emanating from site	number (No)
•	Dumping of milled material in side drains or on grassed areas	number (No)
•	Possession or use of intoxicating substances on site	number (No)
•	Any vehicles being driven in excess of designated speed limits	number (No)
•	Removal and/or damage to flora or cultural or heritage objects on site, and/or killing of wildlife	number (No)
•	Illegal hunting	number (No)
•	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 C3.5.2.10.

The engineer's decision with regard to what is considered a violation, its seriousness and the penalty imposed shall be final. The calculation shall include allied construction activities in the same way as the calculation of reduced payments under section 8200. 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.

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 Noise/lights Dust control Exhaust fumes	Turning circles Parking areas	Restrict access to sensitive areas	Protection of indigenous vegetation Preserve topsoil	

SECTION	CONTENTS	ENVIRONMENTAL IMPACTS				
		POLLUTION TYPE	DEFORMATION OF LANDSCAPE	SOIL EROSION	ALIEN VEGETATION	SENSITIVE AREAS (to be completed by compiler)
		Washing waste				
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	
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	

SECTION	CONTENTS	ENVIRONMENTAL IMPACTS				
		POLLUTION TYPE	DEFORMATION OF LANDSCAPE	SOIL EROSION	ALIEN VEGETATION	SENSITIVE AREAS (to be completed by compiler)
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	
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	

SECTION	CONTENTS	ENVIRONMENTAL IMPACTS				
		POLLUTION TYPE	DEFORMATION OF LANDSCAPE	SOIL EROSION	ALIEN VEGETATION	SENSITIVE AREAS (to be completed by compiler)
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	

C3.4.3.3 PROVISION OF STRUCTURED TRAINING

CONTENTS

C3.4.3.3.1 SCOPE
C3.4.3.3.2 GENERIC TRAINING
C3.4.3.3.3 ENTREPRENEURIAL SKILLS TRAINING
C3.4.3.3.4 MEASUREMENT AND PAYMENT

C3.4.3.3.1 SCOPE

This specification covers the requirements for the provision of structured training to be arranged by the contractor over the period of this contract.

C3.4.3.3.2 GENERIC TRAINING

C3.4.3.3.2.1 The contractor shall, from the commencement of the contract, implement a structured progressive training programme.

C3.4.3.3.2.2 Training shall be at or by an approved accredited organisation and shall be delivered by suitably qualified and experienced trainers.

C3.4.3.3.2.3 The contractor shall be responsible for the provision of everything necessary for the delivery of the generic training programme, including the following:

(a) A suitable venue with sufficient furniture, lighting and power.
(b) All necessary stationery consumables and study material.
(c) Transport of the students (as necessary).

C3.4.3.3.2.4 Generic training courses shall commence within one month of possession of site and be completed before the end of the contract period. The Training Schedule should form part of the section 12 programme to be approved by the Engineer at the start of the project.

C3.4.3.3.2.5 The contractor's training programme shall be subject to the approval of Thulamela Local Municipality and the contractor shall if so instructed by Thulamela Local Municipality alter or amend the programme and course content if a need is identified once the contract commences.

C3.4.3.3.2.6 The contractor shall keep comprehensive records of the training given to each student and whenever required shall provide copies of such records to the engineer. At the successful completion of each course each student shall be issued with a certificate indicating the course contents as proof of attendance and completion.

In addition to the above, a monthly return shall be submitted by the contractor. An example of the form is illustrated in Part C5 of this document (form RDP 11 (E))

C3.4.3.3.3 ENTREPRENEURIAL SKILLS TRAINING

C3.4.3.3.3.1 Small contractors, subcontractors and the Project Steering Committee (PSC) will be entitled to receive a structured training programme, which will comprise both management skills as well as business development skills.

C3.4.3.3.3.2 The contractor shall closely monitor the performance of all small subcontractors in the execution of their contracts and shall identify all such subcontractors who, in his opinion, display the potential to benefit from structured training as may be provided for

in the contract and where required by the engineer, shall make recommendations in this regard. The final list of candidates will be decided between the contractor and the engineer.

C3.4.3.3.3.3 The training will be delivered by trainers who are accredited by the Civil Engineering Training Scheme (CEITS) or other institutions recognised by the Department of Labour. Accredited training refers to both the trainers as well as to the training material.

C3.4.3.3.3.4 The contractor shall facilitate in the delivery thereof, by instructing and motivating the subcontractor regarding attendance and participation therein.

C3.4.3.3.3.5 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.

C3.4.3.3.3.7 The contractor shall be responsible for the provision of everything necessary for the delivery of the entrepreneurial training programme, including the following:

(a) A suitably furnished venue (if required) with lighting and power.
(b) All necessary consumables, stationery and study material.
(c) Transport of the subcontractors (as necessary).

C3.4.3.3.3.7 All entrepreneurial training shall take place within normal working hours.

C3.4.3.3.3.8 The contractor's training programme shall be subject to the approval of Thulamela Local Municipality and the contractor shall if so instructed by Thulamela Local Municipality alter or amend the programme and course content if a need is identified once the contract commences.

C3.4.3.3.3.10 The contractor shall keep comprehensive records of the training given to each subcontractor 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.

In addition to the above, a monthly return shall be submitted by the contractor. An example of the form to be used is illustrated in Part C5 of this document, (form RDP 12 (E)).

C3.4.3.3.4 MEASUREMENT AND PAYMENT

ITEM		UNIT
C12.05	Provision for accredited training	
(a)	Generic skills	Provisional sum
(b)	Entrepreneurial skills	Provisional sum
(c)	Handling cost and profit in respect of sub-item C12.05(a) and (b) above	percentage (%)
(d)	Training venue (only if required)	lump sum

The prime cost sums are provided to cover the actual costs (including wages and the daily PSC reimbursement) for attendance of accredited training courses as agreed with the engineer and shall be expended in accordance with the provisions of sub-clause 48(2) of the general conditions of contract. The tendered percentage in sub-item C12.05 (c) is a percentage of the amount actually spent under sub-items C12.05(a) and (b) which shall include full compensation for the contractor's handling cost, profit, mentoring, record keeping, reporting and all other costs in connection therewith.

The lump sum tendered for C12.05(d) shall include full compensation for the provision of the training venue, for all necessary lighting, power, furniture, stationery, consumables and study material and for transportation of the students to and from the training venue.

Payment of the lump sum will be made after the provision of all the accredit training, issuing of all certificates and submission of all records as specified in the document.

C3.4.3.4 PROVISION OF THE TEMPORARY WORKFORCE

CONTENTS

C3.4.3.4.1 SCOPE

C3.4.3.4.2 INTERPRETATIONS

C3.4.3.4.3 PERMITTED SOURCES OF TEMPORARY WORKERS

C3.4.3.4.4 EMPLOYMENT RECORDS TO BE PROVIDED

C3.4.3.4.5 VARIATIONS IN WORKER PRODUCTION RATES

C3.4.3.4.6 TRAINING OF THE TEMPORARY WORKFORCE

C3.4.3.4.7 RECRUITMENT AND SELECTION PROCEDURES

C3.4.3.4.8 TERMS AND CONDITIONS PERTAINING TO THE EMPLOYMENT OF THE TEMPORARY WORKFORCE

C3.4.3.4.9 LABOUR RELATIONS AND WORKER GRIEVANCE PROCEDURES

C3.4.3.4.10 THE SUBCONTRACTORS' WORKFORCES

C3.4.3.4.11 MEASUREMENT AND PAYMENT

C3.4.3.4.1 SCOPE

This Specification covers the provisions and requirements relating to the provision of the temporary workforce. Reference is also made to the Basic Conditions of Employment Act (Act 75 of 1997) with specific reference to the Sectoral Determination 2: Civil Engineering Sector

C3.4.3.4.2 INTERPRETATIONS

C3.4.3.4.2.1 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.

C3.4.3.4.2.1.2 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 posses 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) “Project Steering Committee (PSC)” means a committee comprising mainly of representatives (to a maximum of 10) of the affected communities with additional members from Thulamela Local Municipality, the Contractor, Consultants and the Municipality. The PSC convenes at least once a month as well as when the need so dictates, for the purpose of recruiting labour for the project, to address community issues and for acting as an avenue for effective communication and liaison between all the parties.

(g) "Liaison Officer" means a local representative of the temporary workforce, duly appointed through the PSC processes, to act on behalf of the workers and through whom all matters pertaining to the temporary workforce can be channelled.

C3.4.3.4.2.1.3 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.

C3.4.3.4.3 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 C3 may consist of the workers of local communities, and shall not be bound to one particular community.

C3.4.3.4.4 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 Thulamela Local Municipality approved format. An example of the forms to be used is illustrated in Part C5 of this document, (forms RDP 9 and 10 (E).

(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.

C3.4.3.4.5 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.

C3.4.3.4.6 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 C3.4.3.3.

(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 C3.4.3.3.

(c) The provision of structured training as described in Part C3.4.3.3. 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 C3.4.3.3, as may be necessary to achieve the execution and completion of the works strictly in accordance with the provisions of the Contract.

C3.4.3.4.7 RECRUITMENT AND SELECTION PROCEDURES

C3.4.3.4.7.1 The Project Steering Committee, though the assistance of the Social Facilitator and the Contractor, shall be responsible for the recruitment and selection of the Community Liaison Officer and the workers to constitute the temporary workforce.

C3.4.3.4.7.2 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 posses (taking due cognisance of the provisions of the Contract relating to training).

C3.4.3.4.7.3 The Social Facilitator shall take the necessary actions to advertise within the affected local communities comprising the personnel resources, the fact that temporary employment opportunities exist and the time and place where recruiting will occur

C3.4.3.4.7.4 The Social Facilitator shall record in writing, the details of all persons applying for employment, including *inter alia*:

(a) Name, Identity Number, Date of Birth, age and sex

(b) Marital status and number of dependants

(c) Qualifications and previous work experience (whether substantiated or not)

(d) On the job training programmes attended

(e) Period since last economically active

(f) Preference for type of work or task.

C3.4.3.4.7.5 The selection of workers from amongst the applicants should take into cognizance the Contractor’s 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 principle:

(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 posses 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. The Contractor should strive to achieve the participation target for employment set for this project which is 60% female and 20% youth.

C3.4.3.4.7.6 After making the selection, the Social Facilitator shall forward the list in writing and without undue delay, to the Engineer for record keeping.

C3.4.3.4.7.7 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.

C3.4.3.4.7.8 The Contractor shall, after appointing 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.

C3.4.3.4.8 TERMS AND CONDITIONS PERTAINING TO THE EMPLOYMENT OF THE TEMPORARY WORKFORCE

C3.4.3.4.8.1 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. Refer to the Contract of Employment drafted/published by Department of Labour.

C3.4.3.4.8.2 RATE OF REMUNERATION. The Contractor shall pay to all workers engaged in terms of the contract, not less than the applicable gazetted minimum rate of remuneration in terms of the Sectorial Determination 2: Civil Engineering Sector.

The remuneration of the CLO shall be paid monthly at the rate equivalent to Task Grade 3 in accordance with the provisions of the Basic Conditions of Employment Act, No. 75 of 1997, Amendment i.t.o Sectorial Determination 2: Civil Engineering Sector, South Africa

Compensation for transport for the members of the Project Steering Committee shall be made at a rate of R75 / month. This will cover for transport cost to and from the PSC meeting, site meeting and any other meeting deemed necessary to fulfil their obligations.

C3.4.3.4.8.3 NON-PAYMENT OF LABOURERS. Under this contract it is expected of the Main Contractor to ensure that all labourers are paid in time on a monthly basis, whether they are employed by him/her directly or by any of his/her subcontractors. In the event of non-compliance, the employer reserves the right to use any remedies available at its disposal.

C3.4.3.4.9 LABOUR RELATIONS AND WORKER GRIEVANCE PROCEDURES

C3.4.3.4.9.1 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. Refer to Disciplinary Procedures for Small Business drafted/published by Department of Labour.

C3.4.3.4.9.2 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.

C3.4.3.4.9.3 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 C3.4.3.4.9.2 above, by one member of the temporary workforce and one member of the Project Committee, which persons shall be nominated by the worker.

C3.4.3.4.9.4 In the event of any grievance not being satisfactorily resolved through the application of normal dispute resolution procedures in accordance with Sub clauses C3.4.3.4.9.2 and C3.4.3.4.9.3, 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.

C3.4.3.4.10 THE SUBCONTRACTORS' WORKFORCES

C3.4.3.4.10.1 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.

C3.4.3.4.10.2 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.

C3.4.3.4.11 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 in Part C3.4.3.3. as relevant, be deemed to be included in the rates tendered for the various items of work listed in the Schedule of Quantities.

C3.5 MANAGEMENT

C3.5.1 MANAGEMENT MEETINGS

The following meetings will be required as minimum for the management of the contract.

(a) Monthly client site meeting (using standard agenda for management control).

(b) Technical meetings as required for each phase of the work.

(c) Monthly safety meetings in terms of the OHS requirements.

(d) Weekly progress meetings

C3.5.2 QUALITY CONTROL

Contractor to supply details of quality plan and procedures. These shall include:

- Accommodation of traffic.
- Inspection and test plans.
- Approval process.
- Hold-points.
- Milestones.

PART C4: SITE INFORMATION

C4.1 SITE INFORMATION C.202
C4.2 LOCALITY PLAN C.204

C4.1 SITE INFORMATION

C4.1.1 General

The study area for this investigation is in the North-eastern portions of the Limpopo Province of South Africa. On a more localised scale, the study area is located approximately approximately 4.5 km south west of Thohoyandou Town.

C4.1.2 Climate and Weather

The area receives about 752 mm of rain per year, with most rainfall occurring during summer. It receives the lowest rainfall (4 mm) in June and the highest (154 mm) in January. The temperature conditions are influenced by seasonal conditions and topography, resulting in relatively warm conditions of 16 °C – 40 °C in summer. The warm-wet season is experienced between December and February. During the chilly-cold winter the temperature ranges from 12°C-22°C.

C4.1.3 Topography

The study area is situated on the Southern edge of the Soutpansberg Mountain Range. The Soutpansberg is characterised by highly undulating surface topography, with steep southern scarp slopes, in combination with shallower northern dip slopes. The change or difference in slope morphology can be attributed to the Northerly dipping strata of the Soutpansberg group, in conjunction with regional erosional processes.

C4.1.4 Material site investigation

The center line materials on the existing gravel road the laboratory test indicates that from a depth of zero mm to 400mm depth average, the average class of G7 to G8, as per the standard specification COLTO, 1998. The Plastic index (PI) ranges from 5 to Non- Plastic (NP), with an average passing 5mm sieve as a sandy material. The material is suitable for selected and can be used for stabilization for C4 or C3 material class. Below 400mm upto1000mm the material laboratory tests indicate the average of G7 to G9 as per COLTO, 1998. The Plastic index (PI) ranges from 7 to 12.
*Geotechnical study report available on request

C4.1.5 Pavement and layerworks design

- Roadbed (G7, 150mm thick, compacted to 93% Mod AASHTO)
- Selected Layer G6 (imported gravel material compacted to 93% Mod AASSHTO
- Cement Stabilized SubBase (C4, 150mm thick, compacted to 95% Mod AASHTO)
- Base of G2 Crushed Stone compacted to 85% Bulk Relative Density
- 30mm AC Surfacing

C4.1.6 Structures

The structures to be constructed are as follows:

- Construction of stormwater pipes for drainage
- About 80m guardrails

C4.1.6 Services

Water Pipelines and Sewerlines:

The as-built drawings for existing water pipelines are not available. Where pipes are crossing the streets, pipe sleeves will be constructed for future maintenance.

Electricity Lines:

The streets consist of overhead electrical cables. Electrical pole which are on the road will be relocated where necessary. The underground cables will be marked and care will be taken when excavating.

Fences:

Fences which are encroaching to the streets will be relocated. The social consultant will be involved to negotiate with the landowners for the expropriation of land.

Telkom lines

All Telkom lines are overheads. Telephone poles or stay found to be on the road will be relocated.

C4.2 LOCALITY PLAN

Locality Map is attached under separate book of drawings.”

PART C5: ANNEXURES

C5.1 PROFORMA DOCUMENTS.....C.206
C5.2 CONTRACT DRAWINGS C.212

C5.1 PROFORMA DOCUMENTS

The following is a list of proforma documents and examples that are required to be completed by the successful tenderer.

C5.1.1 RETENTION MONEY GUARANTEE PROFORMA C.207
C5.1.2 MUNICIPALITY SUPPLY CHAIN MANAGEMENT POLICY.....C.209
C5.1.3 GENERAL CONDITONS OF CONTRACT (2015) …….C 210
C5.1.4 MUNICIPALITY HEALTH AND SAFETY SPECTIFICATION C.211

C5.1.1 RETENTION MONEY GUARANTEE PROFORMA

EXAMPLE

THULAMELA LOCAL MUNICIPALITY
Private Bag x 5066
Thohoyandou
0950

FOR INFORMATION ONLY:
This Guarantee is not to be completed and signed by the Guarantor.
A separate form will be issued to the successful Tenderer

Notes to Tenderer

1. **This pro forma is for information only. The successful tenderer's guarantor will need to reproduce it without amendment, omission or addition for completion and lodgement with the Employer.**
2. **The tenderer's guarantee will have to be on letterheads indicating the contact details of the guarantor, shareholders/board of directors, guarantee number and the company registration number.**

Bid No.: 43/2026/2027

RECONSTRUCTION OF ITSANI TO SHAYANDIMA ROAD

The guarantee is issued on behalf of .....

Registration No .....

(hereinafter referred to as "the Contractor") in connection with the above mentioned contract (hereinafter referred to as "the Contract").

Whereas you have agreed that the Contractor may provide a guarantee in lieu of the retention monies provided for under the Contract.

Now therefore we, the undersigned, being duly authorised to represent the .....

.....

(full name of guarantor) registration number .....

undertake to pay you such amounts as you may from time to time demand from us, immediately upon receipt of a written demand from you.

1. Each demand shall be in writing and delivered to us at ..... or such other address as we shall in writing notify to you.
2. Our liability to make the payments herein referred to shall be unconditional and not be affected or diminished by any disputes, claims or counterclaims between you and the Contractor.
3. Our aggregate liability under this guarantee is limited to .....

   (R.....) and is restricted to payment of monies only.

4. This guarantee shall expire on the date on which the last of the retention monies,

which but for this guarantee would have been retained by you, becomes payable to the Contractor.

5. This guarantee is neither negotiable nor transferable and must be returned to us against final payment of our aggregate liability or on the date of the expiry of the guarantee in terms of Clause 4 (above), whichever is the earlier.

Signed at .....for and on behalf of .....

on this the . ..... day of ..... in the year .....

GUARANTOR: .....

AS WITNESS:

1.	2. .....
NAME(Print):	NAME(Print): .....
ADDRESS	ADDRESS .....
.....	.....
.....	.....

C5.1.2 MUNICIPALITY SUPPLY CHAIN MANAGEMENT POLICY

Note: Thulamela Municipality Supply Chain Management Policy is applicable on this contract and this policy document can be downloaded from Thulamela website (www.thulamela.gov.za) for free.

C5.1.3 GENERAL CONDITIONS OF CONTRACT APPLICABLE TO THIS CONTRACT: GCC 2015 THIRD EDITION

Note: The 2015 GCC Third Edition is applicable for this contract

C5.1.4 MUNICIPALITY HEALTH AND SAFETY SPECIFICATIONS

C5.2 CONTRACT DRAWINGS

The following is a list of contract drawings (See drawing Book 2 of 2)

DRAWING NUMBER	DRAWING TITLE
TLM-JTMI-OLP-001	OVERAL LAYOUT PLAN
TLM-JTMI-CTM-001	CATCHMENTS AREAS
TLM-JTMI-DT-001	TYPICAL ROAD CROSS SECTION, AND DETAILS
TLM-JTMI-CS-001	ROAD 1, PART 1 CROSS SECTION DETAILS
TLM-JTMI-CS-002	ROAD 1, PART 1 END AND PART 2 CROSS SECTION DETAILS
TLM-JTMI-CS-003	ROAD 1, PART 2 END AND PART 3 CROSS SECTION DETAILS
TLM-JTMI-CS-004	ROAD 1, PART 3 CROSS SECTION DETAILS
TLM-JTMI-CS-005	ROAD 1, PART 3 CROSS SECTION DETAILS
TLM-JTMI-CS-006	ROAD 1, PART 3 END AND PART 4 CROSS SECTION DETAILS
TLM-JTMI-CS-007	ROAD 1, PART 5, PART 6 AND PART 7 CROSS SECTION DETAILS
TLM-JTMI-RDT-001	ROAD 1 PART 1 TO PART 7 ROAD DETAILS
TLM-JTMI-RLP-001	ROAD 1 PART 1 LAYOUT PLAN AND LONG SECTION
TLM-JTMI-RLP-002	ROAD 1 PART 1 LAYOUT PLAN AND LONG SECTION
TLM-JTMI-RLP-003	ROAD 1 PART 2 LAYOUT PLAN AND LONG SECTION
TLM-JTMI-RLP-004	ROAD 1 PART 3 LAYOUT PLAN AND LONG SECTION
TLM-JTMI-RLP-005	ROAD 1 PART 3 LAYOUT PLAN AND LONG SECTION
TLM-JTMI-RLP-006	ROAD 1 PART 3 LAYOUT PLAN AND LONG SECTION
TLM-JTMI-RLP-007	ROAD 1 PART 3 LAYOUT PLAN AND LONG SECTION
TLM-JTMI-RLP-008	ROAD 1 PART 4 LAYOUT PLAN AND LONG SECTION
TLM-JTMI-RLP-009	ROAD 1 PART 5, PART 6 AND PART 7 LAYOUT PLAN AND LONG SECTION
TLM-JTMI-RLP-010	ROAD 2 PART 1, PART 2 AND PART 3 LAYOUT PLAN AND LONG SECTION
TLM-JTMI-RLP-011	ROAD 2 PART 3 LAYOUT PLAN AND LONG SECTION
TLM-JTMI-RLP-012	ROAD 2 PART 3 LAYOUT PLAN AND LONG SECTION
TLM-JTMI-RM-001	ROAD 1 PART 1 ROAD SIGNS AND MARKINGS
TLM-JTMI-RM-002	ROAD 1 PART 2 AND PART 3 ROAD SIGNS AND MARKINGS
TLM-JTMI-RM-003	ROAD 1 PART 3 ROAD SIGNS AND MARKINGS
TLM-JTMI-RM-004	ROAD 1 PART 3, 4, 5, 6 AND 7 ROAD SIGNS AND MARKINGS
TLM-JTMI-RM-005	ROAD 2 PART 1 AND PART 2 AND PART 3 ROAD SIGNS AND MARKINGS
TLM-JTMI-RM-006	ROAD 2 PART 3 ROAD SIGNS AND MARKINGS
TLM-JTMI-RM-007	ROAD 2 PART 3 ROAD SIGNS AND MARKINGS



No	DATE	REVISION	CONSULT	DIR
1	28/09/26	ISSUED FOR TENDER		
0	22/08/26	ISSUED FOR INFORMATION		

FOR TENDER

0 0,01 0,02 0,03 0,04 0,05 0,06 0,07 0,08m

SCALE ON REDUCED DRAWING

DESIGNED BY	R. MUPEPE
CHECKED BY	W. MASANGO
DRAWN BY	R. MUPEPE
CHECKED BY	W. MASANGO

THULAMELA LOCAL MUNICIPALITY

THULAMELA LOCAL MUNICIPALITY
PRIVATE BAG X 5066
THOHOYANDOU , 0950
TEL: +27(0) 15 962 7500
FAX: +27(0) 15 962 4020
Email: web@thulamela.gov.za

CONSULTANT

JTMI CONSULTING ENGINEERS
18 HOSPITAL ROAD
ARBOR PARK
TZANEEN
1911
TEL : 082 506 1095
FAX : 086 608 4989
e-mail: office@jtmi.co.za

