

TENDER DOCUMENT



MAKHADO LOCAL MUNICIPALITY

CONSTRUCTION OF KUTAMA SINTHUMULE SPORTS FACILITY

BID NO: 36/ 2022

TENDER SHALL HAVE THE CIDB CLASS GRADING OF: 7CE, 7GB or Higher

TENDERER : _____

AMOUNT TENDERED : _____

AMOUNT IN WORDS : _____
: _____

CIDB REGISTRATION NO. : _____

CIDB GRADING : _____

CLOSING DATE : _____

PREPARED FOR:

THE MUNICIPAL MANAGER
CIVIC CENTRE, 83 KROGH STREET
PRIVATE BAG X 2596
MAKHADO
0920
TEL: 015 516 2990
FAX: 015 309 9419



PREPARED BY:

T2 TECH ENGINEERS
P O BOX 233
FAUNA PARK
POLOKWANE
0700
TEL: 015 291 3320
FAX: 015 295 2116



MAKHADO LOCAL MUNICIPALITY
Tender No: 36/2022
Construction of Kutama Sinthumule Sports Facility

THE TENDER

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THE TENDER

PART T1: TENDERING PROCEDURES

PART T2: RETURNABLE DOCUMENTS

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T1.1 TENDER NOTICE

All suitable service providers are hereby invited to bid for the below mentioned project. Bidders are requested to bid as per the specification attached to the bid documents that will be obtainable from 05 July 2022 at non-refundable amount of R600.00 per document at the procurement office No. B043 Ground Floor, 83 Krogh Street, Civic Centre, Makhado Municipality or can be downloaded from e-tender portal for free <https://etenders.treasury.gov.za/content/advertised-tender> or www.makhado.gov.za

BID NO:	DESCRIPTION	SPECIAL REQUIREMENT	TECHNICAL ENQUIRIES	REFERENCE AND NOTICE NO.	CLOSING DATE AND TIME
36/2022	Construction of Kutama Sinhumule Sports Facility	-CIDB Grading 07 CE or higher -Attach three year audited financial statement (only those that are required by the law)	Acting Director Technical Services: Mr. MG Raleshuku or Ms. L Thulare 015 519 3000	File No.8/3/2/1883 Notice No. 83/2022	01 August 2022 at 12H00 pm

Completed bid documents signed by a duly authorized person, sealed in an envelope clearly marked "As mentioned above" must reach the undersigned by depositing it into the tender box at the foyer of the main entrance to the Civic Centre by no later than "As mentioned above" when all tenders received will be opened in public in the Council Chambers, Ground Floor, Civic Centre, No.83 Krogh Street, Makhado.

The Municipality is not bound to accept the lowest or any bid and reserves the right to accept any part of a bid. Bids must remain valid for a period of ninety (90) days after closing date of submission thereof. Submitted tenders will be evaluated 80/20 score points with functionality.

Bids which are late, incomplete, unsigned or submitted in pencil or by telegraph or facsimile or electronically by e-mail, or not having the following documents attached for evaluation or not complying with the tender specifications, will not be evaluated and will be disqualified:

- Valid Tax compliance status pin issued by SARS
- A copy of company registration documents e.g. CK
- Certified copy/copies of company owner(s) ID book(s), not older than three (03) months
- Attach proof of payment for municipal rates not owing for more than three (03) months or formal lease agreement for rental premises or letter from the traditional

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authority in cases of non-rateable areas. (Attach for both entity and directors of company)

- Copy of central supplier database report.

NB:

- **Service provider must submit their certified BBBEE from verification agency accredited by South African National Accreditation System (SANAS) or sworn affidavit.**
- **All Services Provider doing business with Makhado Municipality are required to register on the CSD (Central Supplier Database).**
- **A copy of a certified copy will not be accepted**

ONLY TENDER NO: 36/2022 CONSTRUCTION OF KUTAMASINTHUMULE SPORTS FACILITY: PRE- QUALIFICATION CRITERIA FOR PREFERENTIAL PROCUREMENT WILL BE CONSIDERED.

NOTE ONLY A TENDERER

- Subcontracting a minimum of 30% to an EME or QSE which is at least 51% owned by black people including youth, women, people with disabilities, people living in rural areas or townships, and military veterans.
- A tender that fails to meet pre- qualifying criteria to Ms. P Mudau or Mr. M Ramabulana at tel no. (015) 519 3044/3024

Civic centre
83 Krogh Street
Louis Trichardt

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T1.2 TENDER DATA

The conditions of tender are the Standard Conditions of Tender as contained in Annex F of SANS 294:2004.

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

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

Sub clause	Data
F.1.1	The employer is MAKHADO LOCAL MUNICIPALITY .
F.1.2	<p>The Project Document issued by the employer consists of the following:</p> <p>THE TENDER</p> <p>Part T1: Tendering procedures:</p> <p style="padding-left: 40px;">T1.1 Tender notice and invitation to tender</p> <p style="padding-left: 40px;">T1.2 Tender Data</p> <p>Part T2: Returnable documents</p> <p style="padding-left: 40px;">T2.1 Returnable Schedules required for Tender Evaluation</p> <p style="padding-left: 40px;">T2.2 Other Documents required for Tender Evaluation</p> <p style="padding-left: 40px;">T2.3 Returnable Schedules that will be incorporated into the Contract</p> <p style="padding-left: 40px;">T2.4 Other Schedules and Documents that will be Incorporated into the Contract</p> <p>THE CONTRACT</p> <p>Part C1: Agreements and contract data</p> <p style="padding-left: 40px;">C1.1 Form of Offer and Acceptance</p> <p style="padding-left: 40px;">C1.2 Agreement in Terms of the Occupational Health & Safety Act</p> <p style="padding-left: 40px;">C1.3 Guarantee</p> <p style="padding-left: 40px;">C1.4 Form Agreement in Terms of the Mine Health and Safety Act</p> <p style="padding-left: 40px;">C1.5 Appointment in Terms of Section 4 of the Mine Health and Safety Act</p> <p style="padding-left: 40px;">C1.6 Mine Health and Safety Act No 29</p> <p style="padding-left: 40px;">C1.7 Agreement in Terms of the Mine Health and Safety Act</p> <p style="padding-left: 40px;">C1.8 Contract Data</p> <p>Part C2: Pricing data</p> <p style="padding-left: 40px;">C2.1 Pricing instructions</p> <p style="padding-left: 40px;">C2.2 Bills of quantities</p> <p style="padding-left: 40px;">C2.3 Summary of Bills of Quantities</p>

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Sub clause	Data
	<p>C2.4 Calculation of Tender Sum</p> <p>Part C3: Scope of work</p> <p>C3.1 Description of Works</p> <p>C3.2 Engineering</p> <p>C3.3 Procurement</p> <p>C3.4 Construction</p> <p>C4.5 Management</p> <p>Part C4: Site information</p> <p>C4.1 Site Information</p> <p>C4.2 Locality Plan</p> <p>Part C5: Annexures</p> <p>C5.1 : Proforma Documents</p> <p>C5.2 : Guidelines for the Implementation of Labour Intensive Infrastructure Projects under the Expanded Public Works Programme (EPWP)</p> <p>C5.3 : Contract Drawings</p>
F.1.4	<p>The employer's agent is:</p> <p>Name: T2-Tech Engineers</p> <p>Address: Maweja House, 16A Church Street, Polokwane,0700</p> <p>Tel: 015 291 3320 Fax: 015 295 2116</p> <p>E-mail office@t2tech.co.za / t2ce@mweb.co.za</p>
F.2.1	<p>Only those tenderers who are registered with the CIDB, or can provide proof of having applied for registration, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a 7CE, 7GB or Higher class of construction work, or by a contractor who is registered as a potentially emerging enterprise in terms of these Regulations at a contractor grading designation, one level higher than the contractor's registered grading designation, provided that the client</p> <p>(a) is satisfied that such a contractor has the potential to develop and qualify to be registered in that higher grade; and</p> <p>(b) Ensures that financial, management or other support is provided to that contractor to enable the contractor to successfully execute that contract are eligible to submit tenders.</p> <p>Joint ventures are eligible to submit tenders provided that:</p> <ol style="list-style-type: none"> every member of the joint venture is registered with the CIDB or can provide proof of having registered. the lead partner has a contractor grading designation in the 7CE, 7GB or Higher class of construction work; and <p>The combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a</p>

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Sub clause	Data
	contractor grading designation determined in accordance with the sum tendered for a 7CE, 7GB or Higher class of construction work are eligible to submit tenders.
F.2.12	<p>If tenderer wishes to submit an alternative tender offer, the only criteria permitted for such alternative tender offer is that it demonstrably satisfies the employer's standards and requirements, the details of which may be obtained from the employer's Agent.</p> <p>Calculations, drawings and all other pertinent technical information and characteristics as well as modified or proposed Pricing Data must be submitted with the alternative tender offer to enable the employer to evaluate the efficacy of the alternative and its principal elements, to take a view on the degree to which the alternative complies with the employer's standards and requirements and to evaluate the acceptability of the pricing proposals. Calculations must be set out in a clear and logical sequence and must clearly reflect all design assumptions. Pricing Data must reflect all assumptions in the development of the pricing proposal.</p> <p>Acceptance of an alternative tender offer will mean acceptance in principle of the offer. It will be an obligation of the contract for the tenderer, in the event that the alternative is accepted, to accept full responsibility and liability that the alternative offer complies in all respects with the employer's standards and requirements.</p> <p>The modified Pricing Data must include an amount equal to 5% of the amount tendered for the alternative offer to cover the employer's costs of confirming the acceptability of the detailed design before it is constructed.</p>
F.2.13.5	<p>The employer's address for delivery of tender offers and identification details to be shown on each tender offer package are:</p> <p>Location of tender box: <i>Makhado Local Municipality, 83 Krogh Street</i></p> <p style="text-align: center;"><i>Makhado</i></p> <p>Identification details: <i>Bid Number: Bid No: 36/2022</i></p> <p style="text-align: center;"><i>Project Name: Construction of Kutama Sinthumule Sports Facility</i></p>
F.2.13. & F.3.5	A two-envelope procedure will not be followed.
F.2.15	Closing time for submission of tender offers is: 12:00am on 01 August 2022.
F.2.15	Telephonic, telegraphic, facsimile or e-mailed tender offers will not be accepted.
F.2.16	The tender offer validity period is 90 days .
F.2.17	The tendered lump sums and rates shall be final and binding irrespective of the total tender price (See C2.1.11).

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Sub clause	Data
F.2.18	The tenderer shall, when requested by the Employer to do so, submit the names of all management and supervisory staff that will be employed to supervise the labour-intensive portion of the works together with satisfactory evidence that such staff members satisfy the eligibility requirements.
F.2.23	The tenderer is required to submit with his tenders a Tax Clearance Pin from the South African Revenue Services (“SARS”) certifying that the tenderer’s taxes are in order or that suitable arrangements have been made with SARS.
F.3.4	The time and location for opening of tender offers: 12:00am on 01 August 2022 Location: Makhado Local Municipality
F.3.11	<p>Evaluation of Bid Offers</p> <p>The procedure for evaluation of responsive tenders is the 80/20 preference point system as contained in the preferential procurement point system policy MBD 6.1.</p> <p>The financial offer will be scored using the following:</p> $P_s = 80 \left(1 - \frac{P_t - P_{\min}}{P_{\min}} \right)$ <p>Where: P_s = Points scored for tender under consideration;</p> <p> P_t = Price of tender under consideration; and</p> <p> P_{\min} = Price of lowest acceptable tender.</p> <p>Notice to bidders:</p> <p>CRITERIA USED FOR THE ADJUDICATION OF INFRASTRUCTURE RELATED BIDS</p> <p>First Stage – Compliance with the Administrative Requirements</p> <p>Bidders must comply with the following administrative requirements and non-complying bidders will be considered as non-responsive and will be disqualified for further evaluation.</p> <ul style="list-style-type: none"> ✓ Valid Tax compliance status pin issued by SARS ✓ Confirmation of VAT Registration ✓ Proof of Receipt of payment for tender document (Receipt/ Internet payment) ✓ Rates & Tax Account (Municipal Bill)

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Sub clause	Data																								
	<div><div>✓</div><div>CIDB Grading of 7CE, 7GB or Higher</div></div> <div><div>✓</div><div>Valid Central Supplier Database Report</div></div> <div><div>✓</div><div>Letter of Good standing from Workman's Compensation</div></div> <div><div>✓</div><div>Letter of Good standing from UIF</div></div> <div><div>✓</div><div>Certified ID copies of all members / owners / shareholders / Trustees</div></div> <div><div>✓</div><div>Certified copies of CC or Company registration Certificate</div></div> <div><div>✓</div><div>Certified copy of 3yrs Audited Financial Statements of company</div></div> <div><div>✓</div><div>All other documents as indicated in the General Conditions Document</div></div> <div><div>✓</div><div>All pages must be initialled including drawings</div></div>																								
	<div><div>Functionality Evaluation Criteria</div><div>The work is described as a Civil Engineering works and requires a grading of 7CE, 7GB or Higher.</div><div>Table 1: Company's reputation & references: Civil engineering works experience</div><table><tr><th>No.</th><th>Target Goals: List reference with details (Civil engineering works)</th><th>Maximum Points (40)</th><th>Points Claimed</th></tr><tr><td>1.</td><td>R0,00 to R1m</td><td>10</td><td></td></tr><tr><td>2.</td><td>R1,1m to R2m</td><td>20</td><td></td></tr><tr><td>3.</td><td>R2,1m to R3m</td><td>30</td><td></td></tr><tr><td>4.</td><td>More than R3m</td><td>40</td><td></td></tr><tr><td></td><td>TOTAL</td><td>100</td><td></td></tr></table><div>NB: Please attach 4 appointment letters & completion Certificates.</div></div>	No.	Target Goals: List reference with details (Civil engineering works)	Maximum Points (40)	Points Claimed	1.	R0,00 to R1m	10		2.	R1,1m to R2m	20		3.	R2,1m to R3m	30		4.	More than R3m	40			TOTAL	100	
No.	Target Goals: List reference with details (Civil engineering works)	Maximum Points (40)	Points Claimed																						
1.	R0,00 to R1m	10																							
2.	R1,1m to R2m	20																							
3.	R2,1m to R3m	30																							
4.	More than R3m	40																							
	TOTAL	100																							