For: CLIENT APPROVAL

PLM (Full signature) DATE

CONSULTING ENGINEER DATE

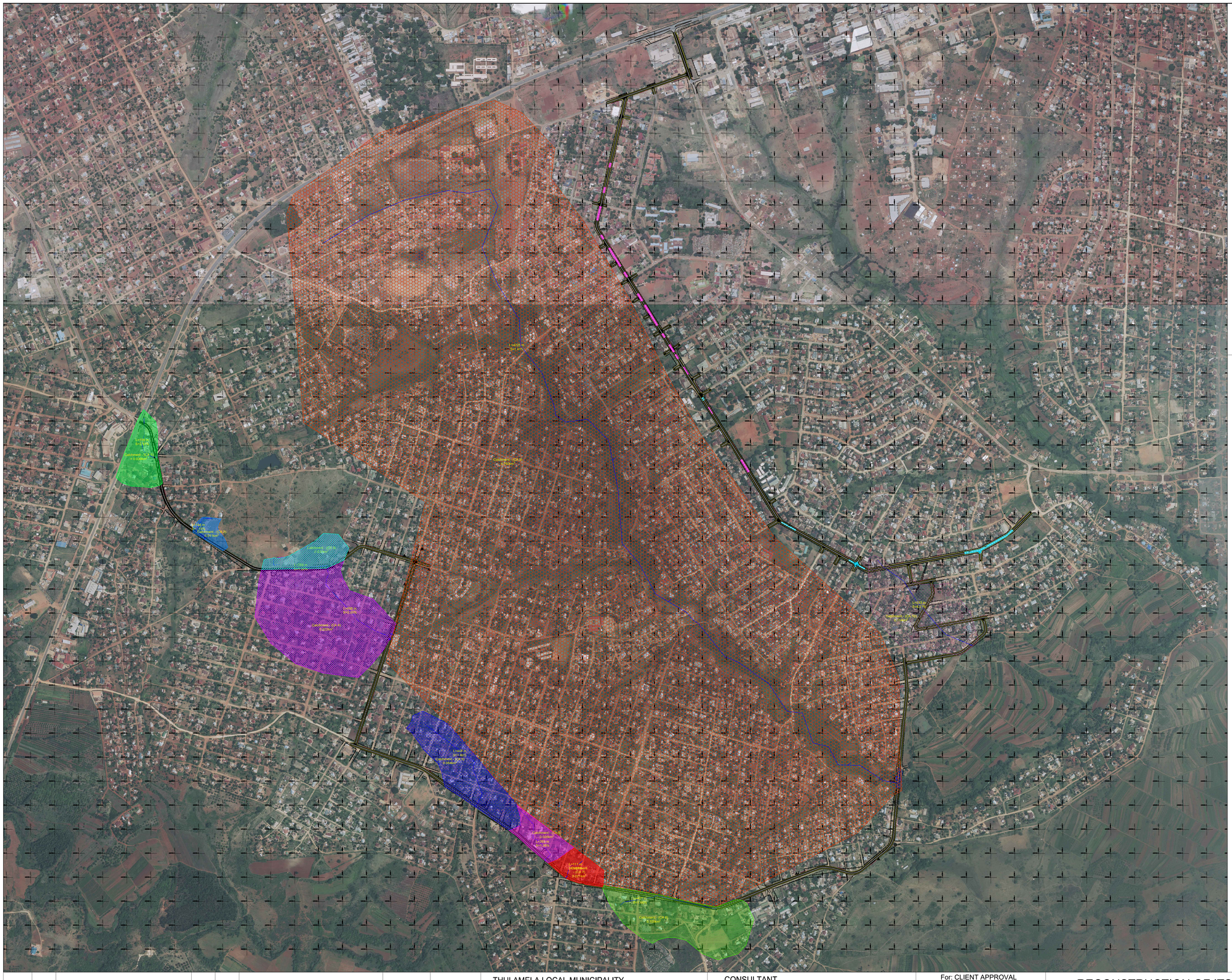
RECONSTRUCTION OF ITSANI TO SHAYANDIMA ROAD IN THULAMELA LOCAL MUNICIPALITY

OVERALL LAYOUT PLAN

PROJECT STATUS

CONCEPT DRAWING	TENDER DRAWING	CONSTRUCTION DRAWING	AS BUILT DRAWING
○	●	○	○

JTMI DRAWING NUMBER	REV
TLM-JTMI-OLP-001	1



LEGEND				
	CATCHMENTS	AREA	SLOPE	HYDRAULIC LENGTH
	CA 1	0.039 km²	2.51 %	199 m
	CA 2	0.011 km²	1.15 %	146 m
	CA 3	0.030 km²	1.50 %	269 m
	CA 4	0.222 km²	2.50 %	695 m
	CA 5	0.084 km²	1.60 %	448 m
	CA 6	0.026 km²	1.08 %	265 m
	CA 7	0.021 km²	1.01 %	111 m
	CA 8	0.109 km²	1.66 %	421 m
	CA 9	4.760 km²	1.41 %	4225 m
	CA 10	0.114 km²	4.21 %	533 m

No	DATE	REVISION	CONSULT	DIR
1	28/09/26	ISSUED FOR TENDER		
0	22/08/26	ISSUED FOR INFORMATION		

FOR TENDER

0 0.01 0.02 0.03 0.04 0.05 0.06 0.07 0.08m

SCALE ON REDUCED DRAWING

DESIGNED BY	R. MUPEPE
CHECKED BY	W. MASANGO
DRAWN BY	R. MUPEPE
CHECKED BY	W. MASANGO

THULAMELA LOCAL MUNICIPALITY

THULAMELA LOCAL MUNICIPALITY
PRIVATE BAG X 5066
THOHOYANDOU , 0950
TEL: +27(0) 15 962 7500
FAX: +27(0) 15 962 4020
Email: web@thulamela.gov.za

CONSULTANT

JTMI CONSULTING ENGINEERS
18 HOSPITAL ROAD
ARBOR PARK
TZANEEN
1911
TEL : 082 506 1095
FAX : 086 608 4989
e-mail: office@jtmi.co.za

For: CLIENT APPROVAL

PLM (Full signature) DATE

CONSULTING ENGINEER DATE

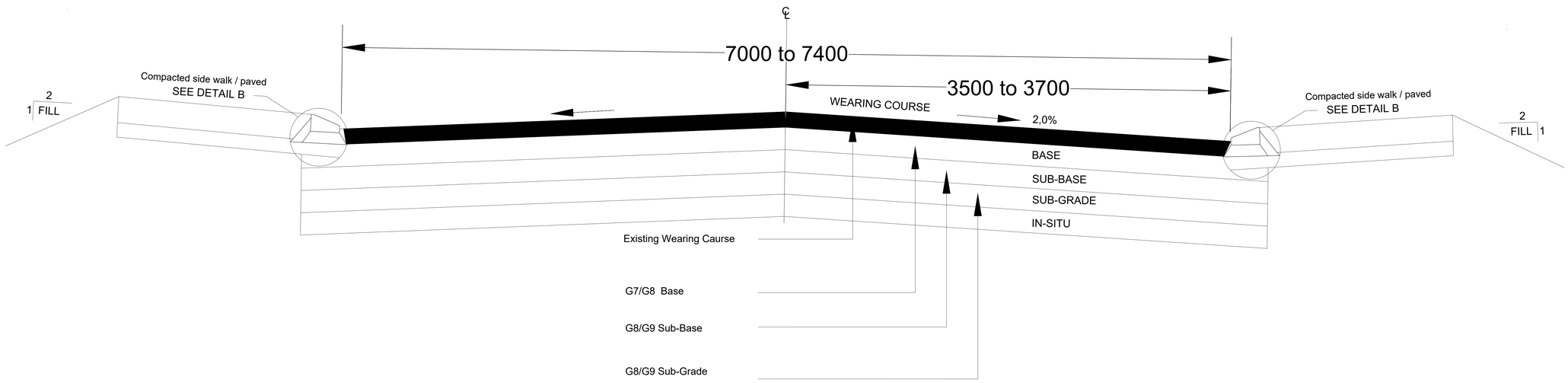
RECONSTRUCTION OF ITSANI TO SHAYANDIMA ROAD IN THULAMELA LOCAL MUNICIPALITY

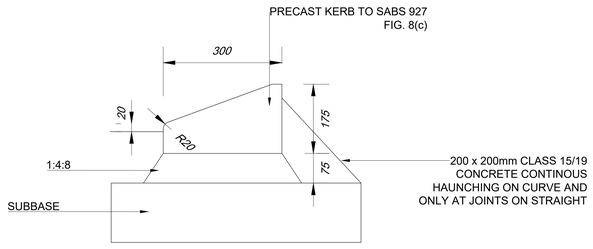
CATCHMENTS AREAS

PROJECT STATUS

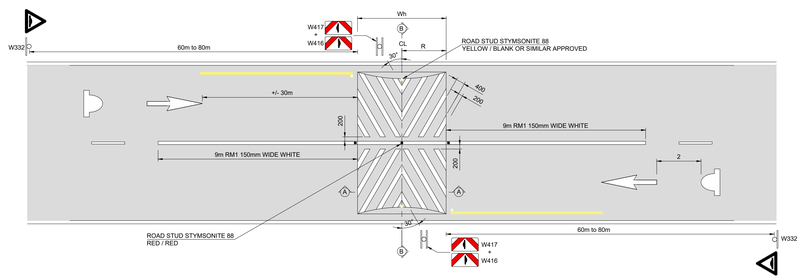
CONCEPT DRAWING | TENDER DRAWING | CONSTRUCTION DRAWING | AS BUILT DRAWING

JTMI DRAWING NUMBER	REV
TLM-JTMI-CTM-001	1





DETAIL B :PRECAST MOUNTABLE KERB (FIG. 8B)3
SCALE: 1:10



SPEED HUMP LAYOUT

No	DATE	REVISION	CONSULT	DIR
1	28/09/26	ISSUED FOR TENDER		
0	22/08/26	ISSUED FOR INFORMATION		

FOR TENDER

0 0,01 0,02 0,03 0,04 0,05 0,06 0,07 0,08m

SCALE ON REDUCED DRAWING

DESIGNED BY	R. MUPEPE
CHECKED BY	W. MASANGO
DRAWN BY	R. MUPEPE
CHECKED BY	W. MASANGO

THULAMELA LOCAL MUNICIPALITY

THULAMELA LOCAL MUNICIPALITY
PRIVATE BAG X 5066
THOHOYANDOU , 0950

TEL: +27(0) 15 962 7500
FAX: +27(0) 15 962 4020
Email: web@thulamela.gov.za

CONSULTANT



JTMI CONSULTING ENGINEERS
18 HOSPITAL ROAD
ARBOR PARK
TZANEEN
1911

TEL : 082 506 1095
FAX : 086 608 4989
e-mail: office@jtmi.co.za

For: CLIENT APPROVAL

PLM (Full signature) DATE

CONSULTING ENGINEER DATE

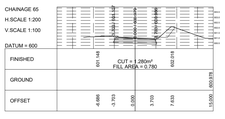
RECONSTRUCTION OF ITSANI TO SHAYANDIMA ROAD IN THULAMELA LOCAL MUNICIPALITY

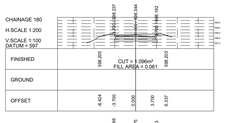
TYPICAL ROAD CROSS SECTION V-DRAIN AND DRIFT DETAILS

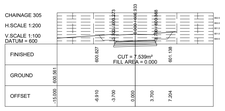
PROJECT STATUS

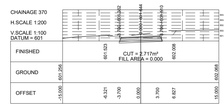
CONCEPT DRAWING	TENDER DRAWING	CONSTRUCTION DRAWING	AS BUILT DRAWING
○	●	○	○

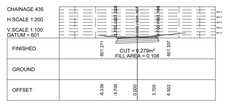
JTMI DRAWING NUMBER	REV
TLM-JTMI-DT-001	1

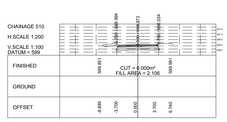


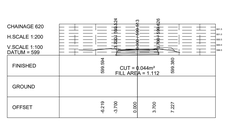


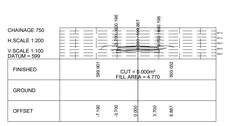


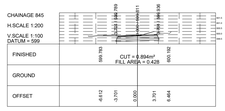


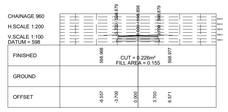


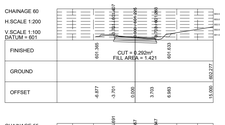


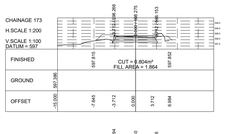


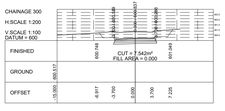


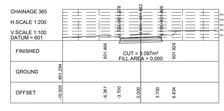


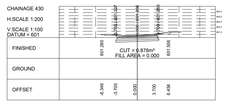


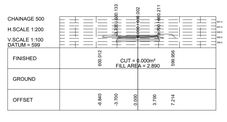


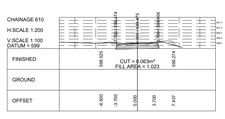


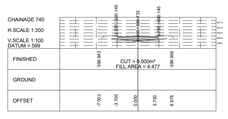


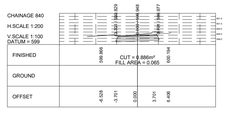


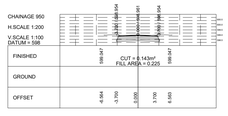


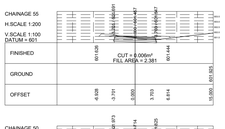




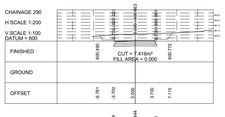


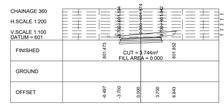


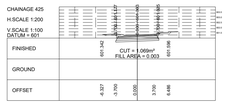


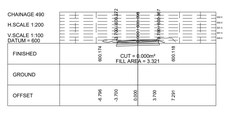


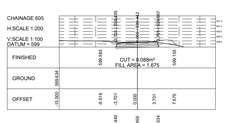


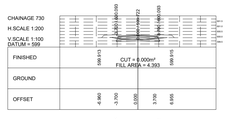


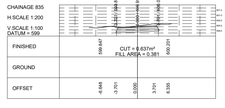


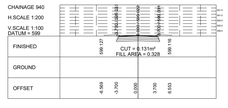


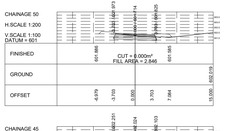


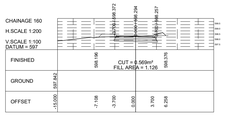


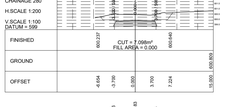


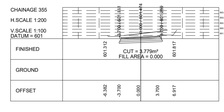


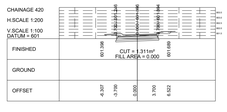


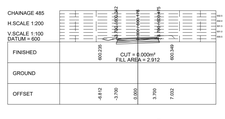


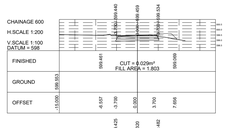


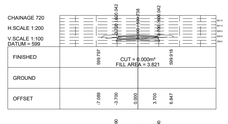


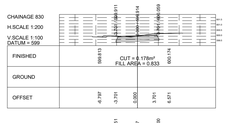






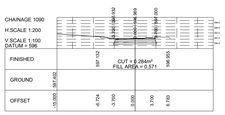


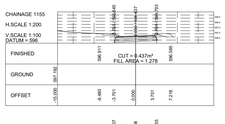


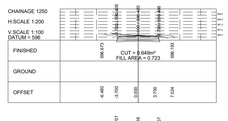


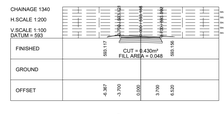


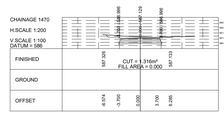
CHAINAGE 7
H.SCALE 1:200
V.SCALE 1:100
DATUM = 603
F