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Sub clause	Data			
	Table 2: Personnel knowledge & Experience			
	No.	Target Goas	Maximum Points (30)	Points Claimed
	1.	N6 Certificate in Civil engineering/ building	3	
	2.	National diploma: civil engineering/building + 1 to 5 yrs. experience in civil engineering/ building works/structures	5	
	3.	National diploma: civil engineering/building with more than 5 yrs. experience in civil engineering/building works	10	
	4.	Register with ECSA as a: Professional technician/Technologist/Engineer	12	
		TOTAL	30	
	NB: Please attach the employment structure with CV's & copies of qualifications.			
	Table 3: Financial status			
			Points (20 Points)	Points Claimed
		Bank rating less than C	4	
		Bank rating C or higher	12	
		Registered financial institution's full details as a guarantor in the amount of 10%as a specification for surety purpose (evaluation committee must verify)	4	
			20	
	NB: attached Bank letter must for this project with the name of the project & tender number.			

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Sub clause	Data			
	Table 4: Plant & Equipment			
	No.	Target Goals	Maximum Points (10)	Points Claimed
	1.	1 x Steel Compactor	2	
	2.	1 x 20 ton excavator	2	
	3.	1 x water cart	2	
	4.	2 x Tipper truck	2	
	5.	1 x Motor Grader	2	
		TOTAL	10	
	NB: Proof of ownership of plant must be submitted with tender. If plant will be hired, a letter from the plant hire company confirming availability is required and 50% of maximum points will be allocated to plant hiring with proof.			
	Table 5: Summary of 1 to 4			
	TARGET GOALS DESCRIPTION	MAXIMUM POINTS TO BE ALLOCATED		POINTS CLAIMED
	Table 1: Company's reputation & reference	40		
	Table 2: Personnel knowledge & experience	30		
	Table 3: Financial Status	20		
	Table 4: Plant & Equipment	10		
	100			
NB: Bidder that scores less than 70 points (60%) threshold on functionality will be regarded as non-responsive to this bid.				

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Sub clause	Data
F3.13.1	<p>Tender offers will only be accepted on condition that:</p> <ul style="list-style-type: none"> a) the tenderer is registered with the Construction Industry Development Board in an appropriate contractor grading designation. b) the tenderer or any of its directors is not listed in 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; and c) the tenderer has not over the last five years failed to satisfactorily perform a contract for the employer and has been issued with a written notice to this effect.
F.3.18	<p>The number of paper copies of signed contract to be provided by the Engineer is Three (3).</p>
	<p>Labour Content:</p> <p>The minimum Labour content for this project shall be 35%</p>
	<p>Eligibility requirements</p> <p>A contract will only be entered into with a tenderer who has in his employ management and supervisory staff satisfying the requirements of the scope of work for labour intensive competencies for supervisory and management staff.</p>
	<p>Tender Qualification: Labour Intensive Contracts</p> <p>To qualify for award of the Contract, tenderers shall meet the following minimum qualifying criteria:</p> <ul style="list-style-type: none"> (a) Having participated in and graduated with fully satisfactory results from the relevant national qualification framework training organized under EPWP (or other similar project) and applying trained supervisory staff on a full-time basis for the execution of the works. (b) Liquid assets/or credit facilities covering the expected expenditures for two full work months; (c) Proposals for timely acquisition (own, lease, hire, etc.) of the essential minimum equipment; (d) The contractor will carry out the works using labour based work methods as described in the Special Conditions of Contract.

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PART T2: RETURNABLE DOCUMENTS

The tenderer must complete the following returnable documents:

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T2.1 RETURNABLE SCHEDULES FOR TENDER EVALUATION

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T2.1 A CERTIFICATE OF AUTHORITY

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

A Company	B Partnership	C Joint Venture	D Sole Proprietor	E Close Corporation

A. Certificate for company

I,....., chairperson of the board of directors of hereby confirm that by resolution of the board (copy attached) taken on20...., Mr/Mrs.....acting in the capacity of.....,was authorised to sign all documents in connection with this tender and any contract resulting from it on behalf of the company.

As witness

1.....
.....
Chairman

2.....
.....
Date

B. Certificate of partnership

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

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

NAME	ADDRESS	SIGNATURE	DATE

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

C. Certificate for Joint Venture

We, the undersigned, are submitting this tender offer in Joint Venture and hereby authorise Mr/Mrs....., authorised signatory of the company,

Acting in the capacity of lead partner, to sign all documents in connection with the tender offer for Contract.....and any other 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 & CAPACITY
Lead partner		

D. Certificate for sole proprietor

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

As Witness:

1.....
Signature: Sole owner

2.....
Date

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E. Certificate for Close Corporation

We, the undersigned, being the key members in the business trading as.....hereby authorise Mr/Mrs.....

Acting in the capacity of....., to sign all documents in connection with the tender for Contract.....and any contract resulting from it on our behalf.

NAME	ADDRESS	SIGNATURE	DATE

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

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T2.1 B CERTIFICATE OF ATTENDANCE AT CLARIFICATION MEETING

This is to certify that

..... (Tenderer)

of

.....(address)

.....

Was represented by the person(s) named below at the compulsory meeting held for all tenderers at
..... (Location) on..... (Date), starting
at.....

We acknowledge that the purpose of the meeting was to acquaint ourselves with the site of the works and / or matters incidental to doing the work specified in the tender documents in order for us to take account of everything necessary when compiling our rates and prices included in the tender.

Particulars of person(s) attending the meeting:

Name Signature.....

Capacity.....

Name..... Signature.....

Capacity.....

Attendance of the above persons at the meeting is confirmed by the employer's representative/
engineer, namely:

Name..... Signature.....

Capacity..... Date & Time.....

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T2.1 C SCHEDULE OF PROPOSED SUBCONTRACTORS

We notify you that it is our intention to employ the following subcontractors 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 name of proposed subcontractors in accordance with requirements in the contract for such appointments. If there are no such requirements in the contract, then your written acceptance of this list shall be binding between us.

	Name and address of proposed Subcontractor	Company Registration Number & CIDB Classification	Description of Work to be executed by Subcontractor
1.			
2.			
3.			
4.			
5.			

Signed.....

Date.....

Name.....

Position.....

Tenderer.....

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T2.1 D SCHEDULE OF PLANT AND EQUIPMENT

The following are lists of major items of relevant equipment that I/we presently own or lease and will have available for this contract or will acquire or hire for this contract is my/our tender is accepted.

(a) Details of major equipment that is owned by and immediately available for this contract.

Quantity	Description, size, capacity, etc.

Attach additional pages if more space is required.

(b) Details of major equipment that will be hired, or acquired for this contract if my/our tender is acceptable

Quantity	Description, size, capacity, etc.

Attach additional pages if more space is required

Signed..... Date.....

Name..... Position.....

Tenderer.....

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T2.1 E SCHEDULE OF THE TENDERER'S EXPERIENCE

The following is a statement of similar work successfully executed by myself/ourselves in the last three years:

Employer, contact person and telephone number	Description of contract	Value of work Inclusive of VAT (Rand)	CIDB Classification	Date Completed

Signed..... Date

Name..... Position.....

Tenderer.....

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T2.1 F RECORD OF ADDENDA TO TENDER DOCUMENTS

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

No.	Date	Title of Details
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Attach additional pages if more space is required.

Signed..... Date

Name..... Position.....

Tenderer.....

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T2.1 G DEVIATIONS OR QUALIFICATIONS BY THE TENDERER

Note: Tenderers will be declared to be non-responsive should any proposed deviation or qualification, save for where alternative tender offers are permitted in terms of the Tender Data, in the employer's opinion:

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

PAGE	DESCRIPTION

SIGNED ON BEHALF OF TENDERER:

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T2.1 H CONTRACTOR'S ESTABLISHMENT ON SITE

Should the combined, extended total tendered for the following Item:

- (a) Fixed obligations
- (b) Value-related obligations
- (c) Time-related obligations

Exceed a maximum of 15 % of the tender sum (excluding VAT), the tenderer shall clearly set out his reasons for tendering in this manner in a letter attached to this page.

Total tendered for the above-mentioned items expressed as a percentage of the tender sum (excluding VAT):% (insert percentage).

ESTABLISHMENT OVER AND ABOVE OF THE ABOVE-MENTIONED ITEMS		
ITEM	PORTION OF RATE OR SUM (R)	VALUE (RANDS)
TOTAL VALUE		

SIGNED ON BEHALF OF TENDERER:

Note to Tenderer:

If the tenderer should require additional compensation for his obligations under section 1300 (over and above the total tendered for item 13.01) by including such additional compensation in the tendered rates and/or lump sum of items in the bill of quantities, these items and the value of such additional compensation shall also be set out in a letter attached to this form.

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T2.1 I CERTIFICATE OF NON-COLLUSIVE TENDER

1 IN THE CASE OF A SINGLE CONSTRUCTION CONCERN:

I/We certify that this is a bona fide tender.

I/We also certify that I/We have not done, and I/We undertake not to do any of the following at any time before the hour and date specified for the closure of submission of tenders for this contract.

- a) Fix or adjust the amount of this tender by or under or in accordance with any agreement or arrangement with any other person;
- b) communicate to a person other than the person calling for these tenders the amount or approximate amount of the proposed tender, except when the confidential disclosure of the approximate amount of the tender is necessary to obtain the insurance-premium quotations required for preparation of the tender;
- c) Cause or induce any other person to communicate to me/us the amount or approximate amount of any rival tender for this contract;
- d) enter into any agreement or arrangement with any other person to induce him to refrain from tendering for this contract, or to influence the amount of any tender or the conditions of any tender to be submitted, nor cause or induce any other person to enter into any such agreement or arrangement;
- e) offer or pay or give or agree to pay or to give any sum of money or valuable consideration directly or indirectly to any person for doing or having done or causing or having caused to be done in relation to any tender or proposed tender for this contract, any action similar to those described above.

In this certificate the term "person" includes any persons, body of persons or association, whether corporate or not, and the term "agreement or arrangement" includes any agreement or arrangement, whether formal or informal and whether legally binding or not.

SIGNED ON BEHALF OF TENDERER:

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I: CERTIFICATE OF NON-COLLUSIVE TENDER (continued)

2 IN THE CASE OF A CONSORTIUM OF CONSTRUCTION CONCERNS:

We certify that this is a bona fide tender.

We also certify that we have not done and we undertake not to do any of the following at any time before the hour and date specified for the closure of submission of tenders for this contract:

- a) Fix or adjust the amount of this tender by or under or in accordance with any agreement or arrangement with any person outside this consortium;
- b) communicate to a person outside this consortium other than the person calling for these tenders, the amount or approximate amount of the proposed tender, except when the confidential disclosure of the approximate amount of the tender is necessary to obtain insurance premium quotations required for preparation of the tender;
- c) Cause or induce any person outside this consortium to communicate to us the amount or approximate amount of any rival tender for this contract.
- d) enter into any agreement or arrangement with any person outside this consortium to induce him to refrain from tendering for this contract, or to influence the amount of any tender or the conditions of any tender to be submitted, nor cause or induce any person outside this consortium to enter into any such agreement or arrangement;
- e) offer or pay or give or agree to give any sum of money or valuable consideration directly or indirectly to any person outside this consortium for doing or having done or causing or having caused to be done in relation to any tender or proposed tender for this contract, any action similar to those described above.

In this certificate the term "person" includes any persons, body of persons or association, whether corporate or not, the term "agreement or arrangement" includes any agreement or arrangement, whether formal or informal and whether legally binding or not, and the term "person outside this consortium" means, when the consortium is a partnership, a person other than a partner or an employee of a partner or the partnership, or when the consortium is a company, a person other than a person or company holdings shares in the consortium, or any employee of such a person, company or the consortium.

SIGNED ON BEHALF OF TENDERER:

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T2.1 J COMPLIANCE WITH OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 AND CONSTRUCTION REGULATIONS, 2014

The tenderer shall attach to this Form evidence that he is registered and in good standing with a compensation insurer who is approved by Department of Labour in terms of section 80 of the Compensation for Injury and Disease Act (COID) (Act 130 of 1993).

The tenderer is required to disclose, by also attaching documentary evidence to this form, all inspections, investigations and their outcomes conducted by the Department of Labour into the conduct of the tenderer at any time during the 36 months preceding the date of this tender.