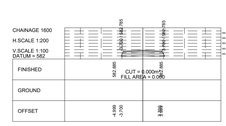

CHAINAGE 1090
H.SCALE 1:200
V.SCALE 1:100
DATUM = 596
FINISHED
GROUND
OFFSET
CUT = 0.284m²
FILL AREA = 0.577

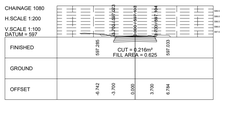

CHAINAGE 1155
H.SCALE 1:200
V.SCALE 1:100
DATUM = 596
FINISHED
GROUND
OFFSET
CUT = 0.437m²
FILL AREA = 1.278

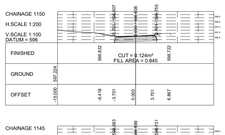

CHAINAGE 1250
H.SCALE 1:200
V.SCALE 1:100
DATUM = 596
FINISHED
GROUND
OFFSET
CUT = 0.649m²
FILL AREA = 0.723

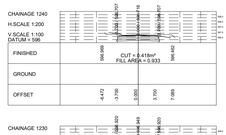

CHAINAGE 1340
H.SCALE 1:200
V.SCALE 1:100
DATUM = 593
FINISHED
GROUND
OFFSET
CUT = 0.430m²
FILL AREA = 0.048

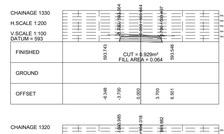

CHAINAGE 1470
H.SCALE 1:200
V.SCALE 1:100
DATUM = 590
FINISHED
GROUND
OFFSET
CUT = 0.316m²
FILL AREA = 0.000

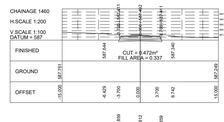

CHAINAGE 1600
H.SCALE 1:200
V.SCALE 1:100
DATUM = 582
FINISHED
GROUND
OFFSET
CUT = 0.000m²
FILL AREA = 0.000

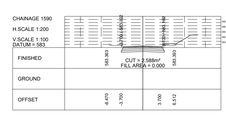

CHAINAGE 1080
H.SCALE 1:200
V.SCALE 1:100
DATUM = 597
FINISHED
GROUND
OFFSET
CUT = 0.216m²
FILL AREA = 0.625

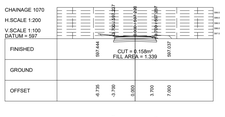

CHAINAGE 1150
H.SCALE 1:200
V.SCALE 1:100
DATUM = 596
FINISHED
GROUND
OFFSET
CUT = 0.124m²
FILL AREA = 0.845

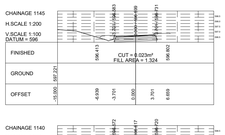

CHAINAGE 1240
H.SCALE 1:200
V.SCALE 1:100
DATUM = 596
FINISHED
GROUND
OFFSET
CUT = 0.418m²
FILL AREA = 0.933

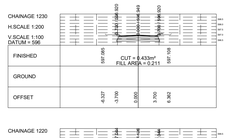

CHAINAGE 1330
H.SCALE 1:200
V.SCALE 1:100
DATUM = 593
FINISHED
GROUND
OFFSET
CUT = 0.926m²
FILL AREA = 0.064

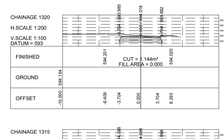

CHAINAGE 1460
H.SCALE 1:200
V.SCALE 1:100
DATUM = 587
FINISHED
GROUND
OFFSET
CUT = 0.472m²
FILL AREA = 0.157

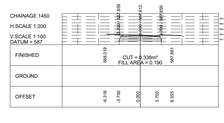

CHAINAGE 1590
H.SCALE 1:200
V.SCALE 1:100
DATUM = 582
FINISHED
GROUND
OFFSET
CUT = 0.588m²
FILL AREA = 0.000

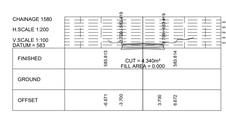

CHAINAGE 1070
H.SCALE 1:200
V.SCALE 1:100
DATUM = 597
FINISHED
GROUND
OFFSET
CUT = 0.108m²
FILL AREA = 1.339


CHAINAGE 1145
H.SCALE 1:200
V.SCALE 1:100
DATUM = 596
FINISHED
GROUND
OFFSET
CUT = 0.023m²
FILL AREA = 1.324

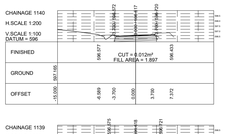

CHAINAGE 1230
H.SCALE 1:200
V.SCALE 1:100
DATUM = 596
FINISHED
GROUND
OFFSET
CUT = 0.433m²
FILL AREA = 0.211

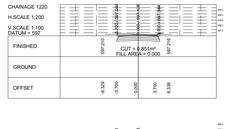

CHAINAGE 1320
H.SCALE 1:200
V.SCALE 1:100
DATUM = 593
FINISHED
GROUND
OFFSET
CUT = 1.144m²
FILL AREA = 0.000


CHAINAGE 1450
H.SCALE 1:200
V.SCALE 1:100
DATUM = 587
FINISHED
GROUND
OFFSET
CUT = 0.338m²
FILL AREA = 0.190

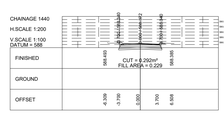

CHAINAGE 1580
H.SCALE 1:200
V.SCALE 1:100
DATUM = 583
FINISHED
GROUND
OFFSET
CUT = 0.340m²
FILL AREA = 0.000

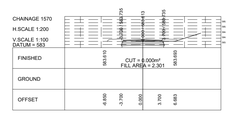

CHAINAGE 1060
H.SCALE 1:200
V.SCALE 1:100
DATUM = 596
FINISHED
GROUND
OFFSET
CUT = 0.075m²
FILL AREA = 1.873

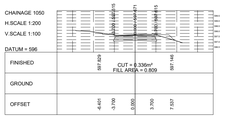

CHAINAGE 1140
H.SCALE 1:200
V.SCALE 1:100
DATUM = 596
FINISHED
GROUND
OFFSET
CUT = 0.012m²
FILL AREA = 1.897

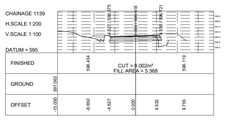

CHAINAGE 1220
H.SCALE 1:200
V.SCALE 1:100
DATUM = 596
FINISHED
GROUND
OFFSET
CUT = 0.651m²
FILL AREA = 0.000

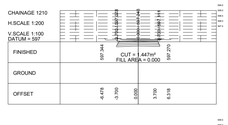

CHAINAGE 1315
H.SCALE 1:200
V.SCALE 1:100
DATUM = 594
FINISHED
GROUND
OFFSET
CUT = 0.921m²
FILL AREA = 0.012

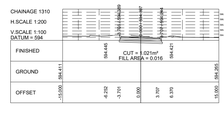

CHAINAGE 1440
H.SCALE 1:200
V.SCALE 1:100
DATUM = 588
FINISHED
GROUND
OFFSET
CUT = 0.292m²
FILL AREA = 0.229

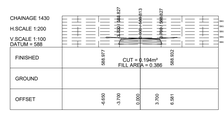

CHAINAGE 1570
H.SCALE 1:200
V.SCALE 1:100
DATUM = 583
FINISHED
GROUND
OFFSET
CUT = 0.000m²
FILL AREA = 2.301

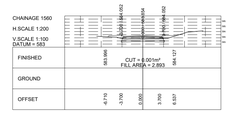

CHAINAGE 1050
H.SCALE 1:200
V.SCALE 1:100
DATUM = 596
FINISHED
GROUND
OFFSET
CUT = 0.336m²
FILL AREA = 0.809

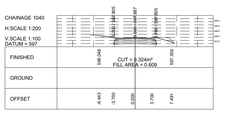

CHAINAGE 1139
H.SCALE 1:200
V.SCALE 1:100
DATUM = 595
FINISHED
GROUND
OFFSET
CUT = 0.002m²
FILL AREA = 5.368

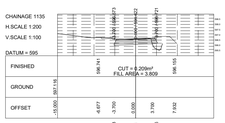

CHAINAGE 1210
H.SCALE 1:200
V.SCALE 1:100
DATUM = 597
FINISHED
GROUND
OFFSET
CUT = 1.447m²
FILL AREA = 0.000

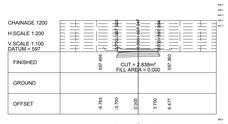

CHAINAGE 1310
H.SCALE 1:200
V.SCALE 1:100
DATUM = 594
FINISHED
GROUND
OFFSET
CUT = 1.021m²
FILL AREA = 0.016

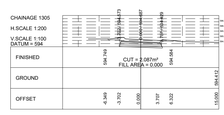

CHAINAGE 1430
H.SCALE 1:200
V.SCALE 1:100
DATUM = 588
FINISHED
GROUND
OFFSET
CUT = 0.194m²
FILL AREA = 0.396

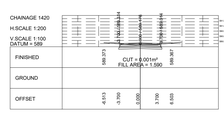

CHAINAGE 1560
H.SCALE 1:200
V.SCALE 1:100
DATUM = 583
FINISHED
GROUND
OFFSET
CUT = 0.001m²
FILL AREA = 2.893

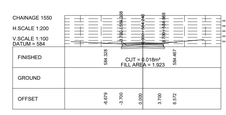

CHAINAGE 1040
H.SCALE 1:200
V.SCALE 1:100
DATUM = 597
FINISHED
GROUND
OFFSET
CUT = 0.324m²
FILL AREA = 0.609

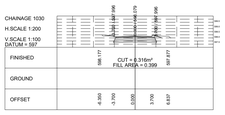

CHAINAGE 1135
H.SCALE 1:200
V.SCALE 1:100
DATUM = 595
FINISHED
GROUND
OFFSET
CUT = 0.209m²
FILL AREA = 3.809

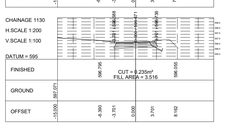

CHAINAGE 1200
H.SCALE 1:200
V.SCALE 1:100
DATUM = 597
FINISHED
GROUND
OFFSET
CUT = 0.838m²
FILL AREA = 0.000

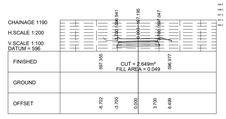

CHAINAGE 1305
H.SCALE 1:200
V.SCALE 1:100
DATUM = 594
FINISHED
GROUND
OFFSET
CUT = 0.087m²
FILL AREA = 0.000

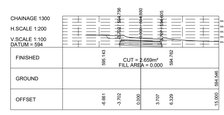

CHAINAGE 1420
H.SCALE 1:200
V.SCALE 1:100
DATUM = 589
FINISHED
GROUND
OFFSET
CUT = 0.001m²
FILL AREA = 1.590


CHAINAGE 1550
H.SCALE 1:200
V.SCALE 1:100
DATUM = 584
FINISHED
GROUND
OFFSET
CUT = 0.018m²
FILL AREA = 1.923


CHAINAGE 1030
H.SCALE 1:200
V.SCALE 1:100
DATUM = 597
FINISHED
GROUND
OFFSET
CUT = 0.316m²
FILL AREA = 0.399


CHAINAGE 1130
H.SCALE 1:200
V.SCALE 1:100
DATUM = 595
FINISHED
GROUND
OFFSET
CUT = 0.235m²
FILL AREA = 3.516


CHAINAGE 1190
H.SCALE 1:200
V.SCALE 1:100
DATUM = 596
FINISHED
GROUND
OFFSET
CUT = 2.649m²
FILL AREA = 0.049


CHAINAGE 1300
H.SCALE 1:200
V.SCALE 1:100
DATUM = 594
FINISHED
GROUND
OFFSET
CUT = 1.659m²
FILL AREA = 0.000

CHAINAGE 1410
H.SCALE 1:200
V.SCALE 1:100
DATUM = 589
FINISHED
GROUND
OFFSET
CUT = 0.000m²
FILL AREA = 2.313

CHAINAGE 1540
H.SCALE 1:200
V.SCALE 1:100
DATUM = 584
FINISHED
GROUND
OFFSET
CUT = 0.009m²
FILL AREA = 2.012

CHAINAGE 1020
H.SCALE 1:200
V.SCALE 1:100
DATUM = 598
FINISHED
GROUND
OFFSET
CUT = 0.250m²
FILL AREA = 0.281

CHAINAGE 1125
H.SCALE 1:200
V.SCALE 1:100
DATUM = 596
FINISHED
GROUND
OFFSET
CUT = 0.318m²
FILL AREA = 3.398

CHAINAGE 1185
H.SCALE 1:200
V.SCALE 1:100
DATUM = 596
FINISHED
GROUND
OFFSET
CUT = 2.467m²
FILL AREA = 0.005

CHAINAGE 1295
H.SCALE 1:200
V.SCALE 1:100
DATUM = 594
FINISHED
GROUND
OFFSET
CUT = 2.904m²
FILL AREA = 0.000

CHAINAGE 1400
H.SCALE 1:200
V.SCALE 1:100
DATUM = 590
FINISHED
GROUND
OFFSET
CUT = 0.000m²
FILL AREA = 2.099

CHAINAGE 1530
H.SCALE 1:200
V.SCALE 1:100
DATUM = 584
FINISHED
GROUND
OFFSET
CUT = 0.000m²
FILL AREA = 2.533

CHAINAGE 1010
H.SCALE 1:200
V.SCALE 1:100
DATUM = 598
FINISHED
GROUND
OFFSET
CUT = 0.346m²
FILL AREA = 0.415

CHAINAGE 1120
H.SCALE 1:200
V.SCALE 1:100
DATUM = 596
FINISHED
GROUND
OFFSET
CUT = 0.285m²
FILL AREA = 2.729

CHAINAGE 1180
H.SCALE 1:200
V.SCALE 1:100
DATUM = 596
FINISHED
GROUND
OFFSET
CUT = 1.867m²
FILL AREA = 0.525

CHAINAGE 1290
H.SCALE 1:200
V.SCALE 1:100
DATUM = 594
FINISHED
GROUND
OFFSET
CUT = 2.262m²
FILL AREA = 0.000

CHAINAGE 1390
H.SCALE 1:200
V.SCALE 1:100
DATUM = 590
FINISHED
GROUND
OFFSET
CUT = 0.000m²
FILL AREA = 1.778

CHAINAGE 1520
H.SCALE 1:200
V.SCALE 1:100
DATUM = 585
FINISHED
GROUND
OFFSET
CUT = 0.000m²
FILL AREA = 1.514

CHAINAGE 1000
H.SCALE 1:200
V.SCALE 1:100
DATUM = 598
FINISHED
GROUND
OFFSET
CUT = 0.332m²
FILL AREA = 0.637

CHAINAGE 1115
H.SCALE 1:200
V.SCALE 1:100
DATUM = 596
FINISHED
GROUND
OFFSET
CUT = 0.221m²
FILL AREA = 1.682

CHAINAGE 1175
H.SCALE 1:200
V.SCALE 1:100
DATUM = 596
FINISHED
GROUND
OFFSET
CUT = 1.694m²
FILL AREA = 0.693

CHAINAGE 1285
H.SCALE 1:200
V.SCALE 1:100
DATUM = 594
FINISHED
GROUND
OFFSET
CUT = 1.217m²
FILL AREA = 0.000

CHAINAGE 1380
H.SCALE 1:200
V.SCALE 1:100
DATUM = 590
FINISHED
GROUND
OFFSET
CUT = 0.000m²
FILL AREA = 2.543

CHAINAGE 1510
H.SCALE 1:200
V.SCALE 1:100
DATUM = 585
FINISHED
GROUND
OFFSET
CUT = 0.006m²
FILL AREA = 1.229

CHAINAGE 990
H.SCALE 1:200
V.SCALE 1:100
DATUM = 598
FINISHED
GROUND
OFFSET
CUT = 0.496m²
FILL AREA = 0.500

CHAINAGE 1110
H.SCALE 1:200
V.SCALE 1:100
DATUM = 596
FINISHED
GROUND
OFFSET
CUT = 0.003m²
FILL AREA = 0.299

CHAINAGE 1170
H.SCALE 1:200
V.SCALE 1:100
DATUM = 596
FINISHED
GROUND
OFFSET
CUT = 0.996m²
FILL AREA = 0.872

CHAINAGE 1280
H.SCALE 1:200
V.SCALE 1:100
DATUM = 595
FINISHED
GROUND
OFFSET
CUT = 1.963m²
FILL AREA = 0.000

CHAINAGE 1370
H.SCALE 1:200
V.SCALE 1:100
DATUM = 591
FINISHED
GROUND
OFFSET
CUT = 0.000m²
FILL AREA = 1.425

CHAINAGE 1500
H.SCALE 1:200
V.SCALE 1:100
DATUM = 585
FINISHED
GROUND
OFFSET
CUT = 0.492m²
FILL AREA = 0.435

CHAINAGE 980
H.SCALE 1:200
V.SCALE 1:100
DATUM = 598
FINISHED
GROUND
OFFSET
CUT = 0.791m²
FILL AREA = 0.505

CHAINAGE 1105
H.SCALE 1:200
V.SCALE 1:100
DATUM = 596
FINISHED
GROUND
OFFSET
CUT = 0.046m²
FILL AREA = 0.196

CHAINAGE 1165
H.SCALE 1:200
V.SCALE 1:100
DATUM = 596
FINISHED
GROUND
OFFSET
CUT = 1.318m²
FILL AREA = 0.549

CHAINAGE 1270
H.SCALE 1:200
V.SCALE 1:100
DATUM = 595
FINISHED
GROUND
OFFSET
CUT = 1.857m²
FILL AREA = 0.000

CHAINAGE 1360
H.SCALE 1:200
V.SCALE 1:100
DATUM = 592
FINISHED
GROUND
OFFSET
CUT = 0.028m²
FILL AREA = 0.757

CHAINAGE 1490
H.SCALE 1:200
V.SCALE 1:100
DATUM = 586
FINISHED
GROUND
OFFSET
CUT = 0.725m²
FILL AREA = 0.054

CHAINAGE 970
H.SCALE 1:200
V.SCALE 1:100
DATUM = 598
FINISHED
GROUND
OFFSET
CUT = 0.393m²
FILL AREA = 0.870

CHAINAGE 1100
H.SCALE 1:200
V.SCALE 1:100
DATUM = 596
FINISHED
GROUND
OFFSET
CUT = 0.120m²
FILL AREA = 1.048

CHAINAGE 1160
H.SCALE 1:200
V.SCALE 1:100
DATUM = 596
FINISHED
GROUND
OFFSET
CUT = 0.886m²
FILL AREA = 0.953

CHAINAGE 1260
H.SCALE 1:200
V.SCALE 1:100
DATUM = 595
FINISHED
GROUND
OFFSET
CUT = 0.253m²
FILL AREA = 0.000

CHAINAGE 1350
H.SCALE 1:200
V.SCALE 1:100
DATUM = 592
FINISHED
GROUND
OFFSET
CUT = 0.234m²
FILL AREA = 0.083

CHAINAGE 1480
H.SCALE 1:200
V.SCALE 1:100
DATUM = 586
FINISHED
GROUND
OFFSET
CUT = 0.964m²
FILL AREA = 0.000

CHAINAGE 960
H.SCALE 1:200
V.SCALE 1:100
DATUM = 598
FINISHED
GROUND
OFFSET
CUT = 0.393m²
FILL AREA = 0.844

CHAINAGE 1095
H.SCALE 1:200
V.SCALE 1:100
DATUM = 596
FINISHED
GROUND
OFFSET
CUT = 0.120m²
FILL AREA = 1.048

CHAINAGE 1150
H.SCALE 1:200
V.SCALE 1:100
DATUM = 596
FINISHED
GROUND
OFFSET
CUT = 0.886m²
FILL AREA = 0.953

CHAINAGE 1250
H.SCALE 1:200
V.SCALE 1:100
DATUM = 595
FINISHED
GROUND
OFFSET
CUT = 0.253m²
FILL AREA = 0.000

CHAINAGE 1350
H.SCALE 1:200
V.SCALE 1:100
DATUM = 592
FINISHED
GROUND
OFFSET
CUT = 0.234m²
FILL AREA = 0.083

CHAINAGE 1480
H.SCALE 1:200
V.SCALE 1:100
DATUM = 586
FINISHED
GROUND
OFFSET
CUT = 0.964m²
FILL AREA = 0.000

CHAINAGE 1090
H.SCALE 1:200
V.SCALE 1:100
DATUM = 596
FINISHED
GROUND
OFFSET
CUT = 0.284m²
FILL AREA = 0.577

CHAINAGE 1155
H.SCALE 1:200
V.SCALE 1:100
DATUM = 596
FINISHED
GROUND
OFFSET
CUT = 0.437m²
FILL AREA = 1.278

CHAINAGE 1250
H.SCALE 1:200
V.SCALE 1:100
DATUM = 596
FINISHED
GROUND
OFFSET
CUT = 0.649m²
FILL AREA = 0.723

CHAINAGE 1340
H.SCALE 1:200
V.SCALE 1:100
DATUM = 593
FINISHED
GROUND
OFFSET
CUT = 0.430m²
FILL AREA = 0.048

CHAINAGE 1470
H.SCALE 1:200
V.SCALE 1:100
DATUM = 590
FINISHED
GROUND
OFFSET
CUT = 0.316m²
FILL AREA = 0.000

CHAINAGE 1600
H.SCALE 1:200
V.SCALE 1:100
DATUM = 582
FINISHED
GROUND
OFFSET
CUT = 0.000m²
FILL AREA = 0.000

CHAINAGE 1080
H.SCALE 1:200
V.SCALE 1:100
DATUM = 597
FINISHED
GROUND
OFFSET
CUT = 0.216m²
FILL AREA = 0.625

CHAINAGE 1150
H.SCALE 1:200
V.SCALE 1:100
DATUM = 596
FINISHED
GROUND
OFFSET
CUT = 0.124m²
FILL AREA = 0.845

CHAINAGE 1240
H.SCALE 1:200
V.SCALE 1:100
DATUM = 596
FINISHED
GROUND
OFFSET
CUT = 0.418m²
FILL AREA = 0.933

CHAINAGE 1330
H.SCALE 1:200
V.SCALE 1:100
DATUM = 593
FINISHED
GROUND
OFFSET
CUT = 0.926m²
FILL AREA = 0.064

CHAINAGE 1460
H.SCALE 1:200
V.SCALE 1:100
DATUM = 587
FINISHED
GROUND
OFFSET
CUT = 0.472m²
FILL AREA = 0.157

CHAINAGE 1590
H.SCALE 1:200
V.SCALE 1:100
DATUM = 582
FINISHED
GROUND
OFFSET
CUT = 0.588m²
FILL AREA = 0.000

CHAINAGE 1070
H.SCALE 1:200
V.SCALE 1:100
DATUM = 597
FINISHED
GROUND
OFFSET
CUT = 0.108m²
FILL AREA = 1.339

CHAINAGE 1145
H.SCALE 1:200
V.SCALE 1:100
DATUM = 596
FINISHED
GROUND
OFFSET
CUT = 0.023m²
FILL AREA = 1.324

CHAINAGE 1230
H.SCALE 1:200
V.SCALE 1:100
DATUM = 596
FINISHED
GROUND
OFFSET
CUT = 0.433m²
FILL AREA = 0.211

CHAINAGE 1320
H.SCALE 1:200
V.SCALE 1:100
DATUM = 593
FINISHED
GROUND
OFFSET
CUT = 1.144m²
FILL AREA = 0.000

CHAINAGE 1450
H.SCALE 1:200
V.SCALE 1:100
DATUM = 587
FINISHED
GROUND
OFFSET
CUT = 0.338m²
FILL AREA = 0.190

CHAINAGE 1580
H.SCALE 1:200
V.SCALE 1:100
DATUM = 583
FINISHED
GROUND
OFFSET
CUT = 0.340m²
FILL AREA = 0.000

CHAINAGE 1060
H.SCALE 1:200
V.SCALE 1:100
DATUM = 596
FINISHED
GROUND
OFFSET
CUT = 0.075m²
FILL AREA = 1.873

CHAINAGE 1140
H.SCALE 1:200
V.SCALE 1:100
DATUM = 596
FINISHED
GROUND
OFFSET
CUT = 0.012m²
FILL AREA = 1.897

CHAINAGE 1220
H.SCALE 1:200
V.SCALE 1:100
DATUM = 596
FINISHED
GROUND
OFFSET
CUT = 0.651m²
FILL AREA = 0.000

CHAINAGE 1315
H.SCALE 1:200
V.SCALE 1:100
DATUM = 594
FINISHED
GROUND
OFFSET
CUT = 0.921m²
FILL AREA = 0.012

CHAINAGE 1440
H.SCALE 1:200
V.SCALE 1:100
DATUM = 588
FINISHED
GROUND
OFFSET
CUT = 0.292m²
FILL AREA = 0.229

CHAINAGE 1570
H.SCALE 1:200
V.SCALE 1:100
DATUM = 583
FINISHED
GROUND
OFFSET
CUT = 0.000m²
FILL AREA = 2.301

CHAINAGE 1050
H.SCALE 1:200
V.SCALE 1:100
DATUM = 596
FINISHED
GROUND
OFFSET
CUT = 0.336m²
FILL AREA = 0.809

CHAINAGE 1139
H.SCALE 1:200
V.SCALE 1:100
DATUM = 595
FINISHED
GROUND
OFFSET
CUT = 0.002m²
FILL AREA = 5.368

CHAINAGE 1210
H.SCALE 1:200
V.SCALE 1:100
DATUM = 597
FINISHED
GROUND
OFFSET
CUT = 1.447m²
FILL AREA = 0.000

CHAINAGE 1310
H.SCALE 1:200
V.SCALE 1:100
DATUM = 594
FINISHED
GROUND
OFFSET
CUT = 1.021m²
FILL AREA = 0.016

CHAINAGE 1430
H.SCALE 1:200
V.SCALE 1:100
DATUM = 588
FINISHED
GROUND
OFFSET
CUT = 0.194m²
FILL AREA = 0.396

CHAINAGE 1560
H.SCALE 1:200
V.SCALE 1:100
DATUM = 583
FINISHED
GROUND
OFFSET
CUT = 0.001m²
FILL AREA = 2.893

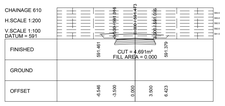
CHAINAGE 1040
H.SCALE 1:200
V.SCALE 1:100
DATUM = 597
FINISHED
GROUND
OFFSET
CUT = 0.324m²
FILL AREA = 0.609

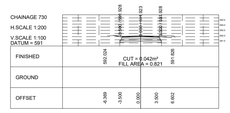
CHAINAGE 1135
H.SCALE 1:200
V.SCALE 1:100
DATUM = 595
FINISHED
GROUND
OFFSET
CUT = 0.209m²
FILL AREA = 3.809

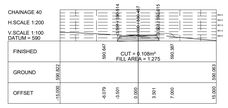
CHAINAGE 1200
H.SCALE 1:200
V.SCALE 1:100
DATUM = 597
FINISHED
GROUND
OFFSET
CUT = 0.838m²
FILL AREA = 0.000

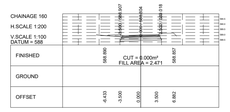
CHAINAGE 1305
H.SCALE 1:200
V.SCALE 1:100
DATUM = 594
FINISHED
GROUND
OFFSET
CUT = 0.087m²
FILL AREA = 0.000

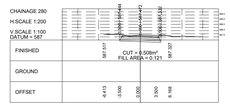
CHAINAGE 1420
H.SCALE 1:200
V.SCALE 1:100
DATUM = 589
FINISHED
GROUND
OFFSET
CUT = 0.001m²
FILL AREA = 1.590

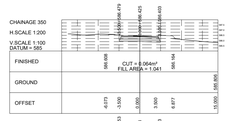


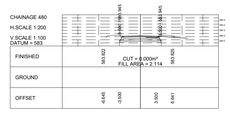


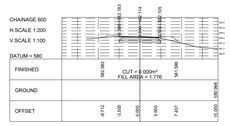


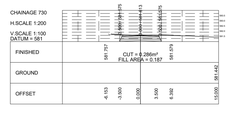


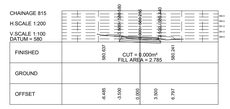


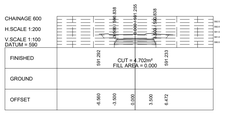


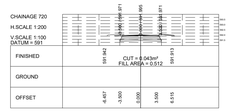


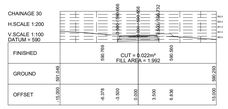


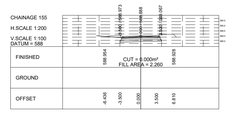


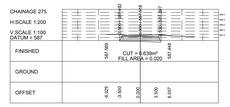


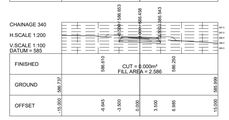


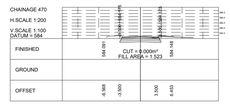


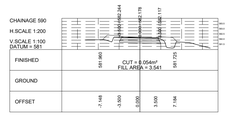




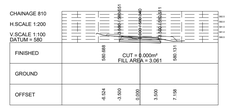


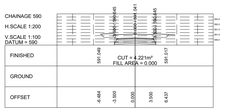




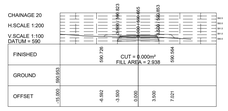


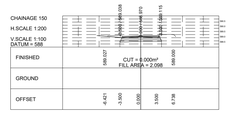


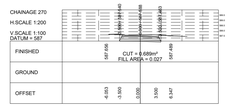


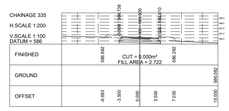


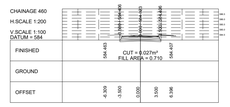


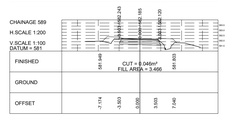


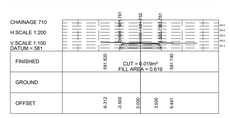


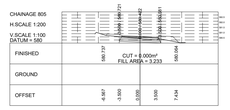


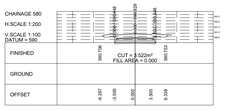


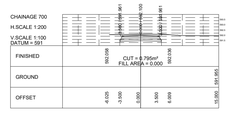


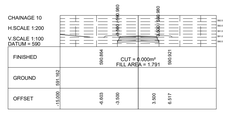


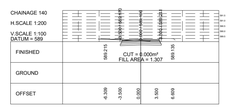


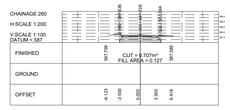


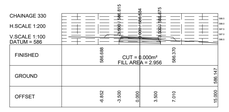


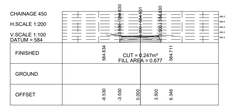


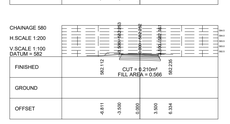


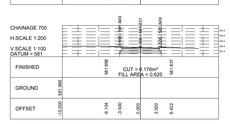


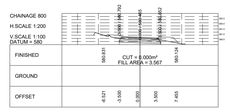






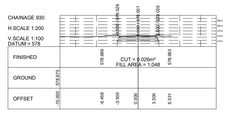




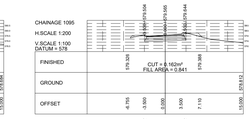


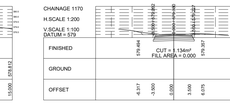
ROAD 1 PART 3

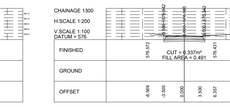
ROAD 1 PART 2 END



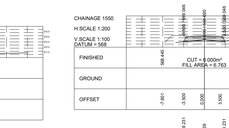


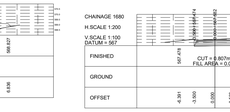


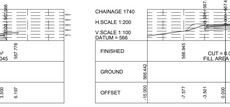


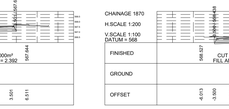


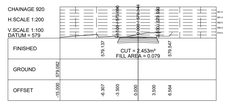




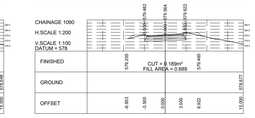


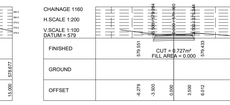


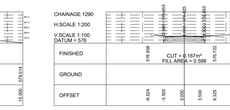


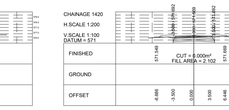


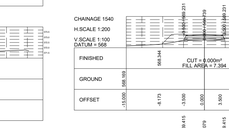


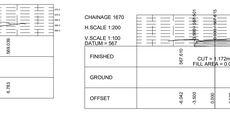


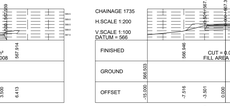


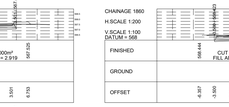


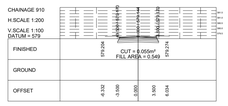




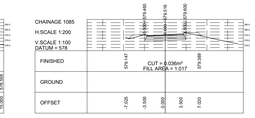


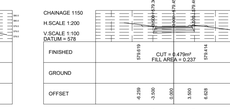


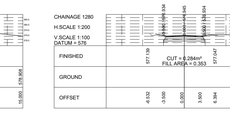


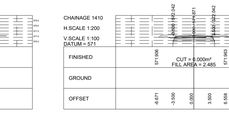


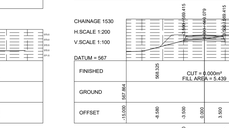


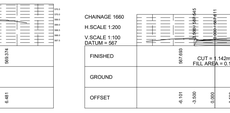


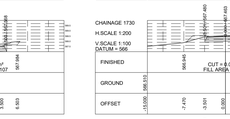


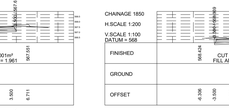


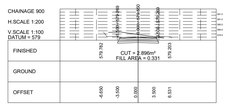




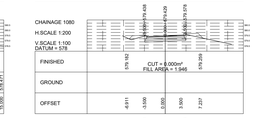


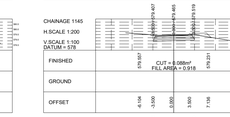


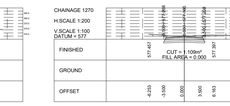


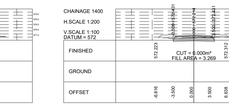


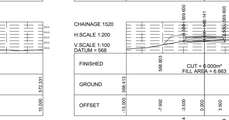


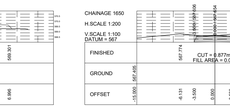


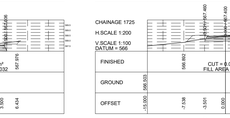


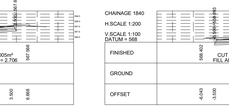




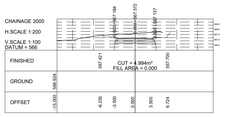




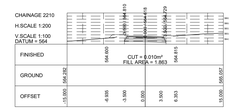


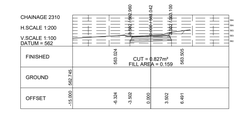


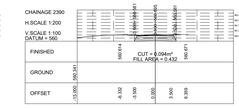
CHAINAGE 1760
H.SCALE 1:200
V.SCALE

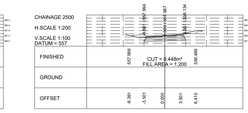

CHAINAGE 2000
H.SCALE 1:200
V.SCALE 1:100
DATUM = 566
FINISHED
GROUND
OFFSET
CUT = 4.994m²
FILL AREA = 0.000

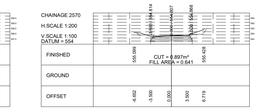

CHAINAGE 2130
H.SCALE 1:200
V.SCALE 1:100
DATUM = 565
FINISHED
GROUND
OFFSET
CUT = 9.374m²
FILL AREA = 0.110

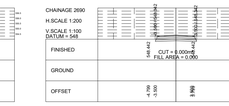

CHAINAGE 2210
H.SCALE 1:200
V.SCALE 1:100
DATUM = 564
FINISHED
GROUND
OFFSET
CUT = 6.010m²
FILL AREA = 1.863

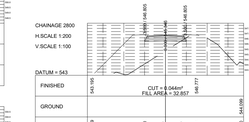

CHAINAGE 2310
H.SCALE 1:200
V.SCALE 1:100
DATUM = 562
FINISHED
GROUND
OFFSET
CUT = 6.827m²
FILL AREA = 0.159

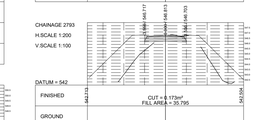

CHAINAGE 2390
H.SCALE 1:200
V.SCALE 1:100
DATUM = 560
FINISHED
GROUND
OFFSET
CUT = 6.094m²
FILL AREA = 0.432

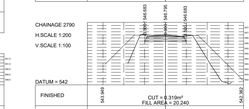

CHAINAGE 2500
H.SCALE 1:200
V.SCALE 1:100
DATUM = 557
FINISHED
GROUND
OFFSET
CUT = 4.448m²
FILL AREA = 1.200

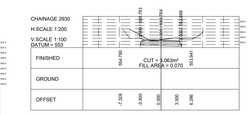

CHAINAGE 2570
H.SCALE 1:200
V.SCALE 1:100
DATUM = 554
FINISHED
GROUND
OFFSET
CUT = 6.897m²
FILL AREA = 0.641

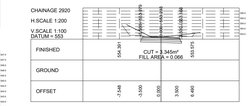

CHAINAGE 2690
H.SCALE 1:200
V.SCALE 1:100
DATUM = 548
FINISHED
GROUND
OFFSET
CUT = 0.000m³
FILL AREA = 0.000

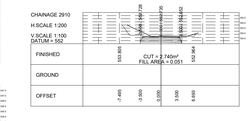

CHAINAGE 2800
H.SCALE 1:200
V.SCALE 1:100
DATUM = 543
FINISHED
GROUND
OFFSET
CUT = 0.044m²
FILL AREA = 32.857

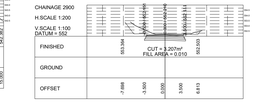

CHAINAGE 2793
H.SCALE 1:200
V.SCALE 1:100
DATUM = 542
FINISHED
GROUND
OFFSET
CUT = 6.172m²
FILL AREA = 35.795

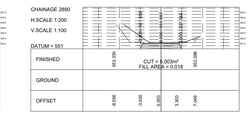

CHAINAGE 2790
H.SCALE 1:200
V.SCALE 1:100
DATUM = 542
FINISHED
GROUND
OFFSET
CUT = 0.191m²
FILL AREA = 20.240

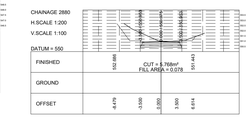

CHAINAGE 2930
H.SCALE 1:200
V.SCALE 1:100
DATUM = 553
FINISHED
GROUND
OFFSET
CUT = 5.063m²
FILL AREA = 0.070

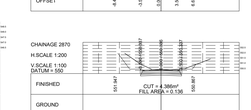

CHAINAGE 2920
H.SCALE 1:200
V.SCALE 1:100
DATUM = 553
FINISHED
GROUND
OFFSET
CUT = 3.345m²
FILL AREA = 0.066

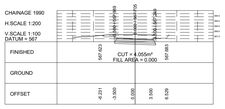

CHAINAGE 2910
H.SCALE 1:200
V.SCALE 1:100
DATUM = 552
FINISHED
GROUND
OFFSET
CUT = 3.740m²
FILL AREA = 0.051

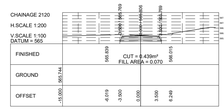

CHAINAGE 2900
H.SCALE 1:200
V.SCALE 1:100
DATUM = 552
FINISHED
GROUND
OFFSET
CUT = 3.207m²
FILL AREA = 0.070

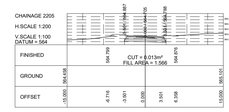

CHAINAGE 2890
H.SCALE 1:200
V.SCALE 1:100
DATUM = 551
FINISHED
GROUND
OFFSET
CUT = 6.003m²
FILL AREA = 0.019

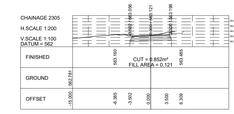

CHAINAGE 2880
H.SCALE 1:200
V.SCALE 1:100
DATUM = 550
FINISHED
GROUND
OFFSET
CUT = 5.768m²
FILL AREA = 0.076

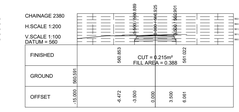

CHAINAGE 2870
H.SCALE 1:200
V.SCALE 1:100
DATUM = 550
FINISHED
GROUND
OFFSET
CUT = 4.386m²
FILL AREA = 0.136

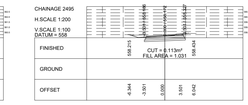

CHAINAGE 1990
H.SCALE 1:200
V.SCALE 1:100
DATUM = 567
FINISHED
GROUND
OFFSET
CUT = 4.055m²
FILL AREA = 0.000

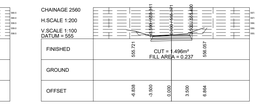

CHAINAGE 2120
H.SCALE 1:200
V.SCALE 1:100
DATUM = 565
FINISHED
GROUND
OFFSET
CUT = 4.839m²
FILL AREA = 0.070

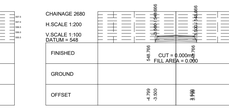

CHAINAGE 2205
H.SCALE 1:200
V.SCALE 1:100
DATUM = 564
FINISHED
GROUND
OFFSET
CUT = 9.013m²
FILL AREA = 1.566


CHAINAGE 2305
H.SCALE 1:200
V.SCALE 1:100
DATUM = 562
FINISHED
GROUND
OFFSET
CUT = 6.862m²
FILL AREA = 0.121


CHAINAGE 2380
H.SCALE 1:200
V.SCALE 1:100
DATUM = 560
FINISHED
GROUND
OFFSET
CUT = 6.215m²
FILL AREA = 0.388


CHAINAGE 2495
H.SCALE 1:200
V.SCALE 1:100
DATUM = 556
FINISHED
GROUND
OFFSET
CUT = 6.113m²
FILL AREA = 1.031


CHAINAGE 2560
H.SCALE 1:200
V.SCALE 1:100
DATUM = 553
FINISHED
GROUND
OFFSET
CUT = 1.499m²
FILL AREA = 5.237


CHAINAGE 2680
H.SCALE 1:200
V.SCALE 1:100
DATUM = 548
FINISHED
GROUND
OFFSET
CUT = 0.000m³
FILL AREA = 0.000

CHAINAGE 2783
H.SCALE 1:200
V.SCALE 1:100
DATUM = 542
FINISHED
GROUND
OFFSET
CUT = 0.000m³
FILL AREA = 0.000

CHAINAGE 2920
H.SCALE 1:200
V.SCALE 1:100
DATUM = 553
FINISHED
GROUND
OFFSET
CUT = 3.345m²
FILL AREA = 0.066

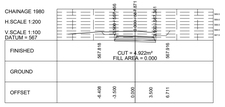
CHAINAGE 2910
H.SCALE 1:200
V.SCALE 1:100
DATUM = 552
FINISHED
GROUND
OFFSET
CUT = 3.740m²
FILL AREA = 0.051

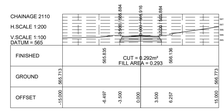
CHAINAGE 2900
H.SCALE 1:200
V.SCALE 1:100
DATUM = 552
FINISHED
GROUND
OFFSET
CUT = 3.207m²
FILL AREA = 0.070

CHAINAGE 2890
H.SCALE 1:200
V.SCALE 1:100
DATUM = 551
FINISHED
GROUND
OFFSET
CUT = 6.003m²
FILL AREA = 0.019

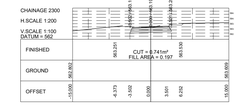
CHAINAGE 2880
H.SCALE 1:200
V.SCALE 1:100
DATUM = 550
FINISHED
GROUND
OFFSET
CUT = 5.768m²
FILL AREA = 0.076

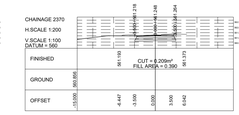
CHAINAGE 2870
H.SCALE 1:200
V.SCALE 1:100
DATUM = 550
FINISHED
GROUND
OFFSET
CUT = 4.386m²
FILL AREA = 0.136

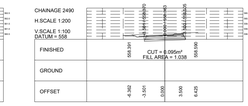

CHAINAGE 1980
H.SCALE 1:200
V.SCALE 1:100
DATUM = 567
FINISHED
GROUND
OFFSET
CUT = 4.022m²
FILL AREA = 0.000

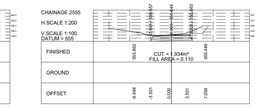

CHAINAGE 2110
H.SCALE 1:200
V.SCALE 1:100
DATUM = 565
FINISHED
GROUND
OFFSET
CUT = 9.292m²
FILL AREA = 0.293


CHAINAGE 2200
H.SCALE 1:200
V.SCALE 1:100
DATUM = 564
FINISHED
GROUND
OFFSET
CUT = 8.034m²
FILL AREA = 1.125


CHAINAGE 2300
H.SCALE 1:200
V.SCALE 1:100
DATUM = 562
FINISHED
GROUND
OFFSET
CUT = 8.747m²
FILL AREA = 0.197


CHAINAGE 2370
H.SCALE 1:200
V.SCALE 1:100
DATUM = 560
FINISHED
GROUND
OFFSET
CUT = 6.209m²
FILL AREA = 0.390


CHAINAGE 2490
H.SCALE 1:200
V.SCALE 1:100
DATUM = 556
FINISHED
GROUND
OFFSET
CUT = 6.099m²
FILL AREA = 1.038


CHAINAGE 2555
H.SCALE 1:200
V.SCALE 1:100
DATUM = 555
FINISHED
GROUND
OFFSET
CUT = 1.934m²
FILL AREA = 5.110

CHAINAGE 2670
H.SCALE 1:200
V.SCALE 1:100
DATUM = 548
FINISHED
GROUND
OFFSET
CUT = 0.000m³
FILL AREA = 2.864

CHAINAGE 2780
H.SCALE 1:200
V.SCALE 1:100
DATUM = 544
FINISHED
GROUND
OFFSET
CUT = 6.092m²
FILL AREA = 3.640

CHAINAGE 2930
H.SCALE 1:200
V.SCALE 1:100
DATUM = 553
FINISHED
GROUND
OFFSET
CUT = 5.063m²
FILL AREA = 0.070

CHAINAGE 2920
H.SCALE 1:200
V.SCALE 1:100
DATUM = 553
FINISHED
GROUND
OFFSET
CUT = 3.345m²
FILL AREA = 0.066

CHAINAGE 2910
H.SCALE 1:200
V.SCALE 1:100
DATUM = 552
FINISHED
GROUND
OFFSET
CUT = 3.740m²
FILL AREA = 0.051

CHAINAGE 2900
H.SCALE 1:200
V.SCALE 1:100
DATUM = 552
FINISHED
GROUND
OFFSET
CUT = 3.207m²
FILL AREA = 0.070

CHAINAGE 2890
H.SCALE 1:200
V.SCALE 1:100
DATUM = 551
FINISHED
GROUND
OFFSET
CUT = 6.003m²
FILL AREA = 0.019

CHAINAGE 1960
H.SCALE 1:200
V.SCALE 1:100
DATUM = 567
FINISHED
GROUND
OFFSET
CUT = 5.543m²
FILL AREA = 0.000

CHAINAGE 2090
H.SCALE 1:200
V.SCALE 1:100
DATUM = 566
FINISHED
GROUND
OFFSET
CUT = 1.000m²
FILL AREA = 0.000

CHAINAGE 2190
H.SCALE 1:200
V.SCALE 1:100
DATUM = 564
FINISHED
GROUND
OFFSET
CUT = 9.233m²
FILL AREA = 0.713

CHAINAGE 2290
H.SCALE 1:200
V.SCALE 1:100
DATUM = 562
FINISHED
GROUND
OFFSET
CUT = 6.690m²
FILL AREA = 0.026

CHAINAGE 2355
H.SCALE 1:200
V.SCALE 1:100
DATUM = 561
FINISHED
GROUND
OFFSET
CUT = 6.725m²
FILL AREA = 0.907

CHAINAGE 2480
H.SCALE 1:200
V.SCALE 1:100
DATUM = 558
FINISHED
GROUND
OFFSET
CUT = 6.000m²
FILL AREA = 1.339

CHAINAGE 2545
H.SCALE 1:200
V.SCALE 1:100
DATUM = 556
FINISHED
GROUND
OFFSET
CUT = 2.640m²
FILL AREA = 5.175

CHAINAGE 2650
H.SCALE 1:200
V.SCALE 1:100
DATUM = 549
FINISHED
GROUND
OFFSET
CUT = 6.225m²
FILL AREA = 1.097

CHAINAGE 2780
H.SCALE 1:200
V.SCALE 1:100
DATUM = 544
FINISHED
GROUND
OFFSET
CUT = 6.092m²
FILL AREA = 3.640

CHAINAGE 2890
H.SCALE 1:200
V.SCALE 1:100
DATUM = 551
FINISHED
GROUND
OFFSET
CUT = 6.003m²
FILL AREA = 0.019

CHAINAGE 1950
H.SCALE 1:200
V.SCALE 1:100
DATUM = 567
FINISHED
GROUND
OFFSET
CUT = 6.048m²
FILL AREA = 0.000

CHAINAGE 2080
H.SCALE 1:200
V.SCALE 1:100
DATUM = 566
FINISHED
GROUND
OFFSET
CUT = 1.989m²
FILL AREA = 0.000

CHAINAGE 2185
H.SCALE 1:200
V.SCALE 1:100
DATUM = 564
FINISHED
GROUND
OFFSET
CUT = 9.029m²
FILL AREA = 1.042

CHAINAGE 2280
H.SCALE 1:200
V.SCALE 1:100
DATUM = 562
FINISHED
GROUND
OFFSET
CUT = 8.692m²
FILL AREA = 0.211

CHAINAGE 2350
H.SCALE 1:200
V.SCALE 1:100
DATUM = 561
FINISHED
GROUND
OFFSET
CUT = 1.136m²
FILL AREA = 0.000

CHAINAGE 2470
H.SCALE 1:200
V.SCALE 1:100
DATUM = 558
FINISHED
GROUND
OFFSET
CUT = 6.014m²
FILL AREA = 1.431

CHAINAGE 2540
H.SCALE 1:200
V.SCALE 1:100
DATUM = 556
FINISHED
GROUND
OFFSET
CUT = 2.102m²
FILL AREA = 5.301

CHAINAGE 2650
H.SCALE 1:200
V.SCALE 1:100
DATUM = 549
FINISHED
GROUND
OFFSET
CUT = 6.225m²
FILL AREA = 1.097

CHAINAGE 2770
H.SCALE 1:200
V.SCALE 1:100
DATUM = 546
FINISHED
GROUND
OFFSET
CUT = 0.000m³
FILL AREA = 1.509

CHAINAGE 2880
H.SCALE 1:200
V.SCALE 1:100
DATUM = 550
FINISHED
GROUND
OFFSET
CUT = 5.768m²
FILL AREA = 0.076

CHAINAGE 1940
H.SCALE 1:200
V.SCALE 1:100
DATUM = 567
FINISHED
GROUND
OFFSET
CUT = 6.214m²
FILL AREA = 0.000

CHAINAGE 2070
H.SCALE 1:200
V.SCALE 1:100
DATUM = 566
FINISHED
GROUND
OFFSET
CUT = 7.364m²
FILL AREA = 0.000

CHAINAGE 2180
H.SCALE 1:200
V.SCALE 1:100
DATUM = 565
FINISHED
GROUND
OFFSET
CUT = 8.020m²
FILL AREA = 0.612

CHAINAGE 2270
H.SCALE 1:200
V.SCALE 1:100
DATUM = 563
FINISHED
GROUND
OFFSET
CUT = 1.139m²
FILL AREA = 0.041

CHAINAGE 2345
H.SCALE 1:200
V.SCALE 1:100
DATUM = 562
FINISHED
GROUND
OFFSET
CUT = 1.338m²
FILL AREA = 0.085

CHAINAGE 2460
H.SCALE 1:200
V.SCALE 1:100
DATUM = 558
FINISHED
GROUND
OFFSET
CUT = 6.094m²
FILL AREA = 0.304

CHAINAGE 2535
H.SCALE 1:200
V.SCALE 1:100
DATUM = 556
FINISHED
GROUND
OFFSET
CUT = 1.154m²
FILL AREA = 0.580

CHAINAGE 2640
H.SCALE 1:200
V.SCALE 1:100
DATUM = 552
FINISHED
GROUND
OFFSET
CUT = 6.495m²
FILL AREA = 0.181

CHAINAGE 2760
H.SCALE 1:200
V.SCALE 1:100
DATUM = 546
FINISHED
GROUND
OFFSET
CUT = 0.000m³
FILL AREA = 1.667

CHAINAGE 2870
H.SCALE 1:200
V.SCALE 1:100
DATUM = 550
FINISHED
GROUND
OFFSET
CUT = 4.386m²
FILL AREA = 0.136

CHAINAGE 1930
H.SCALE 1:200
V.SCALE 1:100
DATUM = 567
FINISHED
GROUND
OFFSET
CUT = 4.855m²
FILL AREA = 0.000

CHAINAGE 2060
H.SCALE 1:200
V.SCALE 1:100
DATUM = 566
FINISHED
GROUND
OFFSET
CUT = 7.285m²
FILL AREA = 0.000

CHAINAGE 2175
H.SCALE 1:200
V.SCALE 1:100
DATUM = 564
FINISHED
GROUND
OFFSET
CUT = 8.054m²
FILL AREA = 0.360

CHAINAGE 2260
H.SCALE 1:200
V.SCALE 1:100
DATUM = 563
FINISHED
GROUND
OFFSET
CUT = 8.715m²
FILL AREA = 0.328

CHAINAGE 2340
H.SCALE 1:200
V.SCALE 1:100
DATUM = 562
FINISHED
GROUND
OFFSET
CUT = 1.069m²
FILL AREA = 0.185

CHAINAGE 2450
H.SCALE 1:200
V.SCALE 1:100
DATUM = 559
FINISHED
GROUND
OFFSET
CUT = 1.652m²
FILL AREA = 0.000

CHAINAGE 2530
H.SCALE 1:200
V.SCALE 1:100
DATUM = 556
FINISHED
GROUND
OFFSET
CUT = 0.250m²
FILL AREA = 1.116

CHAINAGE 2630
H.SCALE 1:200
V.SCALE 1:100
DATUM = 554
FINISHED
GROUND
OFFSET
CUT = 0.857m²
FILL AREA = 0.003

CHAINAGE 2750
H.SCALE 1:200
V.SCALE 1:100
DATUM = 548
FINISHED
GROUND
OFFSET
CUT = 0.000m³
FILL AREA = 2.125

CHAINAGE 2860
H.SCALE 1:200
V.SCALE 1:100
DATUM = 549
FINISHED
GROUND
OFFSET
CUT = 3.106m²
FILL AREA = 0.140

CHAINAGE 1920
H.SCALE 1:200
V.SCALE 1:100
DATUM = 567
FINISHED
GROUND
OFFSET
CUT = 4.055m²
FILL AREA = 0.000

CHAINAGE 2050
H.SCALE 1:200
V.SCALE 1:100
DATUM = 566
FINISHED
GROUND
OFFSET
CUT = 3.741m²
FILL AREA = 0.000

CHAINAGE 2170
H.SCALE 1:200
V.SCALE 1:100
DATUM = 565
FINISHED
GROUND
OFFSET
CUT = 8.418m²
FILL AREA = 0.078

CHAINAGE 2250
H.SCALE 1:200
V.SCALE 1:100
DATUM = 563
FINISHED
GROUND
OFFSET
CUT = 8.212m²
FILL AREA = 0.993

CHAINAGE 2335
H.SCALE 1:200
V.SCALE 1:100
DATUM = 562
FINISHED
GROUND
OFFSET
CUT = 6.586m²
FILL AREA = 0.280

CHAINAGE 2440
H.SCALE 1:200
V.SCALE 1:100
DATUM = 559
FINISHED
GROUND
OFFSET
CUT = 2.051m²
FILL AREA = 0.000

CHAINAGE 2525
H.SCALE 1:200
V.SCALE 1:100
DATUM = 555
FINISHED
GROUND
OFFSET
CUT = 0.063m²
FILL AREA = 1.710

CHAINAGE 2620
H.SCALE 1:200
V.SCALE 1:100
DATUM = 552
FINISHED
GROUND
OFFSET
CUT = 0.660m²
FILL AREA = 0.006

CHAINAGE 2740
H.SCALE 1:200
V.SCALE 1:100
DATUM = 546
FINISHED
GROUND
OFFSET
CUT = 0.000m³
FILL AREA = 2.526

CHAINAGE 2850
H.SCALE 1:200
V.SCALE 1:100
DATUM = 549
FINISHED
GROUND
OFFSET
CUT = 1.512m²
FILL AREA = 0.055

CHAINAGE 1910
H.SCALE 1:200
V.SCALE 1:100
DATUM = 567
FINISHED
GROUND
OFFSET
CUT = 3.223m²
FILL AREA = 0.000

CHAINAGE 2040
H.SCALE 1:200
V.SCALE 1:100
DATUM = 566
FINISHED
GROUND
OFFSET
CUT = 4.184m²
FILL AREA = 0.000

CHAINAGE 2165
H.SCALE 1:200
V.SCALE 1:100
DATUM = 565
FINISHED
GROUND
OFFSET
CUT = 6.486m²
FILL AREA = 0.018

CHAINAGE 2240
H.SCALE 1:200
V.SCALE 1:100
DATUM = 564
FINISHED
GROUND
OFFSET
CUT = 8.000m²
FILL AREA = 2.304

CHAINAGE 2330
H.SCALE 1:200
V.SCALE 1:100
DATUM = 562
FINISHED
GROUND
OFFSET
CUT = 6.447m²
FILL AREA = 0.220

CHAINAGE 2430
H.SCALE 1:200
V.SCALE 1:100
DATUM = 559
FINISHED
GROUND
OFFSET
CUT = 6.644m²
FILL AREA = 0.084

CHAINAGE 2520
H.SCALE 1:200
V.SCALE 1:100
DATUM = 556
FINISHED
GROUND
OFFSET
CUT = 0.005m²
FILL AREA = 1.904

CHAINAGE 2610
H.SCALE 1:200
V.SCALE 1:100
DATUM = 552
FINISHED
GROUND
OFFSET
CUT = 6.245m²
FILL AREA = 0.215

CHAINAGE 2730
H.SCALE 1:200
V.SCALE 1:100
DATUM = 545
FINISHED
GROUND
OFFSET
CUT = 0.000m³
FILL AREA = 4.071

CHAINAGE 2840
H.SCALE 1:200
V.SCALE 1:100
DATUM = 548
FINISHED
GROUND
OFFSET
CUT = 1.983m²
FILL AREA = 0.000

CHAINAGE 1900
H.SCALE 1:200
V.SCALE 1:100
DATUM = 568
FINISHED
GROUND
OFFSET
CUT = 2.165m²
FILL AREA = 0.000

CHAINAGE 2030
H.SCALE 1:200
V.SCALE 1:100
DATUM = 566
FINISHED
GROUND
OFFSET
CUT = 3.996m²
FILL AREA = 0.000

CHAINAGE 2160
H.SCALE 1:200
V.SCALE 1:100
DATUM = 565
FINISHED
GROUND
OFFSET
CUT = 6.610m²
FILL AREA = 0.856

CHAINAGE 2230
H.SCALE 1:200
V.SCALE 1:100
DATUM = 563
FINISHED
GROUND
OFFSET
CUT = 6.393m²
FILL AREA = 0.893

CHAINAGE 2325
H.SCALE 1:200
V.SCALE 1:100
DATUM = 562
FINISHED
GROUND
OFFSET
CUT = 6.232m²
FILL AREA = 0.318

CHAINAGE 2420
H.SCALE 1:200
V.SCALE 1:100
DATUM = 559
FINISHED
GROUND
OFFSET
CUT = 0.000m³
FILL AREA = 0.000

CHAINAGE 2515
H.SCALE 1:200
V.SCALE 1:100
DATUM = 557
FINISHED
GROUND
OFFSET
CUT = 0.107m²
FILL AREA = 1.281

CHAINAGE 2600
H.SCALE 1:200
V.SCALE 1:100
DATUM = 552
FINISHED
GROUND
OFFSET
CUT = 0.000m³
FILL AREA = 1.002

CHAINAGE 2720
H.SCALE 1:200
V.SCALE 1:100
DATUM = 545
FINISHED
GROUND
OFFSET
CUT = 0.000m³
FILL AREA = 5.196

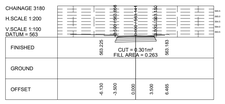
CHAINAGE 2830
H.SCALE 1:200
V.SCALE 1:100
DATUM = 547
FINISHED
GROUND
OFFSET
CUT = 2.441m²
FILL AREA = 0.000