SIGNED ON BEHALF OF THE TENDERER:

Note to tenderer:

Discovery that the tenderer has failed to make proper disclosure may result in MAKHADO Local Municipality terminating a contract that flows from this tender on the ground that it has been rendered invalid by the tenderer's misrepresentation.

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T2.1 K REGISTRATION CERTIFICATE OF AN ENTITY

The Central Supplier Data Base (CSD) will be used to verify the company details including its directors or members.

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T2.1 L SARS PIN NUMBER/ CSD SUMMARY REPORT

Important notes:

A SARS PIN Number document must be attached to this page which will be used to verify the company Tax status alternatively a CSD Summary Report will be printed to verify the company Tax status. Where a bidder's Tax status is found to be non-compliant, the bidder will be disqualified.

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T2.1 M REQUIREMENTS IN TERMS OF GOVERNMENT'S RECONSTRUCTION AND DEVELOPMENT PROGRAMME

M1 General

The employer requires the active participation of the contractor in this aspect of the contract.

Forms RDP 1 (E) to RDP 4 (E) apply to this section and must be completed and submitted with the tender.

The tenderer's submissions under this item will be taken into consideration when evaluating tenders received.

M2 Definitions

M2.1 Contract Participation Goal (CPG)

The value of goods, services and works, excluding VAT, for which the contractor proposes to engage labour or ABEs.

M2.2 Affirmable Business Enterprise (ABE)

A business which adheres to statutory labour practices, is a legal entity, registered with the South African Revenue Service and a continuing and independent enterprise for profit, providing a commercially useful function and

- a) which is at least 51 % Owned by one or more Previously Disadvantaged Individuals (PDI) or in the case of a company, at least 51 % of the shares are owned by one or more Previously Disadvantaged Individuals (PDI) and
- b) whose management and daily business operations are under the control of one or more of the Previously Disadvantaged Individuals (PDI) who effectively own it provided, however, that, during the period for which the business has been operating or the previous three financial years, whichever period is the lesser, the average annual turnover of the business (excluding VAT and any turnover generated in respect of work performed by other parties in a joint venture or a consortium) does not exceed:
 - 1) R10 million in respect of contractors who mainly perform Civil Engineering Services.
 - 2) R2,5 million in respect of labour-only subcontractors

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- 3) R10 million in respect of Manufacturers
- 4) R15 million in respect of Suppliers
- 5) R2,5 million, exclusive of any turnover generated in respect of out-sourced activities which the enterprise does not have the in-house competence and expertise to perform, in respect of professional service providers, and
- 6) R2, 5 million in respect of other service providers, e.g., transport; and that the sum of the average annual turnovers over the same period of all the business concerns which are under the control of Previously Disadvantaged Individuals (PDI) within the business entity and Affiliated Entities does not exceed one and a half (1, 5) times the maximum allowable annual average turnover for the particular category of enterprise as set out in (b) above, seeking ABE status.

M2.3 “Historically Disadvantaged Individuals (HDI)” means all South African Citizens

1. who had no franchise in national elections prior to the introduction of the 1983 and 1993 constitutions;
2. women, or
3. disabled persons

Persons who obtained South African Citizenship after the first democratic election in April 1994, cannot qualify for preference as an HDI.

M2.4 Target values

(a) The values of the following items (excluding VAT) expressed as percentages of the Tender Sum, (excluding VAT) as proposed by the tenderer in his tender. The monetary total of these values shall be the CPG.

In this contract the minimum target values shall be as follows:

Labour Maximisation	: 35%
ABE support	:10%
HDI	45%

(b) The value of the following item expressed as a percentage of the total number of supervisory staff employed on the contract, as proposed by the tenderer in his tender. In this contract the minimum target value shall be:

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HDI Supervisory Staff: 10%

The tender of a tenderer whose proposed target values are below the minimum set by the employer may be disqualified.

The maximum target values for each category will be the highest of all values submitted in the tenders short-listed for detailed evaluation.

M3 Preferential Procurement Point System Policy

The MAKHADO Procurement Policy (MBD 6.1) is Included under MBD Forms.

M4 Contract Participation Performance (CPP)

M4.1 The Contractor's Participation Performance will be measured monthly in order to monitor the extent to which he is striving to reach the Contract Participation Goal (CPG) he proposed in his tender.

M4.2 Monitoring of CPG.

Regular returns will be required from the contractor, to be submitted with each payment certificate.

Examples of the forms to be used are illustrated under Annexure C5.1 of this document.

M5 Training

Provision for training is provided for in the bill of quantities

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T2.1 N EQUITY OWNERSHIP CLAIMED IN TERMS OF HDI STATUS

1. DECLARATION WITH REGARD TO EQUITY

1.1 Name of firm :

1.2 VAT registration number :

1.3 Company registration number :

1.4 TYPE OF FIRM

<input type="checkbox"/>	Partnership
<input type="checkbox"/>	One person business / sole trader
<input type="checkbox"/>	Close corporation
<input type="checkbox"/>	Company
<input type="checkbox"/>	(Pty) Limited

[TICK APPLICABLE BOX]

1.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES

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

1.6 COMPANY CLASSIFICATION

<input type="checkbox"/>	Manufacturer
<input type="checkbox"/>	Supplier
<input type="checkbox"/>	Professional service provider
<input type="checkbox"/>	Other service providers, e.g. transporters, etc.

[TICK APPLICABLE BOX]

1.7 TOTAL NUMBER OF YEARS THE FIRM HAS BEEN IN BUSINESS?

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- 1.8 List all Shareholders by Name, Position, Identity Number, Citizenship, HDI status and ownership, as relevant. Information to be used to calculate the points claimed in paragraph 1.**

Name	Date/Position occupied in Enterprise	ID Number	Date RSA Citizenship obtained	* HDI Status			% of business enterprise owned
				No franchise prior to elections	Women	Disabled	

*Indicate YES or NO

1.9 Consortium / Joint Venture

- 1.9.1 In the event that preference points are claimed for HDI members by consortia / joint ventures, the following information must be furnished in order to be entitled to the points claimed in respect of HDI member:

Name of HDI member (to be consistent with paragraph 2.8)	Percentage (%) of the contract value managed or executed by the HDI member

- 1.10 I / we, the undersigned, who warrants that he/she is duly authorised to do so on behalf of the firm certify that points claimed, based on the equity ownership, qualifies the firm for the preference(s) shown and

I / we acknowledge that:

- (i) The information furnished is true and correct.
- (ii) The Equity ownership claimed is in accordance with the applicable preference point system.
- (iii) In the event of a contract being awarded as a result of points claimed, the tenderer

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may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct.

- (iv) If the claims are found to be incorrect, the MAKHADO LOCAL MUNICIPALITY may, in addition to any other remedy it may have –
- (a) Recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
 - (b) 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;
 - (c) Impose a financial penalty more severe than the theoretical financial preference associated with the claim which was made in the bid; and

WITNESSES:

1 SIGNATURE(S) of TENDERER(S)

2

DATE:

ADDRESS:

.....

.....

.....

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RDP1(E) SCHEDULE OF LABOUR CONTENT

The Tenderer must complete the table below to reflect the labour force anticipated to be employed on this contract, including labour employed by sub-contractors.

The specified target value is 35%. A minimum value of this 35% target value should be obtained from Local Labour content. ***See Form T2.1 M item M2.4 (a).***

Type of Labour	Man-hours	Minimum Wage Rate per Unit	Total Wage Cost (Excl VAT)
Permanent Labour			
Temporary Labour			
SMME/HDI's Labour			
TOTAL			
PERCENTAGE			

Notes to Tenderer:

(1) Labour is defined as hourly paid personnel.

SIGNED ON BEHALF OF THE TENDERER:

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RDP3(E) HDI EQUITY IN PROJECT

The tenderer shall complete the table below.

Company Name (In Case of Joint Venture, all JV Partner Names)	Other HDI Equity Share %	Female Equity Share %	Total HDI Equity Share %

Notes to tenderer:

The tenderer may be required to provide audited proof of equity distribution. In the case of public listed companies, the ratios of equity shareholding are to be replaced by the ratio of HDI and female representatives at directorship level.

SIGNED ON BEHALF OF THE TENDERER

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RDP4(E) HDI SUPERVISORY STAFF

The minimum value of HDI supervisory staff expressed as a percentage of the total number of staff be 10%. Refer Form T2.1 M, item 2.4(b).

It is proposed to employ the following salaried personnel on this contract as supervisory staff:

(Note: The Curriculum Vitae of each staff member proposed to be attached to Section T2.3 A)

Staff Category	Number per Category	HDI Status (Yes or No)
TOTALS		

HDIs as percentage of total %

Notes to tenderer:

1. If personnel are hourly paid, they cannot be classified as supervisory staff, regardless the nature of their duties.
2. The tenderer may be required to provide audited proof that the stated personnel are salaried members of staff or contracted on a monthly fee.
3. Examples of relevant personnel are: Site agent, assistant site agent, senior materials technician, senior surveyors and clerks.

SIGNED ON BEHALF OF THE TENDERER

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RDP5(E) ABE DECLARATION AFFIDAVIT

It is understood and agreed that should this contract be awarded to me an ABE Declaration Affidavit will be completed by each and every ABE employed by me on this contract and will be submitted to the Employer immediately upon demand by the Employer.

SIGNED ON BEHALF OF THE TENDERER

An example of the SMME/PDI Declaration Affidavit is given in Annexure C5.1.

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T2.2 OTHER DOCUMENTS REQUIRED FOR TENDER EVALUATION

T2.2 A	DECLARATION OF GOOD STANDING REGARDING TAX	44
T2.2 B	FINANCIAL DETAILS, STATEMENTS AND BANK REFERENCES	45
T2.2 C	CONSTRUCTION INDUSTRIES DEVELOPMENT BOARD REGISTRATION ..	46

T2.2 A DECLARATION OF GOOD STANDING REGARDING TAX

***Failure to complete the above information will result in the disqualification of the tender.**

(Tenderer to submit an ORIGINAL, COMPLETED FORM FROM SARS NOT OLDER THAN 4 MONTHS)

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T2.2 B FINANCIAL DETAILS, STATEMENTS AND BANK REFERENCES

1. FINANCIAL STATEMENTS

I/We agree, if required, to furnish a copy of the latest audited set of financial statement together with my/our Director's and Auditor's report for consideration by the MAKHADO LOCAL MUNICIPALITY.

2. DETAILS OF CONTRACTOR'S BANK ACCOUNT

I/We furnish the following information:

- a) Name of Bank:
- b) Branch of Bank
- c) Town/city/suburb where bank is situated.....
- d) Contact Person at the Bank:
- e) Telephone number of Bank: Code: Number:
- f) Account Number:
- g) Bank rating (include confirmation from bank or financial institution):
.....

I/We hereby authorise the Employer to approach the above Bank for a reference.

SIGNED ON BEHALF OF THE TENDERER:.....

DATE:

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T2.2 C CONSTRUCTION INDUSTRIES DEVELOPMENT BOARD REGISTRATION

The tenderer is to affix to this page either:

- Written proof of his registration with the CIDB as a Category 7CE, 7GB or Higher

Note:

1. Failure to affix such documentation as prescribed to this page shall result in this tender not being further considered for the award of the contract.
2. Should this tender be considered for award of the contract, based on proof of submission of application for registration in the appropriate category with the CIDB, and should proof of such subsequent registration not be forthcoming to the employer by the time of award of the contract, then this tender will no longer be considered for the award of the contract.

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

T2.3 A	ORGANOGRAM AND CURRICULUM VITAE OF KEY PERSONNEL	48
T2.3 B	PROJECT PROGRAMME AND METHOD STATEMENT	49
T2.3 C	SCHEDULE OF ESTIMATED MONTHLY EXPENDITURE	50

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T2.3 A ORGANOGRAM AND CURRICULUM VITAE OF KEY PERSONNEL

Tenderer to supply an organogram for the management of the contract and include curriculum vitae of key personnel. This curriculum vitae shall provide evidence of relevant experience of the key staff in the organogram. The personnel included here shall be used on the project unless otherwise agreed by the engineer.

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T2.3 B PROJECT PROGRAMME

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

SIGNED ON BEHALF OF TENDERER:.....

Note to Tenderer.

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

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T2.3 C 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	R
7	R
8 (FINAL)	R
TOTAL: R.....	
(EXCLUDING CONTINGENCIES AND CONTRACT PRICE ADJUSTMENT)	

SIGNED ON BEHALF OF TENDERER:

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T2.4 MBD FORMS

The tenderer must complete the following returnable documents:

MBD 4

A. DECLARATION OF INTEREST

1. No Tender will be accepted from persons in the service of the State*.
2. Any person, having a kinship with persons in the service of the State, including a blood relationship, may make an offer/s in terms of this invitation to Tender. In view of possible allegations of favouritism, should the resulting Tender, or part thereof, be awarded to persons connected with or related to persons in service of the State, it is required that the Tenderer or their authorised representative declare their position in relation to the evaluating/adjudicating authority and/or take an oath declaring his/her interest.
3. In order to give effect to the above, the following questionnaire must be completed and submitted with the Tender.