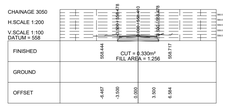
CHAINAGE 1890
H.SCALE 1:200
V.SCALE 1:100
DATUM = 568
FINISHED
GROUND
OFFSET
CUT = 6.780m²
FILL AREA = 0.000

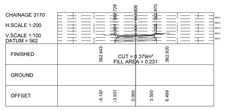
CHAINAGE 2020
H.SCALE 1:200
V.SCALE 1:100
DATUM = 566
FINISHED
GROUND
OFFSET
CUT = 4.852m²
FILL AREA = 0.000

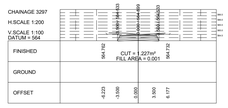
CHAINAGE 2

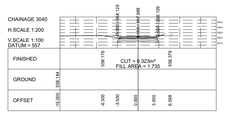


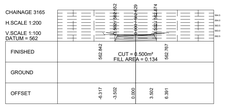


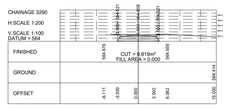


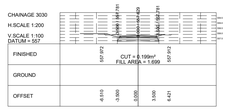


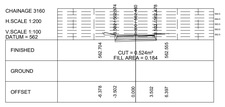


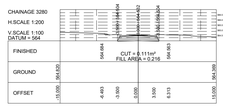


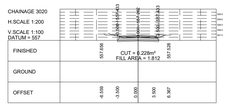


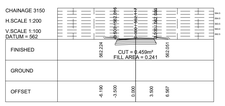


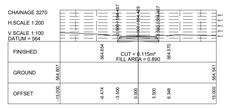


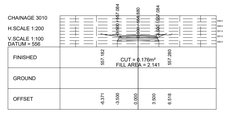


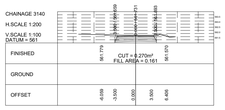


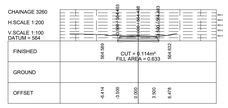


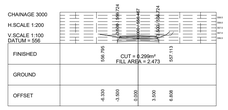


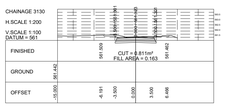


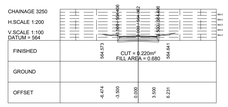


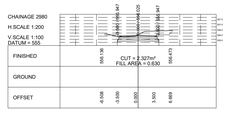


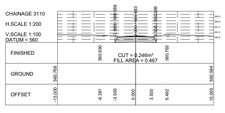


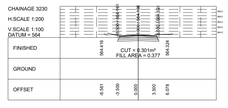


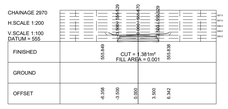


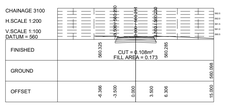


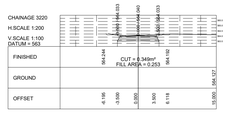


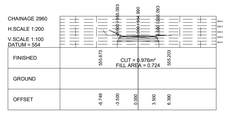


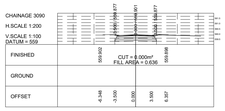


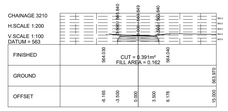


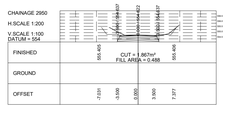


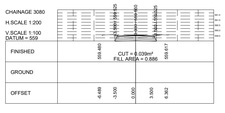


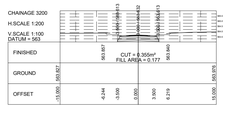


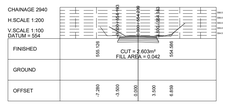


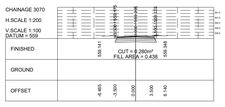


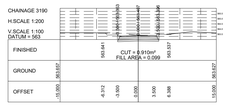






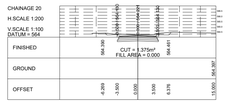


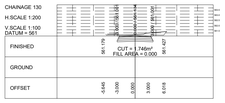


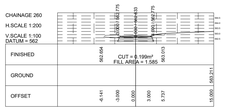


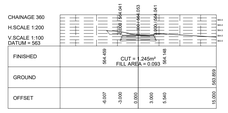
ROAD 1 PART 4

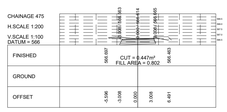
ROAD 1 PART 3 END

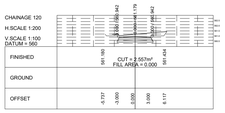

CHAINAGE 20
H.SCALE 1:200
V.SCALE 1:100
DATUM = 564
FINISHED
GROUND
OFFSET
CUT = 1.375m²
FILL AREA = 0.000
564.470
564.470
564.470

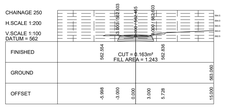


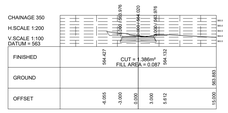




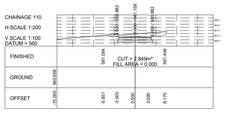


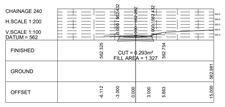


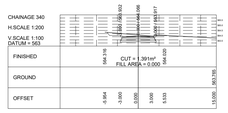


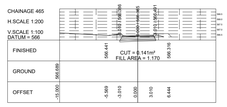


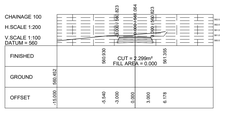


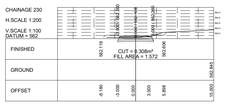


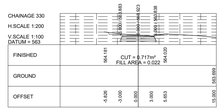


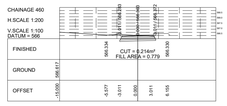


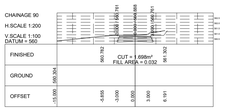


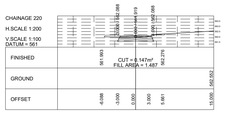


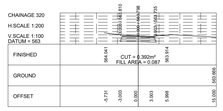


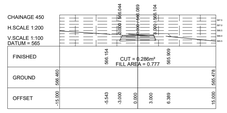


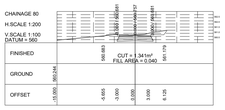




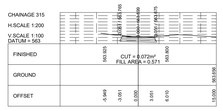


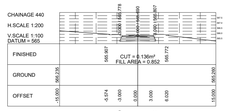


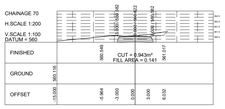


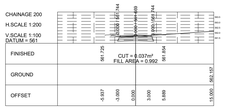


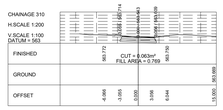


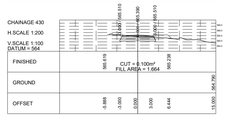


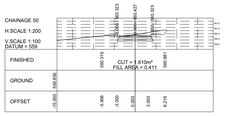


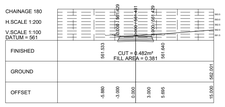


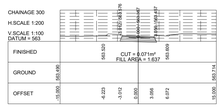




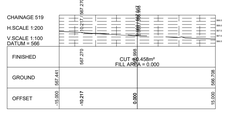




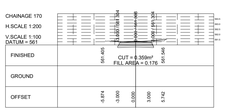


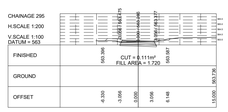


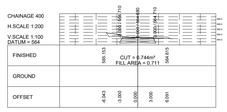


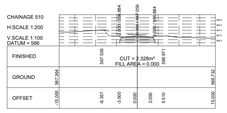


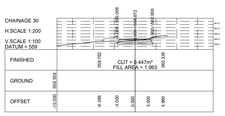


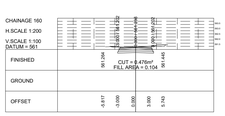












ROAD 1 PART 5

ROAD 1 PART 6

ROAD 1 PART 7

No	DATE	REVISION	CONSULT	DIR
1	28/09/26	ISSUED FOR TENDER		
0	22/08/26	ISSUED FOR INFORMATION		

FOR TENDER

0 0.01 0.02 0.03 0.04 0.05 0.06 0.07 0.08m

SCALE ON REDUCED DRAWING

DESIGNED BY	R. MUPEPE
CHECKED BY	W. MASANGO
DRAWN BY	R. MUPEPE
CHECKED BY	W. MASANGO

THULAMELA LOCAL MUNICIPALITY

THULAMELA LOCAL MUNICIPALITY

PRIVATE BAG X 5066
THOHOYANDOU , 0950

TEL: +27(0) 15 962 7500
FAX: +27(0) 15 962 4020
Email: web@thulamela.gov.za

CONSULTANT

JTMI CONSULTING ENGINEERS
18 HOSPITAL ROAD
ARBOR PARK
TZANEEN
1911

TEL : 082 506 1095
FAX : 086 608 4989
e-mail: office@jtmi.co.za

For: CLIENT APPROVAL

PLM (Full signature) DATE

CONSULTING ENGINEER DATE

RECONSTRUCTION OF ITSANI TO SHAYANDIMA ROAD IN THULAMELA LOCAL MUNICIPALITY

ROAD 1 PART 5, PART 6 AND PART 7 ROSS SECTION DETAILS

PROJECT STATUS

○ CONCEPT DRAWING ● TENDER DRAWING ○ CONSTRUCTION DRAWING ○ AS BUILT DRAWING

JTMI DRAWING NUMBER	REV
TLM-JTMI-CS-007	1

Road List

Road 1 Part 1				
Position	SV	Y-Coord	X-Coord	Radius
PI0	0	61047.64	2545301.31	0.00
BCC1	16.14	61032.93	2545307.95	
PI1	44.23	61005.28	2545320.44	60.00
ECC1	72.31	60998.95	2545350.11	
BCC2	156.82	60981.32	2545432.76	
PI2	158.08	60981.06	2545433.99	100.00
ECC2	159.34	60980.82	2545435.23	
BCC3	301.75	60954.62	2545575.21	
PI3	398.65	60935.83	2545675.52	250.00
ECC3	495.55	60852.21	2545734.04	
BCC4	602.58	60764.51	2545795.40	
PI4	604.48	60762.96	2545796.49	60.00
ECC4	606.37	60761.34	2545797.47	
BCC5	808.07	60589.11	2545902.45	
PI5	836.18	60564.46	2545917.48	100.00
ECC5	864.29	60535.59	2545917.05	
BCC6	1099.51	60300.39	2545913.58	
PI6	1146.40	60251.92	2545912.86	150.00
ECC6	1193.28	60213.04	2545883.92	
BCC7	1285.16	60139.34	2545829.06	
PI7	1303.82	60123.17	2545817.03	40.00
ECC7	1322.49	60103.88	2545822.86	
PI8	1602.48	59835.86	2545903.85	

Road List

Road 1 Part 3				
Position	SV	Y-Coord	X-Coord	Radius
PI0	0	60169.10	2546641.94	0.00
BCC1	37.94	60133.73	2546655.68	
PI1	39.33	60132.44	2546656.18	60.00
ECC1	40.73	60131.11	2546656.62	
BCC2	154.86	60022.93	2546692.97	
PI2	155.26	60022.54	2546693.10	60.00
ECC2	155.67	60022.15	2546693.22	
BCC3	274.67	59908.84	2546729.57	
PI3	309.78	59875.17	2546740.37	240.00
ECC3	344.88	59846.05	2546760.42	
BCC4	580.51	59651.98	2546894.05	
PI4	580.83	59651.71	2546894.24	60.00
ECC4	581.16	59651.45	2546894.42	
BCC5	769.85	59497.20	2547003.11	
PI5	799.53	59472.91	2547020.22	500.00
ECC5	829.20	59450.82	2547040.09	
BCC6	1024.06	59305.95	2547170.40	
PI6	1087.23	59257.70	2547213.79	225.00
ECC6	1150.40	59193.76	2547224.83	
BCC7	1454.65	58893.95	2547276.59	
PI7	1456.04	58892.58	2547276.82	60.00
ECC7	1457.43	58891.22	2547277.12	
BCC8	1680.22	58673.67	2547325.14	
PI8	1710.68	58642.97	2547331.92	100.00
ECC8	1741.13	58613.92	2547319.91	
BCC9	1976.81	58396.11	2547229.89	
PI9	1977.59	58395.39	2547229.59	60.00
ECC9	1978.38	58394.66	2547229.31	
BCC10	2164.50	58220.85	2547162.74	
PI10	2185.50	58200.77	2547155.05	80.00
ECC10	2206.51	58179.54	2547158.46	
BCC11	2224.69	58161.59	2547161.35	
PI11	2228.31	58158.01	2547161.92	60.00
ECC11	2231.93	58154.52	2547162.92	
BCC12	2289.76	58098.95	2547178.91	
PI12	2323.20	58064.12	2547188.92	70.00
ECC12	2356.65	58035.83	2547166.26	
BCC13	2477.45	57941.56	2547090.73	
PI13	2518.11	57907.95	2547063.80	100.00
ECC13	2558.77	57904.42	2547020.89	
BCC14	2915.02	57875.22	2546665.84	
PI14	2915.75	57875.16	2546665.10	60.00
ECC14	2916.49	57875.09	2546664.37	
BCC15	3156.82	57849.51	2546425.40	
PI15	3164.55	57848.69	2546417.70	80.00
ECC15	3172.27	57849.36	2546409.98	
PI16	3297.01	57860.14	2546285.71	

Road List

Road 3				
Position	SV	Y-Coord	X-Coord	Radius
PI0	3.00	59897.42	2545882.11	0.00
PI1	23.24	59890.99	2545862.92	

Road List

Road 1 Part 2				
Position	SV	Y-Coord	X-Coord	Radius
PI0	3.00	59899.17	2545887.85	0.00
BCC1	634.41	60097.02	2546487.46	
PI1	638.47	60098.29	2546491.31	1000.00
ECC1	642.52	60099.53	2546495.18	
PI2	801.30	60148.06	2546646.36	

Road List

Road 1 Part 4				
Position	SV	Y-Coord	X-Coord	Radius
PI0	3.51	57854.78	2546307.03	0.00
BCC1	203.69	57657.61	2546272.44	
PI1	235.10	57625.94	2546266.89	120.00
ECC1	266.51	57601.30	2546246.25	
BCC2	356.37	57532.41	2546188.56	
PI2	371.94	57519.27	2546177.55	30.00
ECC2	387.51	57522.08	2546160.64	
BCC3	405.33	57525.00	2546143.06	
PI3	409.19	57525.63	2546139.23	30.00
ECC3	413.06	57527.22	2546135.68	
PI4	428.79	57533.67	2546121.33	

Road List

Road1 Part 7				
Position	SV	Y-Coord	X-Coord	Radius
PI0	3.70	57844.72	2545895.37	0.00
PI1	84.45	57830.13	2545974.79	

Road List

Road 1 Part 5				
Position	SV	Y-Coord	X-Coord	Radius
PI0	0	57514.84	2546114.84	0.00
BCC1	288.97	57799.11	2546166.80	
PI1	303.68	57826.30	2546171.77	13.00
ECC1	318.38	57812.78	2546147.66	
BCC2	456.76	57745.14	2546026.95	
PI2	467.18	57739.83	2546017.47	30.00
ECC2	477.61	57741.82	2546006.79	
PI3	518.86	57749.37	2545966.23	

Road List

Road 1 Part 6				
Position	SV	Y-Coord	X-Coord	Radius
PI0	0	57729.99	2545959.66	0.00
PI1	124.61	57852.59	2545981.92	

Road Junctions

Road 1 Part 2 - Road1 Part 1				
Position	Z - Coord	Y - Coord	X - Coord	Chainage
i1	585.133	59901.170	2545905.089	20.000
i2	584.911	59898.036	2545895.593	9.998
i3	584.883	59897.649	2545894.418	8.760
i4	584.859	59897.257	2545893.498	7.760
i5	584.819	59896.718	2545892.655	6.759
i6	584.779	59896.047	2545891.914	5.758
i7	584.738	59895.262	2545891.295	4.757
i8	584.713	59891.951	2545896.298	
i9	584.698	59894.385	2545890.814	3.757
i10	584.658	59893.441	2545890.486	2.756
i11	584.618	59892.455	2545890.319	1.755
i12	584.577	59891.455	2545890.319	0.754
i13	584.537	59890.468	2545890.484	-0.247
i14	584.528	59890.215	2545890.555	-0.510
i15	584.421	59886.959	2545891.539	-3.913
i16	584.985	59905.732	2545896.576	13.345
i17	584.962	59905.467	2545895.612	12.345
i18	584.981	59905.299	2545894.626	11.345
i19	585.000	59905.230	2545893.629	10.345
i20	585.019	59905.262	2545892.629	9.345
i21	585.038	59905.393	2545891.638	8.344
i22	585.057	59905.622	2545890.665	7.344
i23	585.076	59905.948	2545889.719	6.344
i24	585.095	59915.228	2545893.443	
i25	585.095	59906.366	2545888.811	5.344
i26	585.115	59906.873	2545887.949	4.344
i27	585.134	59907.463	2545887.142	3.343
i28	585.153	59908.132	2545886.398	2.343
i29	585.172	59908.871	2545885.724	1.343
i30	585.191	59909.673	2545885.128	0.343
i31	585.210	59910.532	2545884.615	-0.657
i32	585.229	59911.437	2545884.190	-1.657
i33	585.261	59912.336	2545883.870	-2.612
i34	585.371	59915.695	2545882.855	-6.123

Road Junctions

Road 1 Part 2 - Road 1 Part 3				
Position	Z-Coord	Y -Coord	X-Coord	Chainage
i1	590.844	60148.082	2546634.979	790.478
i2	590.821	60148.434	2546635.915	791.478
i3	590.835	60148.879	2546636.811	792.478
i4	590.848	60149.411	2546637.658	793.478
i5	590.861	60150.024	2546638.447	794.478
i6	590.874	60150.714	2546639.172	795.478
i7	590.888	60151.472	2546639.823	796.479
i8	590.901	60152.292	2546640.396	797.479
i9	590.914	60153.165	2546640.884	798.479
i10	590.916	60157.603	2546631.923	
i11	590.928	60154.082	2546641.283	799.479
i12	590.941	60155.034	2546641.588	800.479
i13	590.954	60156.012	2546641.796	801.479
i14	590.968	60157.006	2546641.905	802.479
i15	590.981	60158.006	2546641.915	803.479
i16	590.994	60159.002	2546641.825	804.479
i17	591.007	60159.984	2546641.635	805.479
i18	591.021	60160.942	2546641.349	806.479
i19	591.026	60161.224	2546641.245	806.780
i20	591.137	60167.834	2546638.677	813.872
i21	590.768	60142.484	2546640.446	793.972
i22	590.745	60142.730	2546641.415	794.972
i23	590.735	60142.853	2546642.408	795.972
i24	590.724	60142.851	2546643.408	796.972
i25	590.714	60142.724	2546644.400	797.973
i26	590.704	60142.474	2546645.368	798.973
i27	590.693	60142.106	2546646.298	799.973
i28	590.693	60134.867	2546642.891	
i29	590.683	60141.624	2546647.174	800.973
i30	590.673	60141.037	2546647.984	801.973
i31	590.662	60140.353	2546648.713	802.973
i32	590.652	60139.584	2546649.352	803.973
i33	590.642	60138.741	2546649.890	804.973
i34	590.631	60137.838	2546650.319	805.973
i35	590.629	60137.737	2546650.358	806.081
i36	590.509	60130.607	2546653.099	813.721

Road Junctions

Road 1 Part 4 - Road 1 Part 3				
Position	Z-Coord	Y-Coord	X-Coord	Chainage
i1	564.234	57848.631	2546302.397	10.366
i2	564.252	57849.627	2546302.487	9.365
i3	564.280	57850.624	2546302.411	8.365
i4	564.308	57851.595	2546302.170	7.365
i5	564.336	57852.512	2546301.771	6.364
i6	564.363	57849.668	2546296.487	
i7	564.364	57853.350	2546301.225	5.364
i8	564.392	57854.086	2546300.548	4.363
i9	564.420	57854.699	2546299.758	3.363
i10	564.448	57855.172	2546298.877	2.363
i11	564.476	57855.492	2546297.929	1.362
i12	564.482	57855.646	2546297.006	0.426
i13	564.502	57856.047	2546292.379	-4.218
i14	564.046	57837.932	2546307.627	20.000
i15	564.241	57847.782	2546309.355	9.998
i16	564.267	57849.056	2546309.579	8.704
i17	564.284	57850.024	2546309.833	7.704
i18	564.301	57850.935	2546310.244	6.704
i19	564.317	57851.766	2546310.801	5.704
i20	564.334	57852.492	2546311.488	4.703
i21	564.341	57848.020	2546315.488	
i22	564.350	57853.094	2546312.287	3.703
i23	564.366	57853.555	2546313.174	2.703
i24	564.383	57853.863	2546314.126	1.703
i25	564.399	57854.008	2546315.115	0.703
i26	564.396	57853.997	2546316.007	-0.189
i27	564.364	57853.453	2546322.287	-6.493

Road Junctions

Road 1 Part 4 - Road 1 Part 5				
Position	Z-Coord	Y-Coord	X-Coord	Chainage
i1	559.300	57526.028	2546129.888	417.857
i2	559.338	57526.365	2546128.946	418.858
i3	559.359	57526.582	2546127.970	419.858
i4	559.381	57526.676	2546126.974	420.858
i5	559.402	57526.645	2546125.975	421.858
i6	559.423	57526.489	2546124.987	422.858
i7	559.445	57526.212	2546124.026	423.859
i8	559.466	57525.816	2546123.108	424.859
i9	559.470	57518.680	2546126.724	
i10	559.488	57525.309	2546122.246	425.859
i11	559.509	57524.699	2546121.454	426.859
i12	559.530	57523.995	2546120.744	427.860
i13	559.552	57523.207	2546120.128	428.860
i14	559.573	57522.349	2546119.615	429.860
i15	559.594	57521.433	2546119.212	430.860
i16	559.616	57520.475	2546118.928	431.861
i17	559.611	57520.119	2546118.854	432.224
i18	559.526	57514.302	2546117.791	438.137
i19	559.284	57532.342	2546132.924	417.675
i20	559.325	57532.768	2546132.019	418.676
i21	559.362	57533.253	2546131.144	419.676
i22	559.399	57533.795	2546130.304	420.677
i23	559.436	57534.393	2546129.502	421.678
i24	559.473	57535.042	2546128.742	422.678
i25	559.510	57535.740	2546128.026	423.679
i26	559.547	57536.485	2546127.358	424.680
i27	559.583	57537.273	2546126.742	425.680
i28	559.620	57538.099	2546126.180	426.681
i29	559.657	57538.962	2546125.673	427.682
i30	559.661	57546.119	2546138.856	
i31	559.694	57539.856	2546125.226	428.682
i32	559.731	57540.778	2546124.839	429.683
i33	559.768	57541.724	2546124.514	430.684
i34	559.805	57542.689	2546124.253	431.684
i35	559.842	57543.670	2546124.057	432.685
i36	559.879	57544.661	2546123.927	433.686
i37	559.916	57545.659	2546123.863	434.687
i38	559.953	57546.659	2546123.865	435.687
i39	559.990	57547.657	2546123.935	436.688
i40	560.027	57548.648	2546124.070	437.689
i41	560.029	57548.816	2546124.100	437.860
i42	560.100	57553.660	2546124.986	442.785

Road Junctions

Road 3 - Road 1 Part 1				
Position	Z-Coord	Y -Coord	X-Coord	Chainage
i1	584.758	59897.824	2545873.876	10.681
i2	584.757	59898.200	2545874.803	9.681
i3	584.793	59898.688	2545875.675	8.680
i4	584.829	59899.282	2545876.480	7.679
i5	584.866	59899.971	2545877.204	6.679
i6	584.902	59900.746	2545877.837	5.678
i7	584.938	59901.593	2545878.368	4.677
i8	584.944	59905.410	2545871.338	
i9	584.974	59902.500	2545878.790	3.677
i10	585.010	59903.452	2545879.095	2.676
i11	585.046	59904.435	2545879.278	1.676
i12	585.083	59905.434	2545879.338	0.675
i13	585.119	59906.431	2545879.272	-0.326
i14	585.155	59907.413	2545879.083	-1.326
i15	585.165	59907.725	2545878.996	-1.650
i16	585.371	59913.960	2545877.112	-8.167
i17	584.757	59891.928	2545875.166	11.328
i18	584.757	59892.186	2545876.132	10.328
i19	584.733	59892.321	2545877.123	9.328
i20	584.709	59892.331	2545878.123	8.328
i21	584.685	59892.216	2545879.116	7.327
i22	584.661	59891.978	2545880.088	6.327
i23	584.637	59891.621	2545881.022	5.327
i24	584.627	59884.342	2545877.704	
i25	584.613	59891.151	2545881.904	4.326
i26	584.589	59890.574	2545882.721	3.326
i27	584.565	59889.899	2545883.459	2.326
i28	584.541	59889.138	2545884.107	1.326
i29	584.517	59888.301	2545884.656	0.325
i30	584.493	59887.403	2545885.095	-0.675
i31	584.468	59886.656	2545885.362	-1.469
i32	584.421	59885.223	2545885.795	-2.966

Road Junctions

Road 1 Part 5 - Road1 Part 6				
Position	Z-Coord	Y -Coord	X-Coord	Chainage
i1	566.851	57744.944	2545973.593	510.814
i2	566.864	57745.065	2545972.601	511.814
i3	566.848	57745.061	2545971.601	512.814
i4	566.832	57744.933	2545970.609	513.814
i5	566.816	57744.682	2545969.641	514.814
i6	566.800	57744.312	2545968.712	515.814
i7	566.785	57743.830	2545967.836	516.814
i8	566.780	57737.079	2545972.129	
i9	566.769	57743.241	2545967.028	517.814
i10	566.753	57742.557	2545966.299	518.815
i11	566.737	57741.786	2545965.661	519.815
i12	566.721	57740.943	2545965.124	520.815
i13	566.706	57740.039	2545964.697	521.815
i14	566.690	57739.088	2545964.386	522.815
i15	566.670	57738.508	2545964.258	523.410
i16	566.367	57729.453	2545962.614	532.618
i17	566.852	57750.861	2545974.594	510.913
i18	566.865	57751.105	2545973.624	511.913
i19	566.906	57751.468	2545972.693	512.914
i20	566.947	57751.944	2545971.814	513.914
i21	566.987	57752.527	2545971.001	514.915
i22	567.028	57753.206	2545970.267	515.916
i23	567.069	57753.972	2545969.624	516.917
i24	567.080	57758.725	2545976.058	
i25	567.110	57754.812	2545969.081	517.918
i26	567.151	57755.713	2545968.647	518.919
i27	567.192	57756.661	2545968.329	519.919
i28	567.232	57757.641	2545968.132	520.920
i29	567.273	57758.639	2545968.059	521.921
i30	567.314	57759.637	2545968.111	522.922
i31	567.327	57760.154	2545968.187	523.445
i32	567.529	57768.820	2545969.760	532.254

Road List

Road1 Part 7 - Road 2 Part 3				
Position	Z-Coord	Y -Coord	X-Coord	Chainage
i1	570.300	57839.959	2545904.680	13.716
i2	570.323	57840.091	2545903.689	12.715
i3	570.298	57840.122	2545902.689	11.715
i4	570.274	57840.054	2545901.692	10.715
i5	570.249	57839.886	2545900.706	9.714
i6	570.225	57839.621	2545899.741	8.714
i7	570.200	57839.261	2545898.809	7.714
i8	570.176	57838.809	2545897.916	6.714
i9	570.155	57830.124	2545902.873	
i10	570.152	57838.271	2545897.074	5.713
i11	570.127	57837.651	2545896.289	4.713
i12	570.103	57836.956	2545895.570	3.713
i13	570.078	57836.193	2545894.924	2.712
i14	570.054	57835.368	2545894.358	1.712
i15	570.029	57834.492	2545893.877	0.712
i16	570.005	57833.571	2545893.486	-0.289
i17	569.981	57832.617	2545893.188	-1.289
i18	569.945	57831.920	2545893.035	-2.003
i19	569.742	57827.949	2545892.310	-6.045
i20	570.300	57845.866	2545905.734	13.684
i21	570.323	57846.096	2545904.760	12.684
i22	570.387	57846.422	2545903.815	11.682
i23	570.451	57846.840	2545902.907	10.680
i24	570.515	57847.347	2545902.045	9.678
i25	570.578	57847.938	2545901.238	8.676
i26	570.642	57848.606	2545900.494	7.674
i27	570.706	57849.346	2545899.821	6.672
i28	570.760	57855.702	2545907.541	
i29	570.770	57850.149	2545899.225	5.670
i30	570.833	57851.007	2545898.712	4.668
i31	570.897	57851.912	2545898.287	3.666
i32	570.961	57852.855	2545897.955	2.664
i33	571.025	57853.827	2545897.718	1.662
i34	571.089	57854.818	2545897.580	0.660
i35	571.152	57855.817	2545897.542	-0.342
i36	571.216	57856.815	2545897.603	-1.344
i37	571.251	57857.497	2545897.704	-2.035
i38	571.745	57867.319	2545899.496	-12.031

Road Junctions

Road 1 Part 6 - Road1 Part 6				
Position	Z-Coord	Y -Coord	X-Coord	Chainage
i1	568.787	57834.526	2545967.441	76.425
i2	568.762	57834.407	2545968.434	77.425
i3	568.770	57834.413	2545969.434	78.425
i4	568.777	57834.544	2545970.425	79.425
i5	568.785	57834.797	2545971.392	80.425
i6	568.792	57835.169	2545972.321	81.425
i7	568.800	57835.654	2545973.195	82.425
i8	568.802	57842.394	2545968.887	
i9	568.807	57836.244	2545974.002	83.425
i10	568.815	57836.930	2545974.730	84.425
i11	568.822	57837.702	2545975.366	85.425
i12	568.830	57838.547	2545975.901	86.425
i13	568.837	57839.452	2545976.326	87.425
i14	568.845	57840.403	2545976.635	88.425
i15	568.856	57840.966	2545976.758	89.001
i16	568.998	57848.605	2545978.145	96.767
i17	568.786	57828.616	2545966.403	76.473
i18	568.761	57828.374	2545967.374	77.473
i19	568.734	57828.013	2545968.306	78.473
i20	568.707	57827.539	2545969.186	79.474
i21	568.680	57826.958	2545970.001	80.474
i22	568.653	57826.281	2545970.736	81.474
i23	568.625	57825.516	2545971.381	82.475
i24	568.618	57820.748	2545964.957	
i25	568.598	57824.678	2545971.926	83.475
i26	568.571	57823.778	2545972.361	84.475
i27	568.544	57822.830	2545972.682	85.476
i28	568.517	57821.850	2545972.881	86.476
i29	568.490	57820.853	2545972.957	87.477
i30	568.463	57819.855	2545972.907	88.477
i31	568.453	57819.319	2545972.829	89.018
i32	568.449	57819.068	2545972.783	89.274

No	DATE	REVISION	CONSULT	DIR
1	28/09/26	ISSUED FOR TENDER		
0	22/08/26	ISSUED FOR INFORMATION		

FOR TENDER

0 0,01 0,02 0,03 0,04 0,05 0,06 0,07 0,08m

SCALE ON REDUCED DRAWING

DESIGNED BY	R. MUPEPE
CHECKED BY	W. MASANGO
DRAWN BY	R. MUPEPE
CHECKED BY	W. MASANGO

THULAMELA LOCAL MUNICIPALITY

THULAMELA LOCAL MUNICIPALITY
PRIVATE BAG X 5066
THOHOYANDOU , 0950
TEL: +27(0) 15 962 7500
FAX: +27(0) 15 962 4020
Email: web@thulamela.gov.za

CONSULTANT

JTMI CONSULTING ENGINEERS
18 HOSPITAL ROAD
ARBOR PARK
TZANEEN
1911
TEL : 082 506 1095
FAX : 086 608 4989
e-mail: office@jtmi.co.za

For: CLIENT APPROVAL

PLM (Full signature) DATE

CONSULTING ENGINEER DATE

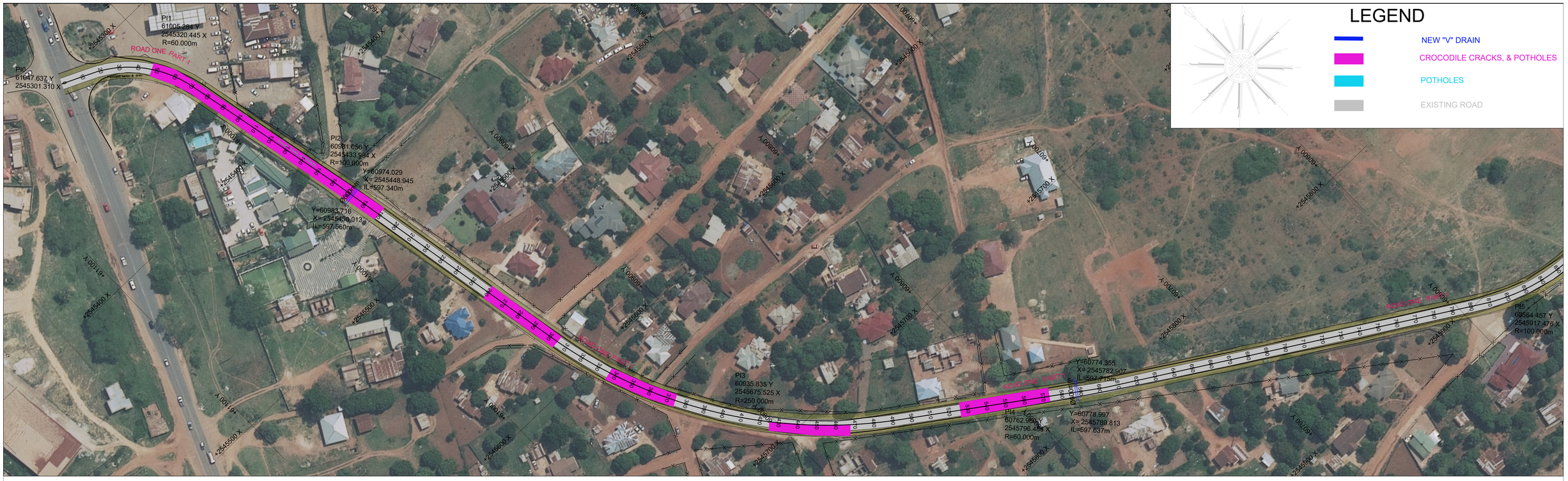
RECONSTRUCTION OF ITSANI TO SHAYANDIMA ROAD IN THULAMELA LOCAL MUNICIPALITY

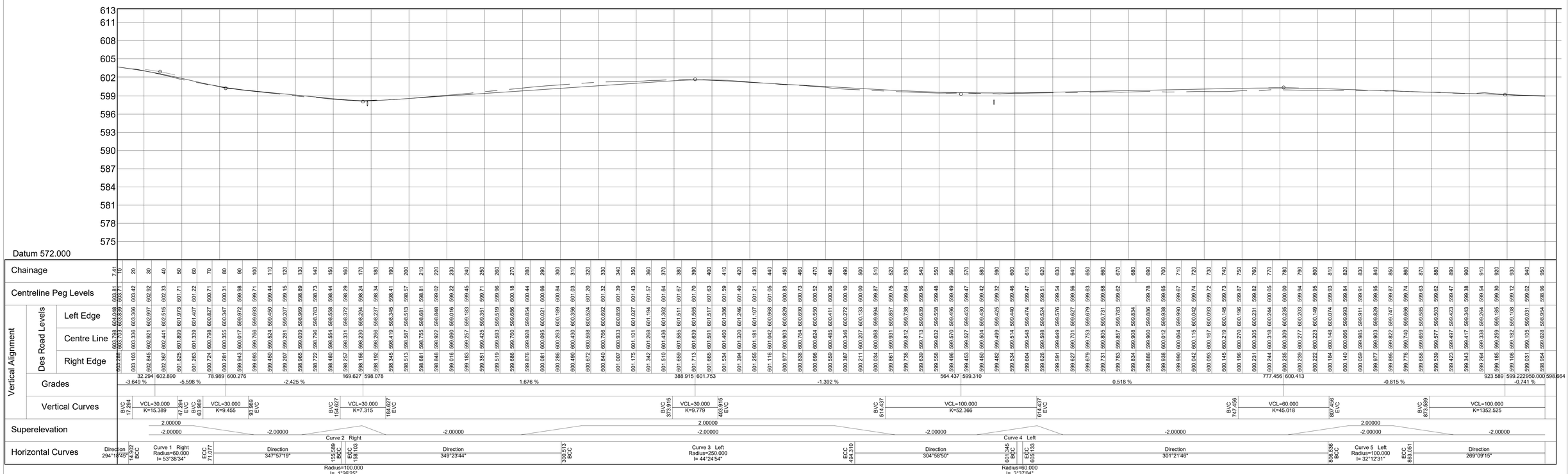
ROAD 1 PART 1 TO PART 7 ROAD DETAILS

PROJECT STATUS

○ CONCEPT DRAWING ● TENDER DRAWING ○ CONSTRUCTION DRAWING ○ AS BUILT DRAWING

JTMI DRAWING NUMBER	REV
TLM-JTMI-RDT-001	1





Longsection for 7 to 950

No	DATE	REVISION	CONSULT	DIR
1	28/09/26	ISSUED FOR TENDER		
0	22/08/26	ISSUED FOR INFORMATION		

FOR TENDER

0 0,01 0,02 0,03 0,04 0,05 0,06 0,07 0,08m

SCALE ON REDUCED DRAWING

DESIGNED BY	R. MUPEPE
CHECKED BY	W. MASANGO
DRAWN BY	R. MUPEPE
CHECKED BY	W. MASANGO

THULAMELA LOCAL MUNICIPALITY

THULAMELA LOCAL MUNICIPALITY
PRIVATE BAG X 5066
THOHOYANDOU , 0950
TEL: +27(0) 15 962 7500
FAX: +27(0) 15 962 4020
Email: web@thulamela.gov.za

CONSULTANT



JTMI CONSULTING ENGINEERS
18 HOSPITAL ROAD
ARBOR PARK
TZANEEN
1911
TEL : 082 506 1095
FAX : 086 608 4989
e-mail: office@jtmi.co.za

For: CLIENT APPROVAL

PLM (Full signature) DATE

CONSULTING ENGINEER DATE

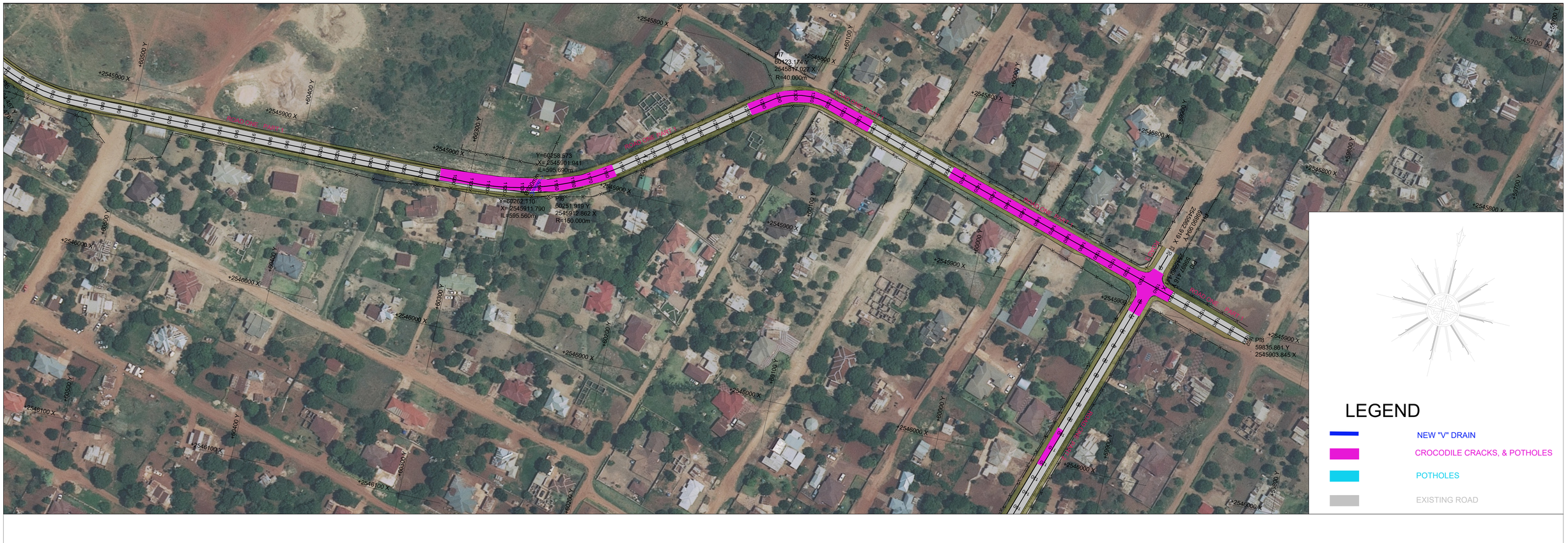
RECONSTRUCTION OF ITSANI TO SHAYANDIMA ROAD IN THULAMELA LOCAL MUNICIPALITY

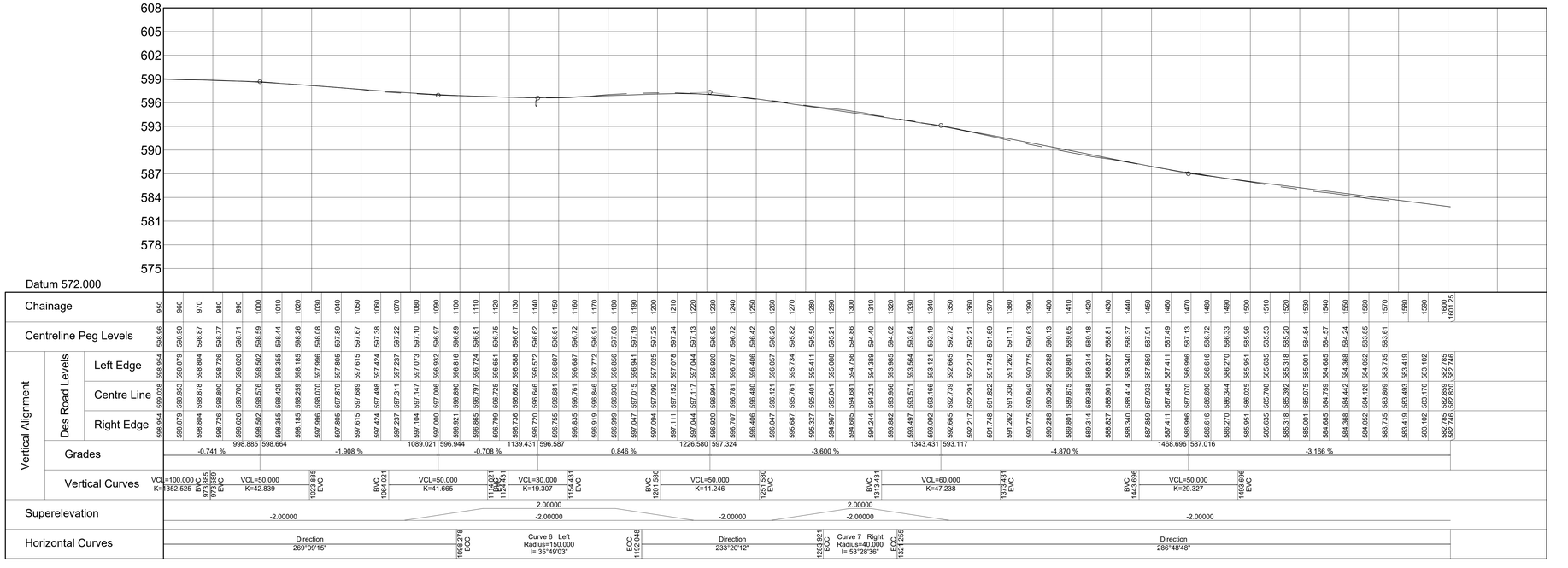
ROAD 1 PART 1
LAYOUT PLAN AND LONG SECTION

PROJECT STATUS

CONCEPT DRAWING	TENDER DRAWING	CONSTRUCTION DRAWING	AS BUILT DRAWING
○	●	○	○

JTMI DRAWING NUMBER	REV
TLM-JTMI-RLP-001	1





Longsection for 950 to 1601

No	DATE	REVISION	CONSULT	DIR
1	28/09/26	ISSUED FOR TENDER		
0	22/08/26	ISSUED FOR INFORMATION		

FOR TENDER

0 0.01 0.02 0.03 0.04 0.05 0.06 0.07 0.08m

SCALE ON REDUCED DRAWING

DESIGNED BY	R. MUPEPE
CHECKED BY	W. MASANGO
DRAWN BY	R. MUPEPE
CHECKED BY	W. MASANGO

THULAMELA LOCAL MUNICIPALITY

THULAMELA LOCAL MUNICIPALITY
PRIVATE BAG X 5066
THOHOYANDOU , 0950
TEL: +27(0) 15 962 7500
FAX: +27(0) 15 962 4020
Email: web@thulamela.gov.za

CONSULTANT

JTMI CONSULTING ENGINEERS
18 HOSPITAL ROAD
ARBOR PARK
TZANEEN
1911
TEL : 082 506 1095
FAX : 086 608 4989
e-mail: office@jtmi.co.za

For: CLIENT APPROVAL

PLM (Full signature) DATE

CONSULTING ENGINEER DATE

RECONSTRUCTION OF ITSANI TO SHAYANDIMA ROAD IN THULAMELA LOCAL MUNICIPALITY

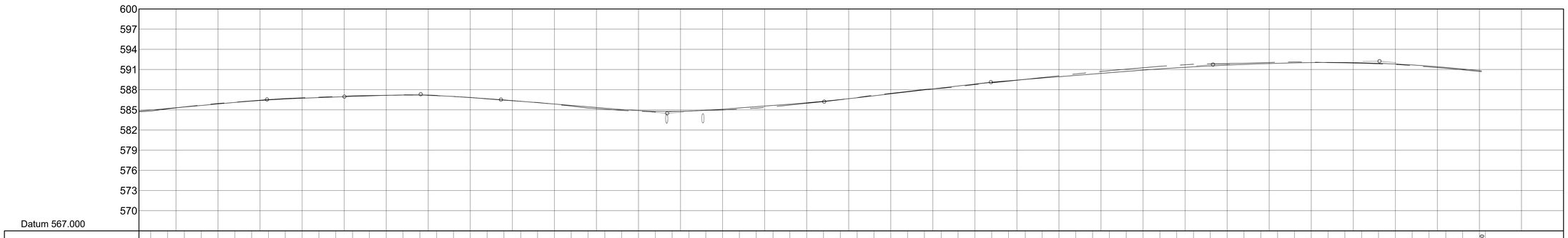
ROAD 1 PART 1
LAYOUT PLAN AND LONG SECTION