Full Name: _____

Identity No: _____

Company Registration No: _____

Tax Reference No: _____

VAT Registration No: _____

Are you at present in the service of the State? **Yes/No**

If so, furnish particulars

-
-
- **Municipal Supply Chain Management Regulation:** “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 National Council of Provinces
 - (b) A member of 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 Parliament or provincial legislature.
 - (f) A member of the accounting authority of any national or provincial public entity; or
 - (g) An employee of Parliament or a provincial legislature

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Have you been in the service of the State for the past twelve months? **YES/NO**

If so, furnish particulars.

Do you have any relationship (family, friend, other) with persons in the service of the State and who may be involved with the evaluation or adjudication of this Tender? **YES/NO**

If so, furnish particulars.

Are you aware of any relationship (family, friend, other) between a Tenderer and any persons in the service of the State who may be involved with the evaluation or adjudication of this Tender? **YES/NO**

If so, furnish particulars?

Are any of the company's directors, managers, principle shareholders or stakeholders in service of the State? **YES/NO**

If so, furnish particulars.

Are any spouses, child or parent of the company's directors, managers, principle shareholders or stakeholders in service of the State? **YES/NO**

If so, furnish particulars?

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CERTIFICATION

**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 Tenderer

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MBD 5

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

For all procurement expected to exceed R10 million (all applicable taxes included), Tenderers 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.

.....
.....

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 Tenderer 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.

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

* Delete if not applicable

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 such contract? ***YES / NO**

3.1 If yes, furnish particulars

.....
.....

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

.....
.....

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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 Tenderer

**PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL
PROCUREMENT REGULATIONS 2017**

1.

This preference form must form part of all bids invited. It contains general information and serves as a claim form for preference points for Broad-Based Black Economic Empowerment (B-BBEE) Status Level of Contribution

NB: BEFORE COMPLETING THIS FORM, BIDDERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF B-BBEE, AS PRESCRIBED IN THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017.

1. GENERAL CONDITIONS

1.1 The following preference point systems are applicable to all bids:

- 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

- a) The value of this bid is estimated not exceed R50 000 000 (all applicable taxes included) and therefore the 80/20 preference point system shall be applicable; or

1.3 Points for this bid shall be awarded for:

- (a) Price; and
- (b) B-BBEE Status Level of Contributor.

1.4 The maximum points for this bid are allocated as follows:

	POINTS
PRICE	80
B-BBEE STATUS LEVEL OF CONTRIBUTOR	20
Total points for Price and B-BBEE must not exceed	100

1.5 Failure on the part of a bidder to submit proof of B-BBEE Status level of contributor together with the bid, will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.

1.6 The purchaser reserves the right to require of a bidder, either before a bid is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the purchaser.

2. DEFINITIONS

- (a) **“B-BBEE”** means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;
- (b) **“B-BBEE status level of contributor”** means the B-BBEE status of an entity in terms of a code of good practice on black economic empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;
- (c) **“bid”** means a written offer in a prescribed or stipulated form in response to an invitation by an organ of state for the provision of goods or services, through price

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- quotations, advertised competitive bidding processes or proposals;
- (d) **“Broad-Based Black Economic Empowerment Act”** means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- (e) **“EME”** means an Exempted Micro Enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act;
- (f) **“functionality”** means the ability of a tenderer to provide goods or services in accordance with specifications as set out in the tender documents.
- (g) **“prices”** includes all applicable taxes less all unconditional discounts;
- (h) **“proof of B-BBEE status level of contributor”** means:
- 1) B-BBEE Status level certificate issued by an authorized body or person;
 - 2) A sworn affidavit as prescribed by the B-BBEE Codes of Good Practice;
 - 3) Any other requirement prescribed in terms of the B-BBEE Act;
- (i) **“QSE”** means a qualifying small business enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act;
- (j) **“rand value”** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;

3. POINTS AWARDED FOR PRICE

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

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

80/20

or

90/10

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

Where

P_s = Points scored for price of bid under consideration

P_t = Price of bid under consideration

P_{\min} = Price of lowest acceptable bid

4. POINTS AWARDED FOR B-BBEE STATUS LEVEL OF CONTRIBUTOR

- 4.1 In terms of Regulation 6 (2) and 7 (2) of the Preferential Procurement Regulations, preference points must be awarded to a bidder for attaining the B-BBEE status level of contribution in accordance with the table below:

B-BBEE Status Level of Contributor	Number of points (90/10 system)	Number of points (80/20 system)
1	10	20
2	9	18
3	6	14
4	5	12
5	4	8
6	3	6

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7	2	4
8	1	2
Non-compliant contributor	0	0

5. BID DECLARATION

- 5.1 Bidders who claim points in respect of B-BBEE Status Level of Contribution must complete the following:

6. B-BBEE STATUS LEVEL OF CONTRIBUTOR CLAIMED IN TERMS OF PARAGRAPHS 1.4 AND 4.1

- 6.1 B-BBEE Status Level of Contributor: =(maximum of 10 or 20 points)
 (Points claimed in respect of paragraph 7.1 must be in accordance with the table reflected in paragraph 4.1 and must be substantiated by relevant proof of B-BBEE status level of contributor.

7. SUB-CONTRACTING

- 7.1 Will any portion of the contract be sub-contracted?
 (***Tick applicable box***)

YES	X	NO	
-----	----------	----	--

- 7.1.1 If yes, indicate:

- i) What percentage of the contract will be subcontracted **30%**
- ii) The name of the sub-contractor.....
- iii) The B-BBEE status level of the sub-contractor.....
- iv) Whether the sub-contractor is an EME or QSE

(***Tick applicable box***)

YES		NO	
-----	--	----	--

- v) Specify, by ticking the appropriate box, if subcontracting with an enterprise in terms of Preferential Procurement Regulations,2017:

Designated Group: An EME or QSE which is at least 51% owned by:	EME √	QSE √
Black people		
Black people who are youth		
Black people who are women		
Black people with disabilities		
Black people living in rural or underdeveloped areas or townships		
Cooperative owned by black people		
Black people who are military veterans		
OR		
Any EME		
Any QSE		

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8. DECLARATION WITH REGARD TO COMPANY/FIRM

8.1 Name of
company/firm:.....

8.2 VAT registration
number:.....

8.3 Company registration
number:.....

8.4 TYPE OF COMPANY/ FIRM

- ☐ Partnership/Joint Venture / Consortium
 - ☐ One person business/sole propriety
 - ☐ Close corporation
 - ☐ Company
 - ☐ (Pty) Limited
- [TICK APPLICABLE BOX]

8.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES

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

8.6 COMPANY CLASSIFICATION

- ☐ Manufacturer
 - ☐ Supplier
 - ☐ Professional service provider
 - ☐ Other service providers, e.g. transporter, etc.
- [TICK APPLICABLE BOX]

8.7 Total number of years the company/firm has been in
business:.....

8.8 I/we, the undersigned, who is / are duly authorised to do so on behalf of the
company/firm, certify that the points claimed, based on the B-BBE status level of
contributor indicated in paragraphs 1.4 and 6.1 of the foregoing certificate, qualifies
the company/ firm for the preference(s) shown and I / we 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 6.1, the contractor may be required to furnish
documentary proof to the satisfaction of the purchaser that the claims are
correct;
- iv) If the B-BBEE status level of contributor has been claimed or obtained on a
fraudulent basis or any of the conditions of contract have not been fulfilled, the
purchaser may, in addition to any other remedy it may have –

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- (a) disqualify the person from the bidding 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 bidder or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted by the National Treasury 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.

WITNESSES

1.

2.

.....

SIGNATURE(S) OF BIDDERS(S)

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MBD 6.2

C. DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT

This Municipal Tendering Document (MBD) must form part of all Tenders invited. It contains general information and serves as a declaration form for local content (local production and local content are used interchangeably).

Before completing this declaration, Tenderers must study the General Conditions, Definitions, Directives applicable in respect of Local Content as prescribed in the Preferential Procurement Regulations, 2011 and the South African Bureau of Standards (SABS) approved technical specification number SATS 1286:201x.

1. General Conditions

- 1.1. Preferential Procurement Regulations, 2011 (Regulation 9. (1) and 9. (3) make provision for the promotion of local production and content.
- 1.2. Regulation 9. (1) prescribes that in the case of designated sectors, where in the award of Tenders local production and content is of critical importance, such Tenders must be advertised with the specific Tendering condition that only locally produced goods, services or works or locally manufactured goods, with a stipulated minimum threshold for local production and content will be considered.
- 1.3. Regulation 9. (3) prescribes that where there is no designated sector, a specific Tendering condition may be included, that only locally produced services, works or goods or locally manufactured goods with a stipulated minimum threshold for local production and content, will be considered.
- 1.4. Where necessary, for Tenders referred to in paragraphs 1.2 and 1.3 above, a two stage Tendering process may be followed, where the first stage involves a minimum threshold for local production and content and the second stage price and B-BBEE.
- 1.5. A person awarded a contract in relation to a designated sector, may not sub-contract in such a manner that the local production and content of the overall value of the contract is reduced to below the stipulated minimum threshold.
- 1.6. The local content (LC) as a percentage of the Tender price must be calculated in accordance with the SABS approved technical specification number SATS 1286: 201x as follows:

$$LC = 1 - \left(\frac{x}{y} \right) \times 100$$

Where

x imported content

y Tender price excluding value added tax (VAT)

Prices referred to in the determination of x must be converted to Rand (ZAR) by using the exchange rate published by the South African Reserve Bank (SARB) at 12:00 on the date, one week (7 calendar days) prior to the closing date of the Tender as required in paragraph 4.1 below.

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1.7. A Tender will be disqualified if:

- The Tenderer fails to achieve the stipulated minimum threshold for local production and content indicated in paragraph 3 below; and this declaration certificate is not submitted as part of the Tender documentation.

2. Definitions

- 2.1. **“Tender”** includes advertised competitive Tenders, written price quotations or proposals;
- 2.2. **“Tender price”** price offered by the Tenderer, excluding value added tax (VAT);
- 2.3. **“contract”** means the agreement that results from the acceptance of a Tender by an organ of state;
- 2.4. **“designated sector”** means a sector, sub-sector or industry that has been designated by the Department of Trade and Industry in line with national development and industrial policies for local production, where only locally produced services, works or goods or locally manufactured goods meet the stipulated minimum threshold for local production and content;
- 2.5. **“Duly sign”** means a Declaration Certificate for Local Content that has been signed by the Chief Financial Officer or other legally responsible person nominated in writing by the Chief Executive, or senior member / person with management responsibility (close corporation, partnership or individual).
- 2.6. **“imported content”** means that portion of the Tender price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the supplier or its subcontractors) and which costs are inclusive of the costs abroad, plus freight and other direct importation costs, such as landing costs, dock duties, import duty, sales duty or other similar tax or duty at the South African port of entry;
- 2.7. **“local content”** means that portion of the Tender price which is not included in the imported content, provided that local manufacture does take place;
- 2.8. **“stipulated minimum threshold”** means that portion of local production and content as determined by the Department of Trade and Industry; and
- 2.9. **“Sub-contract”** means the primary contractor's assigning, leasing, making out work to, or employing another person to support such primary contractor in the execution of part of a project in terms of the contract.

3. The stipulated minimum threshold(s) for local production and content for this Tender is/are as follows:

<u>Description of services, works or goods</u>	<u>Stipulated minimum threshold</u>
_____	_____ %
_____	_____ %
_____	_____ %

4. Does any portion of the services, works or goods offered have any imported content?

YES / NO

- 4.1 If yes, the rate(s) of exchange to be used in this Tender to calculate the local content as prescribed in paragraph 1.6 of the general conditions must be the rate(s) published by the SARB for the specific currency at 12:00 on the date, one week (7 calendar days) prior to the closing date of the Tender.

The relevant rates of exchange information is accessible on www.reservebank.co.za.

Indicate the rate(s) of exchange against the appropriate currency in the table below:

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Currency	Rates of exchange
US Dollar	
Pound Sterling	
Euro	
Yen	
Other	

NB: Tenderers must submit proof of the SARB rate (s) of exchange used.

LOCAL CONTENT DECLARATION BY CHIEF FINANCIAL OFFICER OR OTHER LEGALLY RESPONSIBLE PERSON NOMINATED IN WRITING BY THE CHIEF EXECUTIVE OR SENIOR MEMBER/PERSON WITH MANAGEMENT RESPONSIBILITY (CLOSE CORPORATION, PARTNERSHIP OR INDIVIDUAL)

IN RESPECT OF TENDER No.

ISSUED BY: (Procurement Authority / Name of Municipality / Municipal Entity):

.....

NB The obligation to complete, duly sign and submit this declaration cannot be transferred to an external authorized representative, auditor or any other third party acting on behalf of the Tenderer.

I, the undersigned, (full names),

do hereby declare, in my capacity as

of(name of Tenderer entity), the following:

- (a) The facts contained herein are within my own personal knowledge.
- (b) I have satisfied myself that the goods/services/works to be delivered in terms of the above-specified Tender comply with the minimum local content requirements as specified in the Tender, and as measured in terms of SATS 1286.
- (c) The local content has been calculated using the formula given in clause 3 of SATS 1286, the rates of exchange indicated in paragraph 4.1 above and the following figures:

Tender price, excluding VAT (y)	R
Imported content (x)	R
Stipulated minimum threshold for Local content (paragraph 3 above)	
Local content % as calculated in terms of SATS 1286	

If the Tender is for more than one product, a schedule of the local content by product shall be attached.