PROJECT STATUS

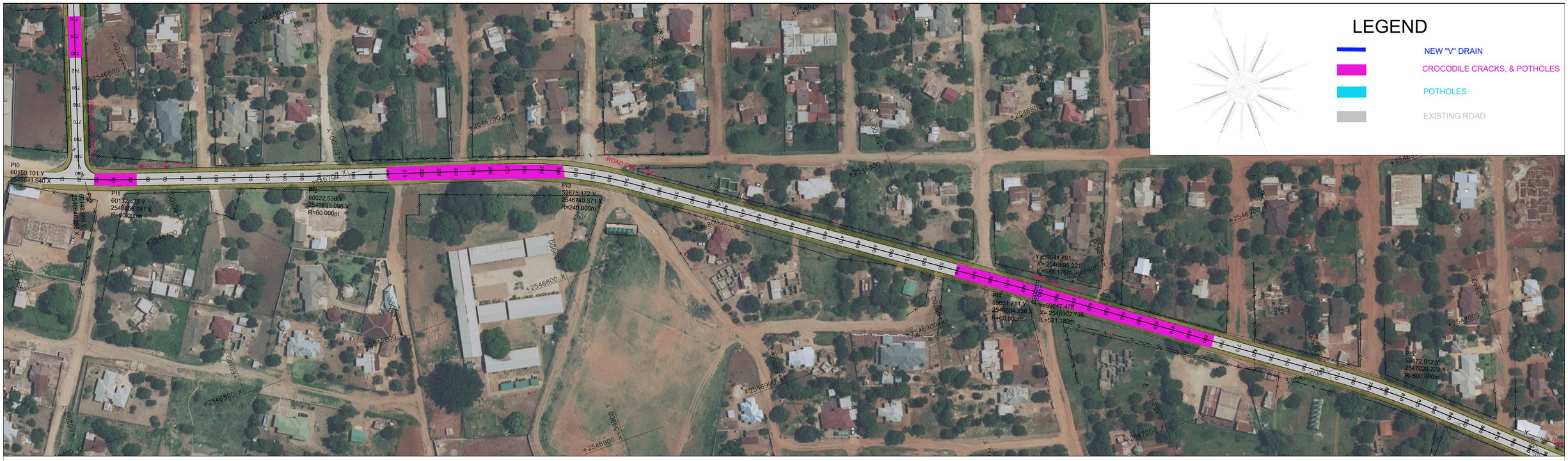
CONCEPT DRAWING | TENDER DRAWING | CONSTRUCTION DRAWING | AS BUILT DRAWING

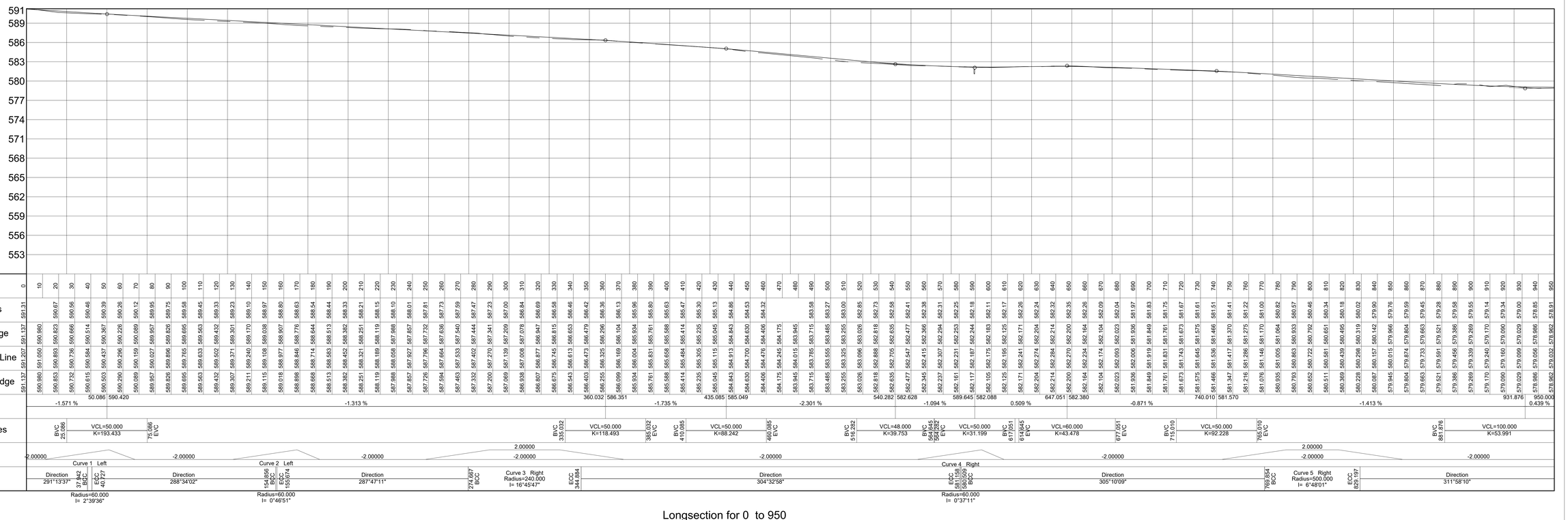
JTMI DRAWING NUMBER	REV
TLM-JTMI-RLP-002	1


ROAD ONE PART 1
ROAD ONE PART 2
ROAD ONE PART 3
PI0
59997.416 Y
2545682.141 X
PI1
60098.289 Y
2546491.313 X
R=1000.000m
PI2
60148.058 X
2546646.358 X
Y=59991.131
X= 2546187.736
IL=582.979m
Y=59997.811
X= 2546208.001
IL=583.025m
Y=60072.905
X= 2546184.227
IL=583.163m
Y=60069.235
X= 2546204.831
IL=583.215m
LEGEND
NEW "V" DRAIN
CROCODILE CRACKS, & POTHOLES
POTHOLES
EXISTING ROAD


600
597
594
591
588
585
582
579
576
573
570
Datum 567.000

| | | |





Longsection for 0 to 950

No	DATE	REVISION	CONSULT	DIR
1	28/09/26	ISSUED FOR TENDER		
0	22/08/26	ISSUED FOR INFORMATION		

FOR TENDER

0 0.01 0.02 0.03 0.04 0.05 0.06 0.07 0.08m

SCALE ON REDUCED DRAWING

DESIGNED BY	R. MUPEPE
CHECKED BY	W. MASANGO
DRAWN BY	R. MUPEPE
CHECKED BY	W. MASANGO

THULAMELA LOCAL MUNICIPALITY

THULAMELA LOCAL MUNICIPALITY
PRIVATE BAG X 5066
THOHOYANDOU , 0950
TEL: +27(0) 15 962 7500
FAX: +27(0) 15 962 4020
Email: web@thulamela.gov.za

CONSULTANT

JTMI CONSULTING ENGINEERS
18 HOSPITAL ROAD
ARBOR PARK
TZANEEN
1911
TEL : 082 506 1095
FAX : 086 608 4989
e-mail: office@jtmi.co.za

For: CLIENT APPROVAL

PLM (Full signature) DATE

CONSULTING ENGINEER DATE

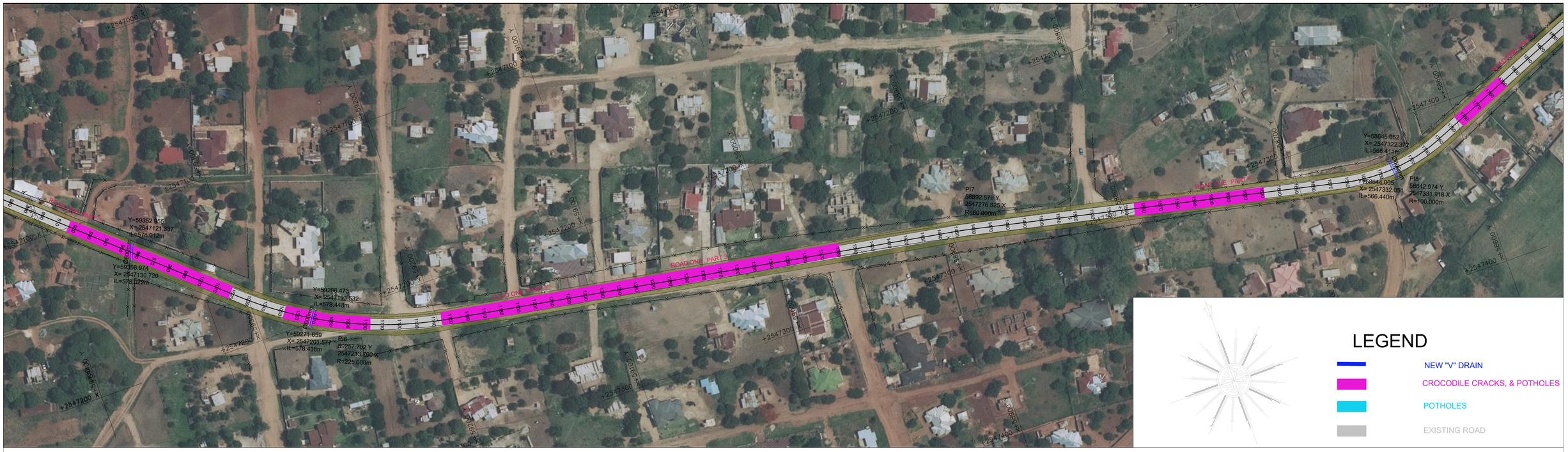
RECONSTRUCTION OF ITSANI TO SHAYANDIMA ROAD IN THULAMELA LOCAL MUNICIPALITY

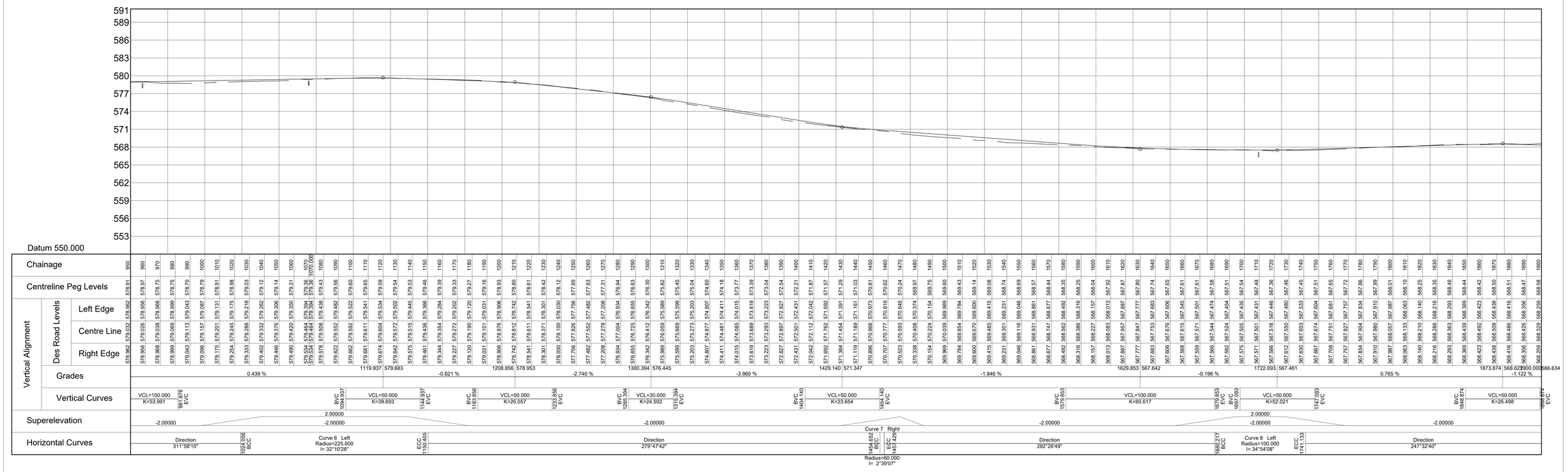
ROAD 1 PART 3
LAYOUT PLAN AND LONG SECTION

PROJECT STATUS

CONCEPT DRAWING | TENDER DRAWING | CONSTRUCTION DRAWING | AS BUILT DRAWING

JTMI DRAWING NUMBER	REV
TLM-JTMI-RLP-004	1





Longsection for 950 to 1900

HORIZONTAL SCALE: 1000
VERTICAL SCALE :250

No	DATE	REVISION	CONSULT	DIR
1	28/09/26	ISSUED FOR TENDER		
0	22/08/26	ISSUED FOR INFORMATION		

FOR TENDER

0 0.01 0.02 0.03 0.04 0.05 0.06 0.07 0.08m

SCALE ON REDUCED DRAWING

DESIGNED BY	R. MUPEPE
CHECKED BY	W. MASANGO
DRAWN BY	R. MUPEPE
CHECKED BY	W. MASANGO

THULAMELA LOCAL MUNICIPALITY

THULAMELA LOCAL MUNICIPALITY
PRIVATE BAG X 5066
THOHOYANDOU , 0950
TEL: +27(0) 15 962 7500
FAX: +27(0) 15 962 4020
Email: web@thulamela.gov.za

CONSULTANT

JTMI CONSULTING ENGINEERS
18 HOSPITAL ROAD
ARBOR PARK
TZANEEN
1911
TEL : 082 506 1095
FAX : 086 608 4989
e-mail: office@jtmi.co.za

For: CLIENT APPROVAL

PLM (Full signature) DATE

CONSULTING ENGINEER DATE

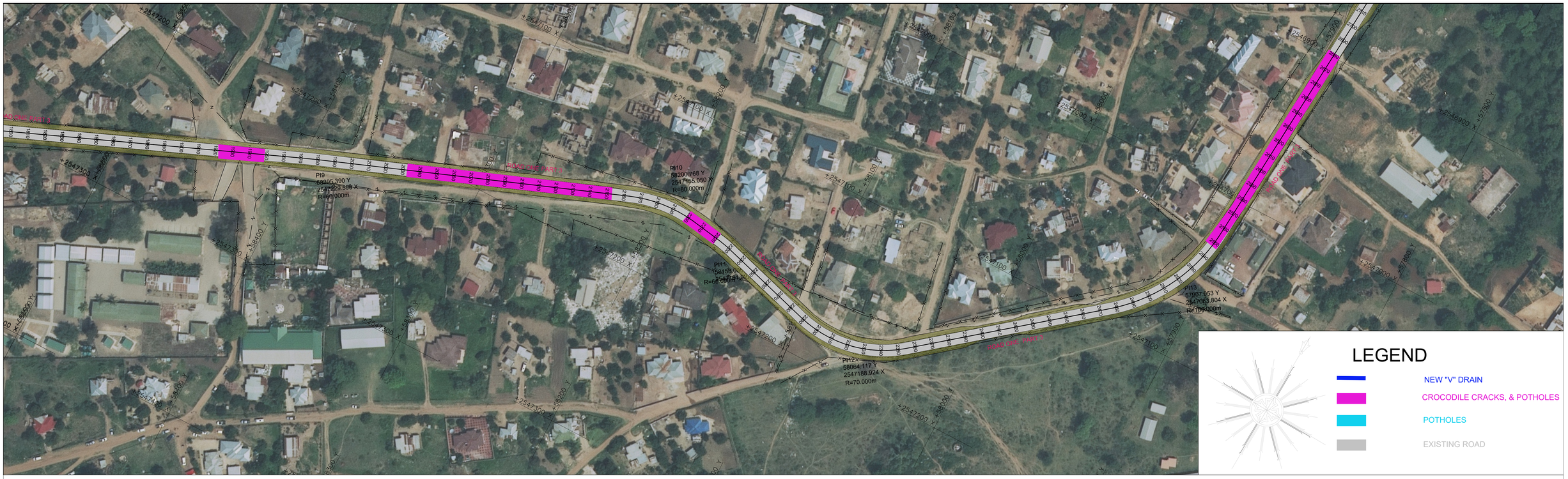
RECONSTRUCTION OF ITSANI TO SHAYANDIMA ROAD IN THULAMELA LOCAL MUNICIPALITY

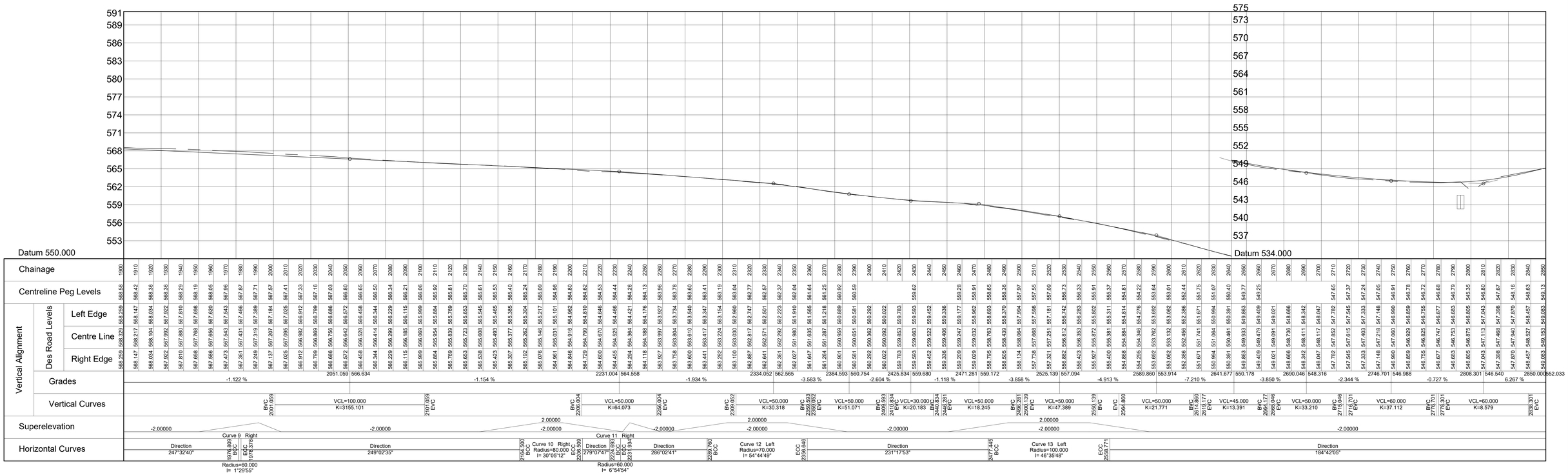
ROAD 1 PART 3
LAYOUT PLAN AND LONG SECTION

PROJECT STATUS

CONCEPT DRAWING | TENDER DRAWING | CONSTRUCTION DRAWING | AS BUILT DRAWING

JTMI DRAWING NUMBER	REV
TLM-JTMI-RLP-005	1





Longsection for 1900 to 2850

No	DATE	REVISION	CONSULT	DIR
1	28/09/26	ISSUED FOR TENDER		
0	22/08/26	ISSUED FOR INFORMATION		

FOR TENDER

0 0,01 0,02 0,03 0,04 0,05 0,06 0,07 0,08m

SCALE ON REDUCED DRAWING

DESIGNED BY	R. MUPEPE
CHECKED BY	W. MASANGO
DRAWN BY	R. MUPEPE
CHECKED BY	W. MASANGO

THULAMELA LOCAL MUNICIPALITY

THULAMELA LOCAL MUNICIPALITY
PRIVATE BAG X 5066
THOHOYANDOU , 0950
TEL: +27(0) 15 962 7500
FAX: +27(0) 15 962 4020
Email: web@thulamela.gov.za

CONSULTANT

JTMI CONSULTING ENGINEERS
18 HOSPITAL ROAD
ARBOR PARK
TZANEEN
1911
TEL : 082 506 1095
FAX : 086 608 4989
e-mail: office@jtmi.co.za

For: CLIENT APPROVAL

PLM (Full signature) DATE

CONSULTING ENGINEER DATE

RECONSTRUCTION OF ITSANI TO SHAYANDIMA ROAD IN THULAMELA LOCAL MUNICIPALITY

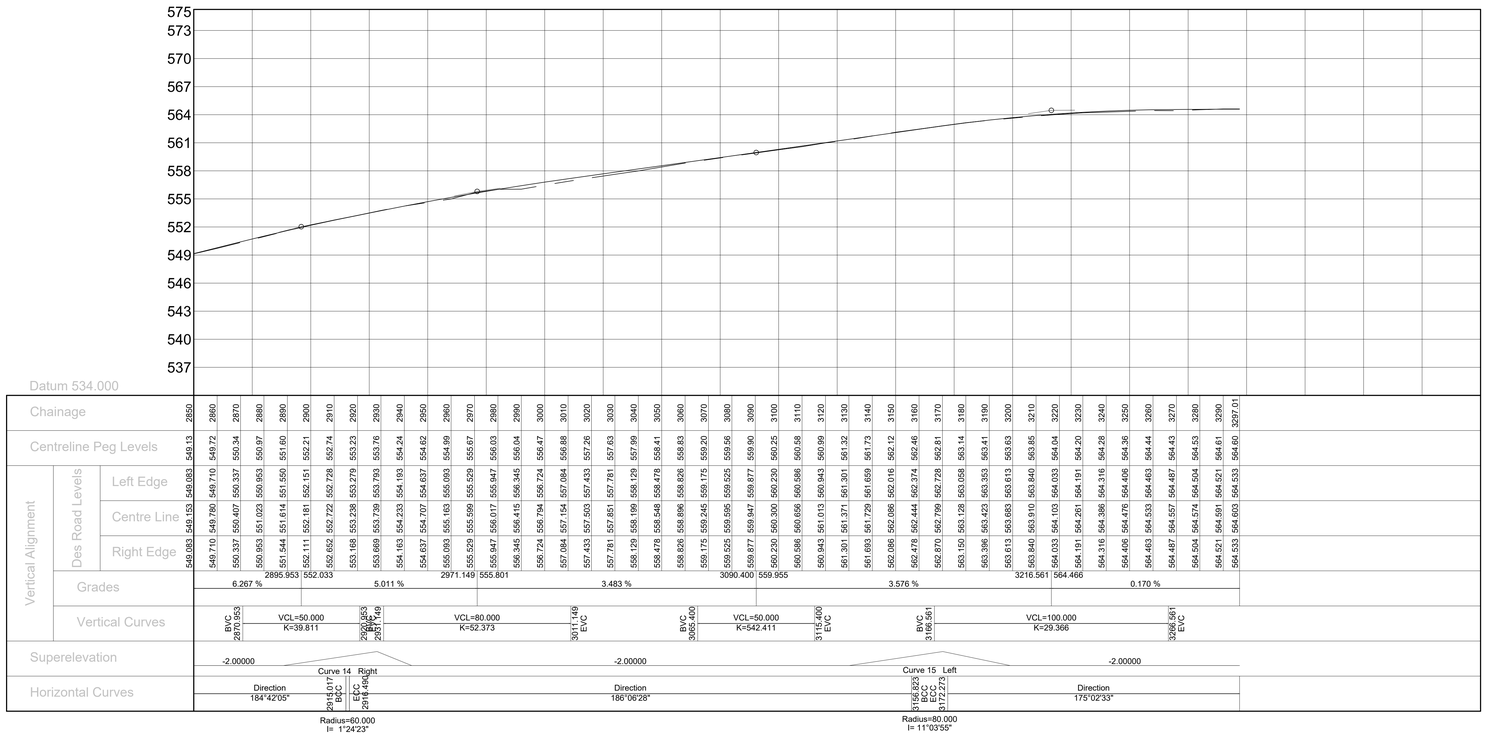
ROAD 1 PART 3
LAYOUT PLAN AND LONG SECTION

PROJECT STATUS

CONCEPT DRAWING | TENDER DRAWING | CONSTRUCTION DRAWING | AS BUILT DRAWING

JTMI DRAWING NUMBER	REV
TLM-JTMI-RLP-006	1





Longsection for 2850 to 2897

No	DATE	REVISION	CONSULT	DIR
1	28/09/26	ISSUED FOR TENDER		
0	22/08/26	ISSUED FOR INFORMATION		

FOR TENDER

0 0,01 0,02 0,03 0,04 0,05 0,06 0,07 0,08m

SCALE ON REDUCED DRAWING

DESIGNED BY	R. MUPEPE
CHECKED BY	W. MASANGO
DRAWN BY	R. MUPEPE
CHECKED BY	W. MASANGO

THULAMELA LOCAL MUNICIPALITY

THULAMELA LOCAL MUNICIPALITY
PRIVATE BAG X 5066
THOHOYANDOU , 0950
TEL: +27(0) 15 962 7500
FAX: +27(0) 15 962 4020
Email: web@thulamela.gov.za

CONSULTANT



JTMI CONSULTING ENGINEERS
18 HOSPITAL ROAD
ARBOR PARK
TZANEEN
1911
TEL : 082 506 1095
FAX : 086 608 4989
e-mail: office@jtmi.co.za

For: CLIENT APPROVAL

PLM (Full signature) DATE

CONSULTING ENGINEER DATE

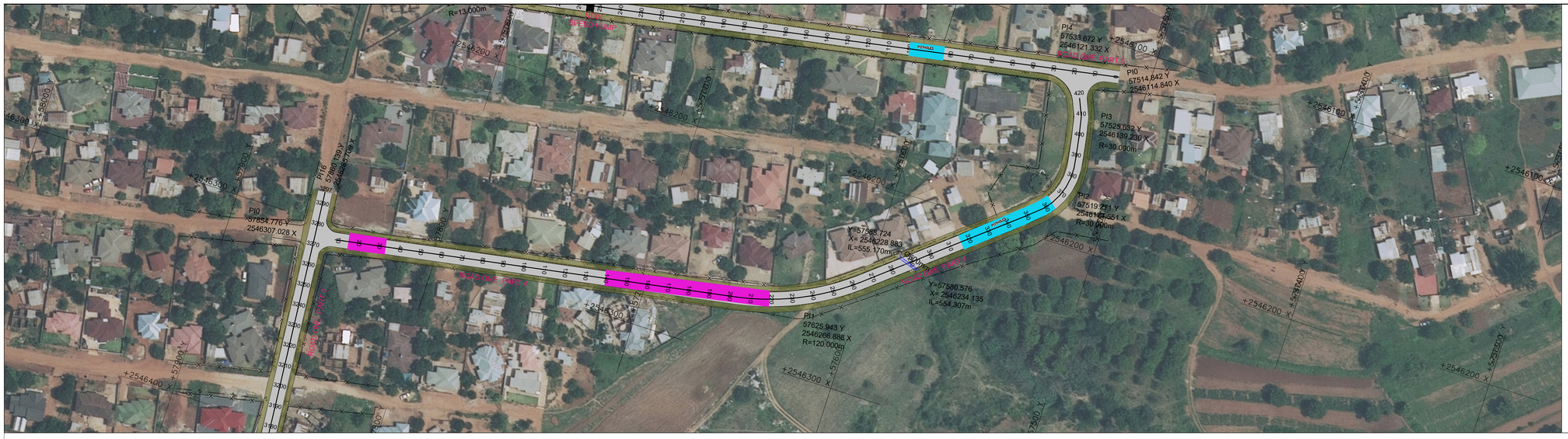
RECONSTRUCTION OF ITSANI TO SHAYANDIMA ROAD IN THULAMELA LOCAL MUNICIPALITY

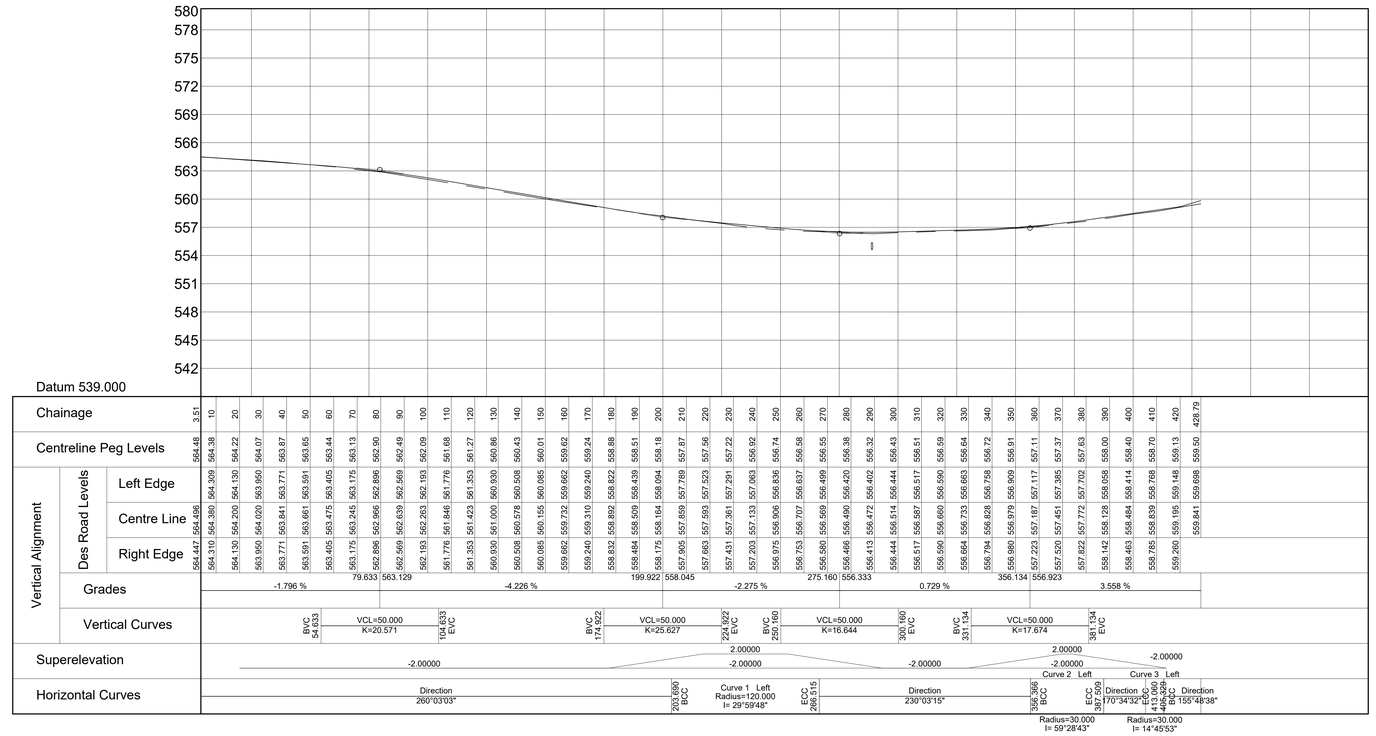
ROAD 1 PART 3
LAYOUT PLAN AND LONG SECTION

PROJECT STATUS

CONCEPT DRAWING | TENDER DRAWING | CONSTRUCTION DRAWING | AS BUILT DRAWING

JTMI DRAWING NUMBER	REV
TLM-JTMI-RLP-007	1





Longsection for 3 to 428

No	DATE	REVISION	CONSULT	DIR
1	28/09/26	ISSUED FOR TENDER		
0	22/08/26	ISSUED FOR INFORMATION		

FOR TENDER

0 0,01 0,02 0,03 0,04 0,05 0,06 0,07 0,08m

SCALE ON REDUCED DRAWING

DESIGNED BY	R. MUPEPE
CHECKED BY	W. MASANGO
DRAWN BY	R. MUPEPE
CHECKED BY	W. MASANGO

THULAMELA LOCAL MUNICIPALITY

THULAMELA LOCAL MUNICIPALITY
PRIVATE BAG X 5066
THOHOYANDOU , 0950

TEL: +27(0) 15 962 7500
FAX: +27(0) 15 962 4020
Email: web@thulamela.gov.za

CONSULTANT

JTMI CONSULTING ENGINEERS
18 HOSPITAL ROAD
ARBOR PARK
TZANEEN
1911

TEL : 082 506 1095
FAX : 086 608 4989
e-mail: office@jtmi.co.za

For: CLIENT APPROVAL

PLM (Full signature) DATE

CONSULTING ENGINEER DATE

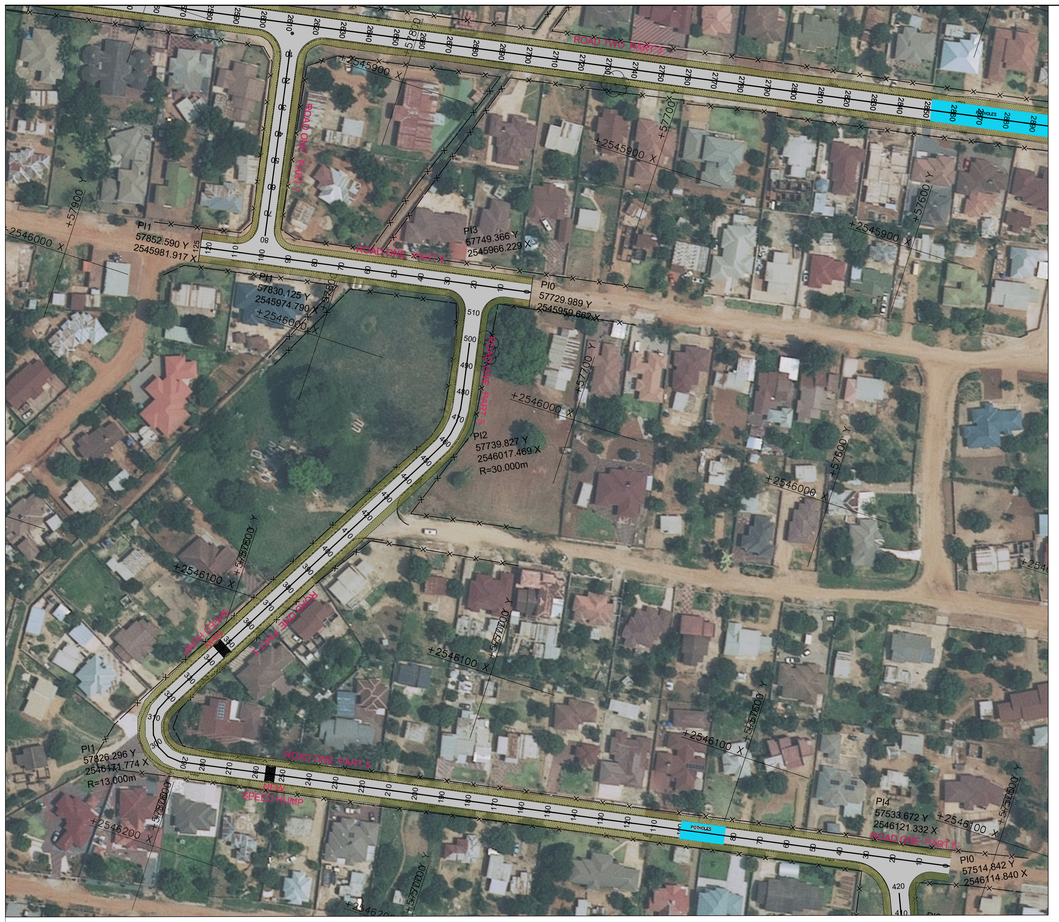
RECONSTRUCTION OF ITSANI TO SHAYANDIMA ROAD IN THULAMELA LOCAL MUNICIPALITY

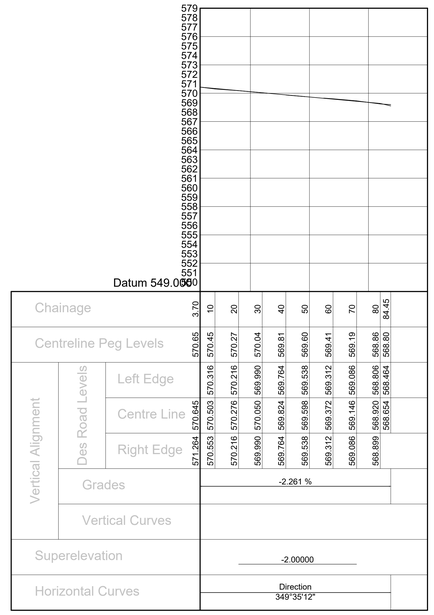
ROAD 1 PART 4
LAYOUT PLAN AND LONG SECTION

PROJECT STATUS

CONCEPT DRAWING	TENDER DRAWING	CONSTRUCTION DRAWING	AS BUILT DRAWING
○	●	○	○

JTMI DRAWING NUMBER	REV
TLM-JTMI-RLP-008	1


ROAD 1 PART 5
ROAD 1 PART 6
ROAD 1 PART 7
PI1
57852.590 Y
2545981.917 X
PI2
57739.827 Y
2546017.469 X
R=30.000m
PI3
57749.366 Y
2545966.229 X
PI4
57533.872 Y
2546121.332 X
PI5
57514.842 Y
2546114.840 X
PI6
57630.125 Y
2545974.790 X
PI7
57729.989 Y
2545990.662 X
PI1
57826.296 Y
2546171.774 X
R=13.000m
PERVIOUS
+2545900 X
+2546000 X
+2546100 X
+2546200 X
+57800 Y
+57700 Y
+57600 Y
+57500 Y
+57400 Y


579
578
577
576
575
574
573
572
571
570
569
568
567
566
565
564
563
562
561
560
559
558
557
556
555
554
553
552
551
550
Datum 549.000

| | | |


ROAD 1 PART 1
ROAD 1 PART 2
ROAD 2 PART 1
ROAD 2 PART 2
ROAD 3 PART 1
ROAD 3 PART 2
ROAD 3 PART 3
ROAD 3 PART 4
ROAD 3 PART 5
ROAD 3 PART 6
ROAD 3 PART 7
ROAD 3 PART 8
ROAD 3 PART 9
ROAD 3 PART 10
ROAD 3 PART


ROAD 2 PART 1
ROAD 2 PART 2
ROAD 2 PART 3
ROAD 2 PART 4
ROAD 2 PART 5
ROAD 2 PART 6
ROAD 2 PART 7
ROAD 2 PART 8
ROAD 2 PART 9
ROAD 2 PART 10
ROAD 2 PART



No	DATE	REVISION	CONSULT	DIR
1	28/09/26	ISSUED FOR TENDER		
0	22/08/26	ISSUED FOR INFORMATION		

FOR TENDER

0 0,01 0,02 0,03 0,04 0,05 0,06 0,07 0,08m

SCALE ON REDUCED DRAWING

DESIGNED BY	R. MUPEPE
CHECKED BY	W. MASANGO
DRAWN BY	R. MUPEPE
CHECKED BY	W. MASANGO

THULAMELA LOCAL MUNICIPALITY

THULAMELA LOCAL MUNICIPALITY
PRIVATE BAG X 5066
THOHOYANDOU , 0950
TEL: +27(0) 15 962 7500
FAX: +27(0) 15 962 4020
Email: web@thulamela.gov.za

CONSULTANT

JTMI CONSULTING ENGINEERS
18 HOSPITAL ROAD
ARBOR PARK
TZANEEN
1911
TEL : 082 506 1095
FAX : 086 608 4989
e-mail: office@jtmi.co.za

For: CLIENT APPROVAL

PLM (Full signature) DATE

CONSULTING ENGINEER DATE

RECONSTRUCTION OF ITSANI TO SHAYANDIMA ROAD IN THULAMELA LOCAL MUNICIPALITY

ROAD 2, PART 3
LAYOUT PLAN AND LONG SECTION

PROJECT STATUS

CONCEPT DRAWING | TENDER DRAWING | CONSTRUCTION DRAWING | AS BUILT DRAWING

JTMI DRAWING NUMBER	REV
TLM-JTMI-RLP-012	1


ROAD ONE PART 1
60
60
60





No	DATE	REVISION	CONSULT	DIR
1	28/09/26	ISSUED FOR TENDER		
0	22/08/26	ISSUED FOR INFORMATION		

FOR TENDER

0 0,01 0,02 0,03 0,04 0,05 0,06 0,07 0,08m

SCALE ON REDUCED DRAWING

DESIGNED BY	R. MUPEPE
CHECKED BY	W. MASANGO
DRAWN BY	R. MUPEPE
CHECKED BY	W. MASANGO

THULAMELA LOCAL MUNICIPALITY

THULAMELA LOCAL MUNICIPALITY

PRIVATE BAG X 5066
THOHOYANDOU , 0950

TEL: +27(0) 15 962 7500
FAX: +27(0) 15 962 4020
Email: web@thulamela.gov.za

CONSULTANT

JTMI CONSULTING ENGINEERS
18 HOSPITAL ROAD
ARBOR PARK
TZANEEN
1911

TEL : 082 506 1095
FAX : 086 608 4989
e-mail: office@jtmi.co.za

For: CLIENT APPROVAL

PLM (Full signature) DATE

CONSULTING ENGINEER DATE

RECONSTRUCTION OF ITSANI TO SHAYANDIMA ROAD IN THULAMELA LOCAL MUNICIPALITY

ROAD 1 PART 2 AND PART 3 ROAD SIGNS AND MARKINGS

PROJECT STATUS

CONCEPT DRAWING | TENDER DRAWING | CONSTRUCTION DRAWING | AS BUILT DRAWING

JTMI DRAWING NUMBER	REV
TLM-JTMI-RM-002	1





No	DATE	REVISION	CONSULT	DIR
1	28/09/26	ISSUED FOR TENDER		
0	22/08/26	ISSUED FOR INFORMATION		

FOR TENDER

0 0.01 0.02 0.03 0.04 0.05 0.06 0.07 0.08m

SCALE ON REDUCED DRAWING

DESIGNED BY	R. MUPEPE
CHECKED BY	W. MASANGO
DRAWN BY	R. MUPEPE
CHECKED BY	W. MASANGO

THULAMELA LOCAL MUNICIPALITY

THULAMELA LOCAL MUNICIPALITY
PRIVATE BAG X 5066
THOHOYANDOU , 0950
TEL: +27(0) 15 962 7500
FAX: +27(0) 15 962 4020
Email: web@thulamela.gov.za

CONSULTANT

JTMI CONSULTING ENGINEERS
18 HOSPITAL ROAD
ARBOR PARK
TZANEEN
1911
TEL : 082 506 1095
FAX : 086 608 4989
e-mail: office@jtmi.co.za

For: CLIENT APPROVAL

PLM (Full signature) DATE

CONSULTING ENGINEER DATE

RECONSTRUCTION OF ITSANI TO SHAYANDIMA ROAD IN THULAMELA LOCAL MUNICIPALITY

ROAD 1 PART 3
ROAD SIGNS AND MARKINGS

PROJECT STATUS

CONCEPT DRAWING | TENDER DRAWING | CONSTRUCTION DRAWING | AS BUILT DRAWING

JTMI DRAWING NUMBER	REV
TLM-JTMI-RM-003	1



No	DATE	REVISION	CONSULT	DIR
1	28/09/26	ISSUED FOR TENDER		
0	22/08/26	ISSUED FOR INFORMATION		

FOR TENDER

0 0.01 0.02 0.03 0.04 0.05 0.06 0.07 0.08m

SCALE ON REDUCED DRAWING

DESIGNED BY	R. MUPEPE
CHECKED BY	W. MASANGO
DRAWN BY	R. MUPEPE
CHECKED BY	W. MASANGO

THULAMELA LOCAL MUNICIPALITY

THULAMELA LOCAL MUNICIPALITY
PRIVATE BAG X 5066
THOHOYANDOU , 0950
TEL: +27(0) 15 962 7500
FAX: +27(0) 15 962 4020
Email: web@thulamela.gov.za

CONSULTANT

JTMI CONSULTING ENGINEERS
18 HOSPITAL ROAD
ARBOR PARK
TZANEEN
1911
TEL : 082 506 1095
FAX : 086 608 4989
e-mail: office@jtmi.co.za

For: CLIENT APPROVAL

PLM (Full signature) DATE

CONSULTING ENGINEER DATE

RECONSTRUCTION OF ITSANI TO SHAYANDIMA ROAD IN THULAMELA LOCAL MUNICIPALITY

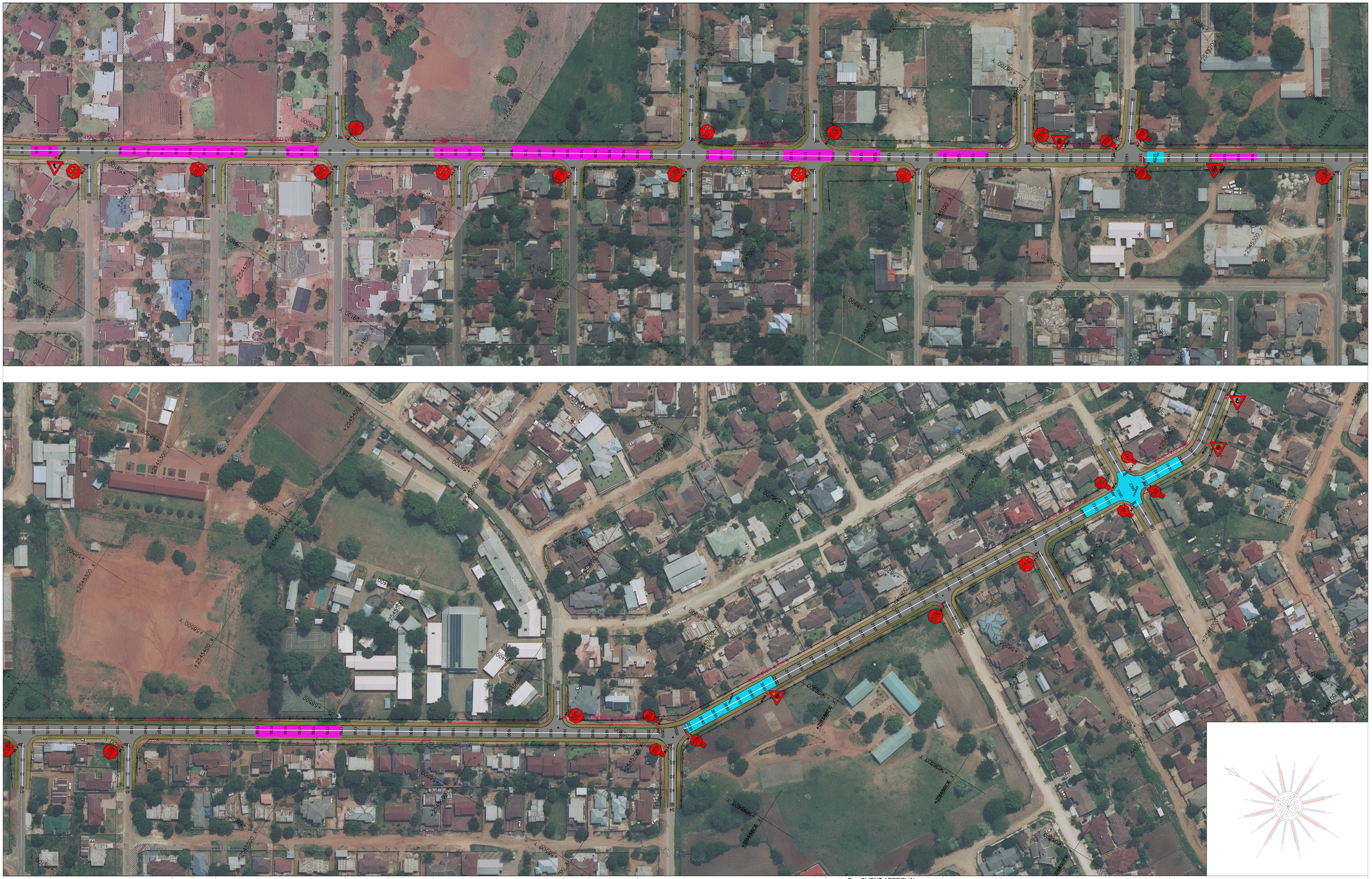
ROAD 1 PART 3, 4, 5, 6 AND 7 ROAD SIGNS AND MARKINGS

PROJECT STATUS

○ CONCEPT DRAWING ● TENDER DRAWING ○ CONSTRUCTION DRAWING ○ AS BUILT DRAWING

JTMI DRAWING NUMBER	REV
TLM-JTMI-RM-004	1


ROAD 1 PART 1 ROAD
ROAD 1 PART 2 ROAD
ROAD 2 PART 1 ROAD
ROAD 2 PART 2 ROAD
ROAD 3 PART 1 ROAD
ROAD 3 PART 2 ROAD
ROAD 3 PART 3 ROAD
ROAD 3 PART 4 ROAD
ROAD 3 PART 5 ROAD
ROAD 3 PART 6 ROAD
ROAD 3 PART 7 ROAD
ROAD 3 PART 8 ROAD
ROAD 3 PART


ROAD 2 PART 3
ROAD 2 PART 3
ROAD 2 PART 3


Xhosa Main Street
Xhosa Main Street
Xhosa Main Street