- (d) I accept that the Procurement Authority / Municipality /Municipal Entity has the right to request that the local content be verified in terms of the requirements of SATS 1286.

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- (e) I understand that the awarding of the Tender is dependent on the accuracy of the information furnished in this application. I also understand that the submission of incorrect data, or data that are not verifiable as described in SATS 1286, may result in the Procurement Authority / Municipal / Municipal Entity imposing any or all of the remedies as provided for in Regulation 13 of the Preferential Procurement Regulations, 2011 promulgated under the Policy Framework Act (PPPFA), 2000 (Act No. 5 of 2000).

SIGNATURE: _____

DATE: _____

WITNESS No. 1 _____

DATE: _____

WITNESS No. 2 _____

DATE: _____

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MBD 8

D. DECLARATION OF TENDERER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

1. This Municipal Tendering Document must form part of all Tenders 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 to combat the abuse of the supply chain management system.
3. The of any Tenderer may be rejected if the Tenderer, or any of its directors have:
 - a) Abused the Municipality'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) Wilfully neglected, reneged or failed to comply with any government, municipal or 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 Corruption 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 Tender.**

ITEM	QUESTION	YES	NO
4.1	Is the Tenderer or any of its directors listed on the National Treasury's database as a company or person 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 National Treasury after the audi alteram partem rule was applied).		
4.1.1	If so, furnish particulars:		
4.2	Is the Tenderer or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corruption Activities Act (No 12 of 2004)? (To access this Register, enter the National Treasury's website www.treasury.gov.za, click on the icon "Register for Tender Defaulters" or submit your written request for a hard copy of the Register to facsimile number (012 326 5445).		
4.2.1	If so, furnish particulars:		
4.3	Was the Tenderer 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?		
4.3.1	If so, furnish particulars:		
4.4	Does the Tenderer or any of its directors owe any municipal rates and taxes or municipal charges to the municipality/municipal entity, or any other municipality/municipal entity, that is in arrears for more than three months?		
4.4.1	If so, furnish particulars:		
4.5	Was any contract between the Tenderer 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?		
4.5.1	If so, furnish particulars:		

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CERTIFICATION

I, THE UNDERSIGNED (FULL NAME) _____
CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM TO BE 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 Tenderer

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MBD 9

E. CERTIFICATE OF INDEPENDENT TENDER DETERMINATION

- 1 This Municipal Tendering Document (MBD) must form part of all Tenders¹ 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 Tendering (or Tender rigging).² Collusive Tendering 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 Tender of any Tenderer if that Tenderer 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 Tendering 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 Tenders are considered, reasonable steps are taken to prevent any form of Tender-rigging.
- 5 In order to give effect to the above, the attached Certificate of Tender Determination (MBD 9) must be completed and submitted with the Tender:

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

² Tender rigging (or collusive Tendering) 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 Tendering process. Tender rigging is, therefore, an agreement between competitors not to compete.

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- (f) Tendering with the intention not to win the Tender.
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 Tender invitation relates.
9. The terms of the accompanying Tender have not been, and will not be, disclosed by the Tenderer, directly or indirectly, to any competitor, prior to the date and time of the official Tender 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 Tenders and contracts, Tenders 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 Tenderer

THE CONTRACT

PART C1	AGREEMENT AND CONTRACT DATA
PART C2	PRICING DATA
PART C3	SCOPE OF WORKS
PART C4	SITE INFORMATION
PART C5	ANNEXURES

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PART C1: AGREEMENT AND CONTRACT DATA

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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:

“CONSTRUCTION OF KUTAMA SINTHUMULE SPORTS FACILITY- BID NO: 36/2022“

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 this form of offer and acceptance, the tenderer offers to perform all of the obligations and liabilities of the contractor under the contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the conditions of contract identified in the contract data.

**THE OFFERED TOTAL OF THE PRICE INCLUSIVE OF VALUE ADDED TAX IS
(CONTRACT PRICE)**

.....

Rand (in words); (in figures)

This offer may be accepted by the employer by signing the acceptance part of this form of offer and acceptance and returning one copy of this document to the tenderer before the end of the period of validity stated in the tender data, whereupon the tenderer becomes the party named as the contractor in the conditions of contract identified in the contract data.

Signature(s)

Name(s)

Capacity

For the tenderer
 (Name and address of organization)

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Name and
signature of
witness

Date

ACCEPTANCE

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

The terms of the contract are contained in:

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

Part 2 Pricing Data

Part 3 Scope of Work

Part 4 Site information

Part 5 Additional Documentation

and drawings and documents or parts thereof, which may be incorporated by reference into Parts 1 to 4 above.

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

The Tenderer shall within two weeks after receiving a completed copy of this Agreement, including the Schedule of Deviations (if any), contact the Employer's agent (whose details are given in the Contract Data) to arrange the delivery of any bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the Conditions of Contract identified in the Contract Data at or just after the date this Agreement comes into effect. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this Agreement.

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

Signature(s) _____

Name(s) _____

Capacity _____

For the tenderer _____
(Name and address of organisation)

Name & Signature

Of Witness _____
Name Date

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

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confirmation, clarification or change to the tender documents and which it is agreed by the Parties becomes an obligation of the contract, shall also be recorded here.

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

1 Subject _____

Details _____

2 Subject _____

Details _____

3 Subject _____

Details _____

4 Subject _____

Details _____

5 Subject _____

Details _____

6 Subject _____

Details _____

By the duly authorised representatives signing this Schedule of Deviations, the Employer and the Tenderer agree to and accept the foregoing Schedule of Deviations as the only deviations from and amendments to the documents listed in the Tender Data and addenda thereto as listed in the Tender Schedules, as well as any confirmation, clarification or change

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

FOR THE TENDERER:

Signatures (s) _____

Name(s) _____

Capacity _____

(Name and address of Organisation)

Name & Signature

Of Witness _____ Date _____

FOR THE EMPLOYER

Signatures (s) _____

Name(s) _____

Capacity _____

(Name and address of Organisation)

Name & Signature

Of Witness _____ Date _____

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C1.2 CONTRACT DATA

PART 1: DATA PROVIDED BY THE EMPLOYER

CONDITIONS OF CONTRACT

The Conditions of Contract are the *General Conditions of Contract for Construction Works (2015)*, 3rd edition, published by the South African Institution of Civil Engineering. Copies of these conditions of contract may be obtained from the South African Institute of Civil Engineering (Tel: 011 805 5947).

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

PART 1: Data provided by the Employer.

Clause	Data
1.1.1.15	The Name of the Employer is MAKHADO LOCAL MUNICIPALITY
1.2.1.2	The address of the Employer is: Private Bag X 2596 Makhado 0920 Telephone: 015 519 3000 Facsimile: 015 309 9419
1.1.16	The name of the Engineer is T2-Tech Engineers
1.2.1.2	The address of the Engineer is: 16A Church Street

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	<p>Maweja House</p> <p>Polokwane</p> <p>0700</p> <p>Telephone: 015 291 3320</p> <p>Facsimile: 015 295 2116</p>
5.1.1	Non-working Days Are Saturday and Sundays
5.8.1	<p>The special non-working days are the official builder's holiday plus all statutory public holidays.</p> <p>The year-end break commences on 15th December 2022 and the first Monday of the subsequent year.</p>
5.3.1	<p>Documentation required before commencing with the works are:</p> <ol style="list-style-type: none"> 1. Health and Safety Plan and file (refer clause 4.3) 2. Initial Programme (refer to clause 5.6) 3. Security Guarantee (refer to clause 6.2) 4. Insurance (refer to clause 8.6) 5. Notification to Department of labour 6. CVs and Qualifications of Key Personnel
5.3.2	The time to submit the documentation required before commencement of works is 14 days.
6.2	The Form of Guarantee is to contain the wording of the proforma document included in the General Conditions of Contract (Pro-forma included in section C1.3 to this document).
6.2	The liability of the guarantee shall be 10 % .
5.3.2	The Contractor shall commence executing the Works within 14 days from the Commencement Date.
1.1.1.26	Pricing Strategy is Fixed Price Contract
8.6.1.1.2	The value of the materials supplied by the Employer to be included in the insurance sum is nil.
8.6.1.1.3	The amount to cover professional fees for repairing damage and loss to be

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	included in the insurance sum is nil.
8.6.1.3	The limit of indemnity for liability insurance is R 10 million .
1.1.1.14	The Works shall be completed within 12 Months .
5.13.1	The penalty for failing to complete the works is R 10 000.00 per calendar day.
6.10.1.5	The percentage advance on materials not yet built into the Permanent Works is 80 % .
6	The issuing of cessions by the Contractor is prohibited except if and when prior written approval of the MAKHADO LOCAL MUNICIPALITY under the signature of the Municipal Manager for the issue of a cession has been requested and obtained.
6.10.3	The limit of retention money is 10 % of the contract value.
1.1.1.13	The Defects Liability Period is 12 months .
5.12.1	<p>The additional clauses to the General Conditions of Contract are:</p> <p>Extensions of time in respect of clause 5.12.2.2 in respect of abnormal rainfall shall be calculated using the following formula for each calendar month or part thereof:</p> $V = (Nw - Nn) + \frac{(Rw - Rn)}{X}$ <p>Where:</p> <p>V = Extension of time in calendar days in respect of the calendar month under consideration.</p> <p>Nw = Actual number of days during the calendar month on which a rainfall of 10 mm or more has been recorded.</p> <p>Nn = Average number of days in the relevant calendar month , as derived from existing rainfall records, on which a rainfall of 20mm or more has been recorded for the calendar month.</p> <p>Rw = Actual average rainfall in mm recorded for the calendar month under consideration.</p> <p>Rn = Average rainfall in mm for the calendar month as derived from existing</p>

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	<p>rainfall records as stated in the Site Information.</p> <p>For purposes of the Contract Nn, Rn, X and Y shall have those values assigned to them in the South African Weather Service's rainfall records of the nearest station to the site.</p> <p>If V is negative and its absolute value exceeds Nn, then V shall be taken as equal to minus Nn. The total extension of time shall be the algebraic sum of all monthly totals for the period under consideration, but if the total is negative the time for completion shall not be reduced due to subnormal rainfall. Extensions of time for part of a month shall be calculated using pro rata values of Nn and Rn.</p> <p>This formula does not take account flood damage which could cause further or concurrent delays and will be treated separately as far as extension of time is concerned.</p> <p>The factor (Nw – Nn) shall be considered to represent a fair allowance for variations from the average in the number of days during which rainfall exceeds 10 mm. The factor (Rw-Rn) shall be considered to represent a fair allowance for variations from the average in the number of days during which the rainfall did not exceed 10 mm but wet conditions prevented or disrupted work.</p> <p>For the purpose of applying the formula, accurate rain gauging shall be taken at a suitable point on the Site and the Contractor shall at his own expense, take all necessary precautions to ensure that rain gauges cannot be interfered with by unauthorized persons.</p>
5.12	<p>A delay caused by inclement weather conditions will be regarded as a delay only if, in the opinion of the Engineer, all progress on an item or items of work on the critical path of the working programme of the contractor has been brought to a halt. Delays on working days only (based on a five-day working week) will be taken into account for the extension of time, but the Contractor shall make provision in his programme of work for an expected delay of "n" working days caused by normal rainy weather, for which he will not receive any extension of time, where "n" equals 1 day. Extension of time during working days will be granted to the degree to which actual delays, as defined above, exceed the number of "n" working days.</p>

PART 1: DATA PROVIDED BY THE CONTRACTOR

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

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

Clause	Data
1.1.1.9	The Contractor is:
1.2.1.2	Name: The Address of the Contractor is: Address (physical): Address (postal): Telephone: Facsimile: E-mail:
6.5.1.2.3	The percentage allowance to cover overhead charges is 14%.

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43.6 The variation in cost of special materials is:

Special material	Unit on which variation will be determined		Price for base month, excluding transport, labour or any other costs.
	Containers	Delivered in bulk	

*State unit in appropriate column

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C1.3 FORM OF GUARANTEE

Bid No: 36/2022

CONSTRUCTION OF KUTAMA SINTHUMULE SPORTS FACILITY IN MAKHADO LOCAL MUNICIPALITY IN LIMPOPO PROVINCE

WHEREAS
at.....

(Hereinafter referred to as "the Employer")

entered into, on the..... Day of2012, at

a Contract with

at

(Hereinafter called "The Contractor")

for the construction of

AND WHEREAS it is provided by such Contract that the Contractor shall provide the Employer with security by way of suretyship for the due and faithful fulfilment of such Contract by the Contractor;

AND WHEREAS

has/have at the request of the Contractor, agreed to give such security;

NOW THEREFORE WE.....

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

1. The Employer shall, without reference and/or notice to us, have complete liberty of action to act in any manner authorised and/or contemplated by the terms of the said contract, and/or to agree to any modifications, variations, alterations, directions or

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extensions of the Due Completion Date of the Works under the said Contract, and that its rights under this guarantee shall in no way be prejudiced nor our liability hereunder be affected by reason of any steps which the Employer may take under such Contract, or of any modification, variation, alterations of the Due Completion Date which the Employer may make, give, concede or agree to under the said Contract.

2. The Employer shall be entitled, without reference to us, to release any securities held by it, and to give time to or compound or make any other arrangement with the Contractor.
3. This guarantee shall remain in full force and effect until the issue of the Certificate of Completion in terms of the Contract, unless we are advised in writing by the Employer before the issue of the said Certificate of his intention to institute claims, and the particulars thereof, in which event this guarantee shall remain in full force and effect until all such claims have been paid or liquidated.
4. Our total liability hereunder shall not exceed the sum of (R.....)
5. We hereby choose domicile citadel executant for all purposes arising hereof at
.....

IN WITNESS WHEREOF this guarantee has been executed by us at on
this..... day of 2022.

As witnesses:

1	Signature.....	
		Duly authorised to	
2	sign on behalf of
		Address
		
		

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

THIS AGREEMENT is made between The **MAKHADO LOCAL MUNICIPALITY** represented by the

Municipal Manager:

(hereinafter called the EMPLOYER of the one part, herein represented by:

.....

in his capacity as:

AND:

(hereinafter called the CONTRACTOR) of the other part, herein represented by

.....

in his capacity as:

duly authorised to sign on behalf of the Contractor.

WHEREAS the CONTRACTOR is the Mandatory of the EMPLOYER in consequence of an agreement between the CONTRACTOR and the EMPLOYER in respect of

Bid No: 36/2022 – Construction of Kutama Sinthumule Sports Facility in Makhado Local Municipality of Limpopo province.

AND WHEREAS the EMPLOYER and the CONTRACTOR have agreed to enter into an agreement in terms of the provisions of Section 37(2) of the Occupational Health and Safety Act No 85 of 1993, as amended by OHSA Amendment Act No 181/1993 (hereinafter referred to as the ACT).

NOW THEREFORE the parties agree as follows:

1. The CONTRACTOR undertakes to acquaint the appropriate officials and employees of the CONTRACTOR with all relevant provisions of the ACT and the regulations promulgated in terms thereof.
2. The CONTRACTOR undertakes to fully comply with all relevant duties, obligations and prohibitions imposed in terms of the ACT and Regulations: Provided that should the EMPLOYER have prescribed certain arrangements and procedures that same shall be observed and adhered to by the CONTRACTOR, his officials and employees. The CONTRACTOR shall bear the onus of acquainting himself/herself/itself with such arrangements and procedures.
3. The CONTRACTOR hereby accepts sole liability for such due compliance with the relevant duties, obligations, prohibitions, arrangements and procedures, if any, imposed by the ACT and Regulations, and the CONTRACTOR expressly absolves

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the EMPLOYER and the Employer's ENGINEERS from being obliged to comply with any of the aforesaid duties, obligations, prohibitions, arrangements and procedures in respect of the work included in the contract.

4. The CONTRACTOR agrees that any duly authorised officials of the EMPLOYER shall be entitled, although not obliged, to take such steps as may be necessary to ensure that the CONTRACTOR has complied with his undertakings as more fully set out in paragraphs 1 and

2 above, which steps may include, but shall not be limited to, the right to inspect any appropriate site or premises occupied by the CONTRACTOR, or to take such steps it may deem necessary to remedy the default of the CONTRACTOR at the cost of the CONTRACTOR.

5. The CONTRACTOR shall be obliged to report forthwith to the EMPLOYER any investigation, complaint or criminal charge which may arise as a consequence of the provisions of the ACT and Regulations, pursuant to work performed in terms of this agreement, and shall, on written demand, provide full details in writing of such investigation, complaint or criminal charge.

Thus signed at..... for and on behalf of the

CONTRACTOR on this the day of 20.....

SIGNATURE:

NAME AND SURNAME:

CAPACITY:

WITNESSES: 1.

2.

Thus signed at for and on behalf of the EMPLOYER on this

the day of 20.....

SIGNATURE:.....

NAME AND SURNAME:

CAPACITY:

WITNESSES: 1.

3.

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PART C2: PRICING DATA

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C2.1 PRICING INSTRUCTIONS

1. GENERAL

The pricing instructions describe the criteria and assumptions which will be assumed in the Contract that the Tenderer has taken into account when developing his prices. The Bills of Quantities record the Contractor's rates for providing supplies, services, Engineering and construction works in accordance with the Scope of Work.

The terms of payment and the provisions for price adjustment, if applicable, are established in the Contract Data. These items are not described in the Pricing Data.

The terms of payment and the provisions for price adjustment, if applicable, are established in the Contract Data. These items are not described in the Pricing Data.

2. DOCUMENTS MUTUALLY EXPLANATORY

The documents forming the Contract are to be taken as mutually explanatory of one another. The Bill of Quantities forms an integral part of the Contract Documents and shall be read in conjunction with the Tender Data, Contract Data, Scope of Work, Site Information General and Special Conditions of Contract, the Specifications and the Drawings.

3. DEFINITIONS

For the purpose 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 Scope of Work and Site Information.
Quantity:	The number of units of work for each item.
Rate:	The payment per unit of measurement at which the Contractor Contracts to do the work.
Amount:	The product of the quantity and the rate Tendered for an item.
Sum:	An amount Contracted for an item, the extent of which is described in the Bill of Quantities, the specifications or elsewhere but the quantity of work of which is not measured in any units

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4. DESCRIPTIONS

Descriptions in the Bill of Quantities are abbreviated and comply generally with those in the Standardised Specifications. Clause 8 of each Standardised Specification, read together with the relevant Clauses of the Scope of Work, set out what ancillary or associated activities are included in the rates for the operations specified. Should any requirements of the measurement and payment Clause of the applicable Standardised Specification, or the Scope of Work, conflict with the terms of the Bill, the requirements of the Standardised Specification or Scope of Work, as applicable, shall prevail.

5. REFERENCES

The Clauses in a specification in which further information regarding the schedule item can be obtained appears under "Reference Clause" in the Bill. The reference Clauses indicated are not necessarily the only sources of information in respect of scheduled items. Further information and specifications may be found elsewhere in the Contract documents. Standardised Specifications are identified by the letter or letters which follow SANS in the SANS 1200 series of specifications, eg. G for SANS 1200 G.

6. UNITS OF MEASUREMENT

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
m ²	=	square metre
m ² -pass	=	square metre pass
ha	=	hectare
m ³	=	cubic metre
m ³ km	=	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

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7. NET MEASUREMENTS

Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance is made for off-cuts and waste.

8. QUANTITIES

The quantities set out in these Bills of Quantities are approximate and do not necessarily represent the actual amount of work to be done. The quantities of work accepted and certified for payment will be used for determining payments due and not the quantities given in the Bill of Quantities.

The Contract Amount to be determined in accordance with the conditions of Contract identified in the Contract Data shall be computed from the actual quantities of authorized work done, value at rates determined in terms of the Contract Data, against the respective items in the Bill of Quantities.

9. CURRENCY

All rates and sums of money quoted in the Bill of Quantities shall be in Rand and whole cents. Fractions of a cent shall be discounted.

10. VALUE ADDED TAX

Value Added Tax shall be excluded from the rates and sums Contracted for the various items of work included in the Bill of Quantities. VAT will be added as a single entry to the summary.

11. RATES AND PRICES

11.1 General

- a) The Contractor must price each item in the Bill of Quantities in BLACK INK. Reproduced computer printouts of the Bill of Quantities will not be acceptable.
- b) The rates and prices to be inserted in the Bill of Quantities shall cover all the services and incidentals for the work described under the several items. Such prices and rates shall cover all costs and expenses that may be required in and for the execution of the work described, and shall cover the cost of all general risks, liabilities and obligations set forth or implied in the documents on which the Tender is based, as well as overhead charges and profit. Reasonable prices shall be inserted as these will be used as a basis for assessment of payment for additional work that may have to be carried out.
- c) Where the Contractor is required to furnish detailed drawings and designs or other information in terms of the Contract Data, all costs thereof shall be deemed to have been provided for and included in the unit rates and sum amounts Contracted for the items scheduled in the Bill of Quantities. Separate additional payments will not be made.
- d) A price or rate is to be entered against each item in the Bill of Quantities, whether the quantities are stated or not. An item against which no price is entered will be considered to be covered by the other prices or rates in the Bill. The Contractor will

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not be paid for items against which no rate or lump sum has been entered in the Bill of Quantities.

- e) Should the Contractor group a number of items and Contract one lump sum for such group of items, this single lump sum shall apply to that group of items and not to each individual item.
- f) Should the Contractor indicate against any item that compensation for such item is included in another item; the rate for the item included in another item shall be deemed nil.
- g) A submission may be regarded as non-responsive if any rates or lump sums in the Bill of Quantities are, in the opinion of the Employer, unreasonable or out of proportion.

11.2 "Rate only" items

The Contractor shall fill in a rate (in the rate column) against all items where the words "rate only" appear in the Amount column, which rate will constitute payment for work which may be done in terms of this item. Such "rate-only" items are used where it is estimated that little or no work will be required under the item or where the item is to be considered as an alternative to another item for which a quantity is given.

11.3 Arithmetic

Excepting where Sum Amounts are required or where Provisional Sums have been indicated, the Contractor shall enter an applicable rate in the Rate Column of the Bill of Quantities for each scheduled item. He shall also enter an appropriate sum in the Amount column for each scheduled item, by determining in the applicable line item the product of the Quantity and the Unit Rate.

If there is an error in the line item resulting from the product of the unit rate and the quantity, the rate shall be binding and the error of extension as entered in the Tender Offer will be corrected by the Employer in determining the Contract Price.

Where there is an error in addition, either as a result of other corrections required by this checking process or in the Bidder's addition of prices, such error will be corrected by the Employer in determining the Contract Price.

12. VARIATION IN TEXT

No alteration, erasure or addition is to be made in the text of the Bill of Quantities. Should any alteration, erasure or addition be made, it will not be recognized; the original wording of the Bill of Quantities will be adhered to.

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C2.2 BILL OF QUANTITIES

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C2.3 SUMMARY OF BILL OF QUANTITIES

SUMMARY OF SCHEDULE FOR THE KUTAMA/SINTHUMULE SPORTS FACILITIES		
Bill Section	Description	Scheduled Amount
A	PRELIMINARIES & GENERAL	
B	SITE CLEARANCE	
C	EARTHWORKS	
D	FOOTBAL/RUGBY FIELD, ATHLETICS TRACK AND GRAND STANDS	
E	COMBO COURTS (Tennis/Netball & Basketball/Volleyball)	
F	ACCESS ROAD AND PARKING	
G	WATER SUPPLY LINE	
H	SEWER INFRASTRUCTURE	
I	STORMWATER	
J	ELECTRICAL INFRASTRUCTURE	
K	FENCING AND ACCESS CONTROL	
L	DAYWORK AND HIRE OF CONSTRUCTIONAL PLANT	
NET TOTAL OF TENDER		
CONTINGENCIES (5%)		
SUB TOTAL		
VAT@15%		
TOTAL TENDER AMOUNT TO FORM OF OFFER		

CONSTRUCTION OF KUTAMA/SINTHUMULE SPORTS FACILITIES SCHEDULE OF QUANTITIES							
ITEM	LI	PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		SABS 1200A	SECTION A: PRELIMINARY AND GENERAL				
			SCHEDULED FIXED-CHARGE AND VALUE-RELATED ITEM				
A.1		PSA 8.3.1	Fixed preliminary and general charges	Sum	1		
A.2		PSA 8.3.2	Value - related preliminary and general charges	Sum	1		
A.3		8.3.2	Establishment of Facilities on the Site:				
A.3.1		8.3.2.1	Facilities for Engineer:				
A.3.1.1			Furnished Office	Sum	1		
A.3.1.3		PSAB 3.1	One Name board	Sum	1		
A.3.1.4		PSAB 3.2	Carports (2.No)	Sum	1		
A.3.2		8.3.2.2	a) Facilities for Contractor:				
A.3.2.1			Office and storage sheds	Sum	1		
A.3.2.2			Living accommodation	Sum	1		
A.3.2.3			Ablution and latrine facilities	Sum	1		
A.3.2.5			Water supply, electric power and communications	Sum	1		
A.3.2.6			Dealing with water (sub - clause A5.5)	Sum	1		
A.3.2.7			Access (sub - clause A 5.5)	Sum	1		
A.3.2.8			Plant (sub - clause A 5.8)	Sum	1		
A.4		8.3.3	Other Fixed-charge Obligations	Sum	1		
A.6		8.3.5	Asbuilt Drawings & Records	Prov. Sum	1	R5 000,00	R5 000,00
		8.4	SCHEDULED TIME-RELATED ITEMS				
A.7		8.4.1	Contractual Requirements	Sum	1		
TOTAL CARRIED OVER							

CONSTRUCTION OF KUTAMA/SINTHUMULE SPORTS FACILITIES						
SCHEDULE OF QUANTITIES						
ITEM	PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
BROUGHT FORWARD						
A.8		8.4.2	Housing, Office and Laboratories for the Engineer's site Personnel			
A.8.1		8.4.2.1	Office fittings, installations and equipment			
A.8.2			(a) Prime cost items and items paid in Lump Sum	Prov. Sum	1	R1 210 000,00
A.8.3			(b) Provision of Sum of Cost of Cellular calls	Prov. Sum	1	R35 000,00
			(c)Provision of service in connection with contract administration	Prov. Sum	1	R152 000,00
			(d) Handling costs and profit in respect of sub item above	%	R1 397 000,00
A.9		8.4.3	Supervision for the Duration of Construction work	Sum	12	
A.10		8.4.4	Company and Head Office Overhead Costs for the Duration of the Contract	Sum	12	
A.11		PSA 8.5	SUMS STATED PROVISIONALLY BY THE ENGINEER:			
A.11.1			Compliance with the Occupational Health and Safety Act, Construction Regulations 2014 and Covid-19 Regulations(Including Safety File and Plan)	Sum	1	
A.11.2			Appointment of OHS Agent as per Construction Regulations 2014 clause 5(5) and 5(7)	Month	12	
A.11.3			Provision of full time construction Safety representative	Month	12	
A.11.4			Compliance with the specified Environmental Requirements	Sum	1	
TOTAL CARRIED OVER						

CONSTRUCTION OF KUTAMA/SINTHUMULE SPORTS FACILITIES							
SCHEDULE OF QUANTITIES							
ITEM	PAYMENT	DESCRIPTION		UNIT	QUANTITY	RATE	AMOUNT
BROUGHT FORWARD							
A.11.5			Allowance for the appointment of Environmentalist to conduct Environmental Impact Assessment	Prov. Sum	1		
A.11.7			Contractors charges on Items from A.11.2, A.11.3 & A.11.5	%	R300 000,00		
A.11.8		(a)	Payment of Community liaison services and expences	Month	12	R6 000,00	R72 000,00
		(b)	Payment of PSC sitting at Progress Meeting (5 people @R220 each)	Month	12	R1 100,00	R13 200,00
		(c)	Provision for 2 Civil Engineering students @R6000 each	Month	12	R12 000,00	R144 000,00
		(d)	Provision for 2 Enviromental students @R6000 each	Month	12	R12 000,00	R144 000,00
A.11.9			Contractors charges on Item A.11.8 (a to d)	%	R373 200,00	
			Training				
A.11.10			Allowance for accredited training of local unskilled labour	Prov. Sum	1	R80 000,00	R80 000,00
A.11.11			Contractors charges on Item A.11.10	%	R80 000,00	
A.12		PSA 8.6	PRIME COST ITEMS				
A.12.1			Additional tests required by the Engineer	Prov. Sum	1	R70 000,00	R70 000,00
A.12.2			Contractors charges on Item A.12.1	%	R70 000,00	
A.13		PSA8.8.4	Location and Protection of existing services	Sum	1		
TOTAL CARRIED FORWARD TO SUMMARY							

[illegible]

CONSTRUCTION OF KUTAMA/SINTHUMULE SPORTS FACILITIES							
SCHEDULE OF QUANTITIES							
ITEM	LI	PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
			SECTION C: EARTHWORKS				
		SABS 1200D	Earthworks				
C.1		8.3.1	Site Preparations				
C.1.1	LI	8.3.1.2	Remove topsoil to nominal depth of 150mm, stockpile and maintain	m²	34 562		
		SANS 1200DM					
		8.3.4	Cut to fill				
C.2.1			Compact to 90% of modified AASHTO maximum density	m³	4 000		
			Borrow to fill				
C.2.2			Compact to 90% of modified AASHTO maximum density	m³	5 000		
			Extra-over for item C.2.1 above for:				
			Intermediate excavation	m³	2 500		
C.2.3			Hard rock excavation	m³	400		
		SABS 1200DM					
C.3		8.3.3	Treatment of road and field bed				
C.3.1	LI		Rip and compact 150mm Insitu material, to 93% ModAASHTO	m³	9 945		
	147.12		Overhaul:				
		.01	Limited overhaul	m³	500		
		.02	Long overhaul	m³-km	9 000		
		SABS 1200D					
C.4		8.3.4(a)	Extra-over for importation of materials from commercial sources:				
C.4.1	LI		a) Football/Rugby field				
C.4.1.2			50mm of 19mm crusher run stone for subsoil drainage	m³	1 029		
C.4.1.3			50mm Crusher run base coarse layer	m³	1 239		
C.4.1.4			25mm coarse river sand	m³	617		
C.4.1.5			100mm weed free topsoil	m³	1 235		
				TOTAL CARRIED OVER			

TOTAL CARRIED FORWARD TO SUMMARY

TOTAL CARRIED OVER

CONSTRUCTION OF KUTAMA/SINTHUMULE SPORTS FACILITIES							
SCHEDULE OF QUANTITIES							
ITEM		PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
BROUGHT FORWARD							
D.5	LI		Line Markings				
D.5.1			Setting out and marking 120mm wide dermacation white lines for Rugby playfield	m	1200		
D.5.2			Setting out and marking 120mm wide dermacation yellow lines for Football playfield	m	570		
D.5.3			Setting out and marking 120mm wide dermacation yellow lines for Athletic track	m	4500		
D.6			Specialist Items				
D.6.1			Supply and install set of steel portable Football goal posts complete with nets as per the specification on drawings	No	1		
D.6.2			Supply and install a set of Rugby goal posts as per the specifications on the drawings	No	1		
D.6.3			Supply and install manual scoreboard for Footbal and Rugby as per the specification on drawings	No	2		
			Supply and install shot put ball, shot put ring with stop block as the drawing	No.	1		
			Supp and install Discuss/Hammer disk, Discuss ring with stop block as per the drawing	No.	1		
			Supp and install Long & tripple jump take off board,tray and lid	Sum	1		
			Construct with concrete long/ tripple runway, shot put and discuss/hammer	m³	20		
			Construct Long jump sand pit and fill with fine river sand	m³	9		
			sandwich system to 40m long/tripple jump running track, with EPDM layer, polyurethane binder & SBR layer	m²	50		
D.6.4			Construction of the Western 600 Seater Concrete Grand Stand with Changing Rooms and Ablution Facility and complete as per the specification on drawings	Prov. Sum	1	R9 000 000,00	R9 000 000,00
D.5.6			Provision of Roof structure for 600 Seater Concrete Grand Stand complete as per the drawings	Prov. Sum	1	R1 200 000,00	R1 200 000,00
			Handling costs and profit in respect of sub item above	%	R10 200 000,00	
			Refurbishment of Existing steel stand including minor repairs and repainting	Sum	1		
TOTAL CARRIED OVER							

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CONSTRUCTION OF KUTAMA/SINTHUMULE SPORTS FACILITIES						
SCHEDULE OF QUANTITIES						
ITEM	PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
BROUGHT FORWARD						
E.4		Spectator Stands				
E.4.1		Supply and installation of 5 Tier 50 Seater movable Spectator Stands with wheels and flat roof	Prov Sum	2	R30 000,00	R60 000,00
E.5		Equipment and Accessories				
E.5.1		Supply and install 4 x steel benches of about 2,5 m long and 0,5m wide with back support	No.	4		
		Supply and install 2x high rise tennis umpire chairs	No.	2		
E.8	LI	Fencing for Combo Courts				
E.8.1		Supply and install fence and complete as follows: 72 x 2mm round tubing corner poles, 51 x 2mm round tubing intermediate poles(4m apart), 32 x 2mm round tubing top rail, 31 x 2mm joining pipe, 3.6m x 50mm x 2mm painted mesh, 900mm x 1.8m gate with gates post,3 mm straining wire, 1.6mm binding wire, caps on top of poles: e.t.c	m	140		
		Traditional Games Allowance for traditional sports under a shaded area with paved area, with sports like Morabaraba, Diketo, Kgati, etc	Prov Sum	1	R350 000,00	R350 000,00
		Handling costs and profit in respect of sub item above	%	R410 000,00	
TOTAL CARRIED FORWARD TO SUMMARY						

TOTAL CARRIED FORWARD TO SUMMARY

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CONSTRUCTION OF KUTAMA/SINTHUMULE SPORTS FACILITIES							
SCHEDULE OF QUANTITIES							
ITEM	LI	PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
BROUGHT FORWARD							
G.5		8.2.2	Supply only of Bedding by importation				
G.5.1		8.2.2.1	From other necessary excavation				
G.5.1.1			b) Selected fill material	m³	16		
G.5.2		8.2.2.1	From other borrow pits				
G.5.2.1			b) Selected fill material	m³	12		
G.5.3		8.2.2.1	From other commercial sources				
G.5.3.1			b) Selected fill material	m³	12		
G.6		8.2.3	Bedding Cradle of selected granular material	m³	330		
		SABS 1200L	<u>MEDIUM - PRESSURE PIPELINES</u>				
G.7	LI	8.2.1	Supply, lay, bed, test and disinfect pipes complete with Couplings:				
			<u>Pipes</u>				
G.7.1			32mm Dia. Class 8 HDPE	m	190		
G.7.2			75mm Dia. Class 9 u PVC	m	820		
G.7.3			90mm Dia. Class 9 u PVC	m	700		
G.8	LI	8.2.2	Extra over Item G.7 for the supplying, laying, bedding of specials, complete with couplings:				
			<u>Bends</u>				
			<u>75mm Dia. uPVC</u>				
G.8.2			32°	No	2		
G.8.3			45°	No	4		
G.8.4			90°	No	1		
			<u>90mm Dia. uPVC</u>				
G.8.6			32°	No	1		
G.8.7			45°	No	2		
G.8.8			90°	No	2		
TOTAL CARRIED OVER							

CONSTRUCTION OF KUTAMA/SINTHUMULE SPORTS FACILITIES							
SCHEDULE OF QUANTITIES							
ITEM	LI	PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
					BROUGHT FORWARD		
			<u>Cast iron equal tee:</u>				
G.8.9			32 x 32 x 32	No	2		
G.8.10			75 x 75 x 75	No	1		
G.8.11			90 x 90 x 90	No	3		
			<u>Cast iron Unequal tee:</u>				
G.8.12			32 x 32 x 20	No	6		
G.8.13			75 x 75 x 32	No	6		
G.8.14			90 x 90 x 75	No	4		
			<u>Elbows</u>				
G.8.15			75mm Dia.	No	4		
G.8.16			90mm Dia.	No	2		
			<u>Plasson Saddles</u>				
G.8.17			75mm Dia.	No	2		
G.8.18			90mm Dia.	No	2		
			<u>Reducers</u>				
			90x32	No	4		
			75X32	No	2		
			90X75	No	4		
			<u>VALVES</u>				
G.9	LI	8.2.3	Extra over Item G.7 for the supplying, laying, bedding, and testing of valves as per the drawings:				
			<u>Isolation Valves</u>				
G.9.1			32mm Dia.	No	10		
G.9.2			75mm Dia.	No	6		
G.9.3			90mm Dia.	No	5		
G.10	LI	8.2.11	<u>Anchor or Thrust Block and Pedestals</u>				
G.10.1			Anchor Thrust blocks with 20Mpa concrete. Rate to include excavation, material and placing	m³	7		
G.11	LI	SABS 1200LF	Construct Communal Standpipe complete,including saddles, as per the specification on the drawings	No.	5		
			<u>Hydrants</u>				
			Supply and install 90mm Hydrant complete with valve as per specification	No	2		
					TOTAL CARRIED OVER		

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TOTAL CARRIED FORWARD TO SUMMARY

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CONSTRUCTION OF KUTAMA/SINTHUMULE SPORTS FACILITIES							
SCHEDULE OF QUANTITIES							
ITEM		PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
BROUGHT FORWARD							
		SANS 1200MK	Kerbing and Channelling				
	LI	8.2.5	Chutes				
I.2			Cast insitu class 25/19 concrete chutes as per the drawing	m	50		
	LI	8.2.6.2	Inlet, outlet, transition and similar structures:				
I.3			a) Chuts inlet for concrete side channel concrete class 25/19	No.	8		
I.4	LI	8.2.7	Trimming of excavations for concrete - lined open drains				
I.4.1			a) In soft material	m ³	240		
I.4.2			b) In hard material	m ³	160		
	LI	8.2.8	Cast-in-situ concrete lining to open drains:				
I.5			Cast-in-situ concrete (class 25/19)	m ³	34		
I.6	LI	8.2.9	Formwork to cast-in-situ concrete lining to open drains (class F2 surface finish)	m ²	15		
I.7	LI	8.2.10	Sealed joints in concrete linings of open drains	m	240		
I.8	LI	8.2.11	Concrete screed or backfill below chutes (Concrete class 25/19)	m ³	9		
I.9		8.2.13	Polyethylene sheeting (0,15 mm thick) for concrete lined open drains	m ²	400		
		SANS 1200MK	Gabions and Pitching				
	8.2.5		Pitching				
I.10	LI		b) Grouted stone pitching	m ²	400		
I.11			Erosion protection				
I.11.1			Supply and Install Precast Armoflex (340mmx400mmx95mm) erosion control blocks	m ²	30		
I.11.2			Grassing for embankment	m ²	400		
TOTAL CARRIED FORWARD TO SUMMARY							

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CONSTRUCTION OF KUTAMA/SINTHUMULE SPORTS FACILITIES							
SCHEDULE OF QUANTITIES							
ITEM		PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
BROUGHT FORWARD							
			Manholes				
			500mm x 500mm x 800mm Electrical Manhole complete with heavy duty steel cover				
J.1.7			Supply	No	2		
J.1.8			Install	No	2		
			Sleeves				
			110mm diameter PVC Kabelflex Sleeves				
J.1.9			Supply	m	180		
J.1.10			Install	m	180		
			Draw Wire				
			1.6mm² Steel draw wire.				
J.1.11			Supply	m	500		
J.1.12			Install	m	500		
			Route Markers				
			Concrete Cable Route Markers				
J.1.13			Supply	No	25		
J.1.14			Install	No	25		
			Cable Covers				
			Cable Concrete Covers				
J.1.15			Supply	No	20		
J.1.16			Install	No	20		
TOTAL CARRIED OVER							

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CONSTRUCTION OF KUTAMA/SINTHUMULE SPORTS FACILITIES							
SCHEDULE OF QUANTITIES							
ITEM		PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
BROUGHT FORWARD							
J.2			BULK POWER SUPPLY				
			100kVA/ 22kV/11kV - 420V Inland Pole Top Mounted Transformer complete with Drop Out Fuses , Morsdorf Fuses, Surge Arrestors and all other accessories to ensure Pole Mount to ESKOM standards. Transformer to be out off line and mounted on 9m (180mm-200mm) wood pole				
			100kVA Transformer				
J.2.1			Supply	No	1		
J.2.2			Install	No	1		
			Transformer earthing complete with crows feet	Lot	1		
J.3			ELECTRICITY CONNECTION				
J.3.1			Bulk Electrical Power Connection with ESKOM	Pro Sum	1	R350 000,00	R350 000,00
J.4			MV RETICULATION				
			OVERHEAD MV LINE CONSTRUCTION				
			Supply, Deliver to site all materials required to ensure construction of a 1260m overhead MV Line comprised of fox conductor, 11m (160mm-180mm) and (180mm - 200mm) treated wood poles structures, stays, strut poles and all accessories required to construct an overhead MV line to ESKOM standards				
			Fox Conductor				
J.4.1			Supply	m	1260		
J.4.2			Install	m	1260		
			Structure D-DT1710 (MV intermediate 0-10 deg 3Ph 600mm spacing)				
J.4.3			Supply	No	5		
			Install	No	5		
TOTAL CARRIED OVER							

CONSTRUCTION OF KUTAMA/SINTHUMULE SPORTS FACILITIES										
SCHEDULE OF QUANTITIES										
ITEM		PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT			
BROUGHT FORWARD										
			Structure D-DT1715 (MV Strain 30-90 deg 3Ph 600mm spacing with 2 stays)							
J.4.6			Supply	No	2					
J.4.7			Install	No	2					
			Structure D-DT0341 (MV stay wires)							
J.4.8			Supply	No	2					
J.4.9			Install	No	2					
			Structure D-DT0351 (11m strut pole)							
J.4.10			Supply	No	1					
J.4.11			Install	No	1					
			Excavation for 11m pole holes (1.8m deep) to ESKOM standard							
J.4.12			Supply	No	7					
J.4.13			Install	No	7					
			Excavation for 11m striut pole hole to ESKOM standard							
J.4.14			Supply	No	1					
J.4.15			Install	No	1					
			Excavation for MV stay wires to ESKOM standard							
J.4.16			Supply	No	2					
J.4.17			Install	No	2					
TOTAL CARRIED OVER										

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CONSTRUCTION OF KUTAMA/SINTHUMULE SPORTS FACILITIES							
SCHEDULE OF QUANTITIES							
ITEM		PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
BROUGHT FORWARD							
J.5			LV RETICULATION				
			LV DISTRIBUTION CABLES				
			Supply and installation of 600/1000V copper cables installed in the ground				
			70 mm ² 4 core PVC PVC SWA PVC 600/1000V copper cable				
J.5.1			Supply	m	100		
J.5.2			Install	m	100		
			25 mm ² 4 core PVC PVC SWA PVC 600/1000V copper cable				
J.5.3			Supply	m	350		
J.5.4			Install	m	350		
			10 mm ² 4 core PVC PVC SWA PVC 600/1000V copper cable				
J.5.5			Supply	m	1740		
J.5.6			Install	m	1740		
			6 mm ² 4 core PVC PVC SWA PVC 600/1000V copper cable				
J.5.7			Supply	m	50		
J.5.8			Install	m	50		
			2.5 mm ² 4 core PVC PVC SWA PVC 600/1000V copper cable				
J.5.9			Supply	m	350		
J.5.10			Install	m	350		
			10 mm ² 2 core PVC PVC SWA PVC 600/1000V copper cable				
J.5.11			Supply	m	480		
J.5.12			Install	m	480		
TOTAL CARRIED OVER							

CONSTRUCTION OF KUTAMA/SINTHUMULE SPORTS FACILITIES								
SCHEDULE OF QUANTITIES								
ITEM		PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
BROUGHT FORWARD								
			2.5 mm² 2 core PVC PVC SWA PVC 600/1000V copper cable					
J.5.13			Supply	m	350			
J.5.14			Install	m	350			
			16 mm² bare copper earth wire (BCEW)					
J.5.15			Supply	m	100			
J.5.16			Install	m	100			
			10 mm² bare copper earth wire (BCEW)					
J.5.17			Supply	m	800			
J.5.18			Install	m	800			
			6 mm² bare copper earth wire (BCEW)					
J.5.19			Supply	m	200			
J.5.20			Install	m	200			
			4 mm² bare copper earth wire (BCEW)					
J.5.21			Supply	m	1200			
J.5.22			Install	m	1200			
			2.5 mm² bare copper earth wire (BCEW)					
J.5.23			Supply	m	400			
J.5.24			Install	m	400			
			1.5 mm² bare copper earth wire (BCEW)					
J.5.25			Supply	m	550			
J.5.26			Install	m	550			
TOTAL CARRIED OVER								

CONSTRUCTION OF KUTAMA/SINTHUMULE SPORTS FACILITIES							
SCHEDULE OF QUANTITIES							
ITEM		PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
					BROUGHT FORWARD		
J.6			LV CABLE TERMINATIONS				
			Supply and installation of 600/1000V copper cable terminations complete with lugs and earthings as required and specified Cable Termination Kit (outdoor) for 70 mm² 4 core PVC Sheathed SWA				
			600/1000V underground cable				
J.6.1			Supply	No	2		
J.6.2			Install	No	2		
			Cable Termination Kit (outdoor) for 25 mm² 4 core PVC Sheathed SWA				
			600/1000V underground cable				
J.6.3			Supply	No	2		
J.6.4			Install	No	2		
			Cable Termination Kit (outdoor) for 10 mm² 4 core PVC Sheathed SWA				
			600/1000V underground cable				
J.6.5			Supply	No	22		
J.6.6			Install	No	22		
			Cable Termination Kit (outdoor) for 6 mm² 4 core PVC Sheathed SWA				
			600/1000V underground cable				
J.6.7			Supply	No	2		
J.6.8			Install	No	2		
			Cable Termination Kit (outdoor) for 2.5 mm² 4 core PVC Sheathed SWA				
			600/1000V underground cable				
J.6.9			Supply	No	6		
					TOTAL CARRIED OVER		

CONSTRUCTION OF KUTAMA/SINTHUMULE SPORTS FACILITIES							
SCHEDULE OF QUANTITIES							
ITEM		PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
BROUGHT FORWARD							
J.6.10			Install	No	6		
			Cable Termination Kit (outdoor) for 10 mm² 2 core PVC Sheathed SWA 600/1000V underground cable				
J.6.11			Supply	No	10		
J.6.12			Install	No	10		
			Cable Termination Kit (outdoor) for 2.5 mm² 2 core PVC Sheathed SWA 600/1000V underground cable				
J.6.13			Supply	No	4		
J.6.14			Install	No	4		
J.7			LV DISTRIBUTION BOARDS (KIOSKS)				
			Supply and Installation of LV Kiosk as per attached drawings and specifications with labels, legends, danger warning signs, and green locks locks with master keys.				
			KIOSK 1 (Mounted on a plinth)				
J.7.1			Supply	No	1		
J.7.2			Install	No	1		
			KIOSK 2 (Mounted on a plinth)				
J.7.3			Supply	No	1		
J.7.4			Install	No	1		
			KIOSK 3 (Mounted on a plinth)				
J.7.5			Supply	No	1		
J.7.6			Install	No	1		
			KIOSK 4 (Mounted on a plinth)				
J.7.7			Supply	No	1		
J.7.8			Install	No	1		
TOTAL CARRIED OVER							

CONSTRUCTION OF KUTAMA/SINTHUMULE SPORTS FACILITIES								
SCHEDULE OF QUANTITIES								
ITEM		PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
BROUGHT FORWARD								
			KIOSK 5 (Mounted on a plinth)					
J.7.9			Supply	No	1			
J.7.10			Install	No	1			
			DB-Guard House (Flush Mounted on Wall)					
J.7.11			Supply	No	1			
J.7.12			Install	No	1			
			DB-Pavilion 1 (Flush Mounted on Wall)					
J.7.13			Supply	No	1			
J.7.14			Install	No	1			
			DB-Pavilion 2 (Flush Mounted on Wall)					
J.7.15			Supply	No	1			
J.7.16			Install	No	1			
TOTAL CARRIED OVER								

CONSTRUCTION OF KUTAMA/SINTHUMULE SPORTS FACILITIES							
SCHEDULE OF QUANTITIES							
ITEM		PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
BROUGHT FORWARD							
			25m Flood lighting masts suitable for mounting an array of 15 x 144LED/463 LED Luminaire. Flood lighting mast shall have top support structure complete with tilting frame to allow tilting luminaires to the required angles as per the detail lighting design. Rate shall include costs for supply, deliver to site, install the mast into position (which shall include excavation for each masts foundation, construction of concrete base, lighting and earthing of mast system, distribution board, winching system , all tests required such as concrete cube tests , earthing and lightning protection tests etc).				
J.8.1.1			Supply	No	4		
J.8.1.2			Install	No	4		
			144LED/463W LED Luminaire similar or equivalent to the BEKA Omnistar 470 optic 5125 .				
J.8.1.3			Supply	Sum	8		
J.8.1.4			Install	Sum	8		
			144LED/463W LED Luminaire similar or equivalent to the BEKA Omnistar 470 optic 5126 .				
J.8.1.5			Supply	Sum	8		
J.8.1.6			Install	Sum	8		
			144LED/463W LED Luminaire similar or equivalent to the BEKA Omnistar 470 optic 5127 .				
J.8.1.7			Supply	Sum	4		
J.8.1.8			Install	Sum	4		
			144LED/463W LED Luminaire similar or equivalent to the BEKA Omnistar 470 optic 5128 .				
J.8.1.9			Supply	Sum	4		
			Install	Sum	4		
TOTAL CARRIED OVER							

CONSTRUCTION OF KUTAMA/SINTHUMULE SPORTS FACILITIES							
SCHEDULE OF QUANTITIES							
ITEM		PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
BROUGHT FORWARD							
			8m Flood lighting masts suitable for mounting an array of 2 x 128LED/279W LED Luminaire. Flood lighting mast shall have top support structure complete with tilting frame to allow tilting luminaires to the required angles as per the detail lighting design. Rate shall include costs for supply, deliver to site, install the mast into position (which shall include excavation for each masts foundation, construction of concrete base, lighting and earthing of mast system, distribution board, winching system , all tests required such as concrete cube tests , earthing and lightning protection tests etc).				
J.8.1.11			Supply	No	6		
J.8.1.12			Install	No	6		
			128LED/279W LED Luminaire similar or equivalent to the BEKA LEDFlood ma1282794511A1G				
J.8.1.13			Supply	Sum	8		
J.8.1.14			Install	Sum	8		
			5m hot dipped galvanised steel pole complete with gland plate, MCB and base plate. Rates shall include costs for supply, deliver to site, install the pole into position (which shall include excavation for each poles foundation, construction of concrete base).				
J.8.1.15			Supply	No	13		
J.8.1.16			Install	No	13		
			55W LED Post top similar or equivalent to the BEKA ZELA 55 ASAV76BGR1				
J.8.1.17			Supply	Sum	13		
TOTAL CARRIED OVER							

CONSTRUCTION OF KUTAMA/SINTHUMULE SPORTS FACILITIES							
SCHEDULE OF QUANTITIES							
ITEM		PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
BROUGHT FORWARD							
J.8.1.18			Install	Sum	13		
			PAVILION 1 - ELECTRICAL INSTALLATION				
J.8.2			Complete Electrical Installation at the Pavilion 1 building to SANS 10142-1	Prov. Sum	1	R550 000,00	R550 000,00
			GUARD HOUSE - ELECTRICAL INSTALLATION				
J.8.4			Complete Electrical Installation at the Guard House building to SANS 10142-1	Prov. Sum	2	R35 000,00	R70 000,00
J.9			TESTING AND COMMISSIONING				
J.9.1			Testing and comissioning of the entire medium and low voltage network and area lighting including the provision of all test equipment required and issuing of a certificate of compliance for the installation.	sum	1		
J.9.2			Provide as built drawings for the whole electrical installation to the engineer	set	2		
TOTAL CARRIED FORWARD TO SUMMARY							

TOTAL CARRIED FORWARD TO SUMMARY

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TOTAL CARRIED FORWARD TO SUMMARY

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ART C3: SCOPE OF WORK

<u>C3.1</u>	<u>DESCRIPTION OF WORKS</u>	95
<u>C3.2</u>	<u>ENGINEERING</u>	99
<u>C3.3</u>	<u>CONSTRUCTION</u>	100

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C1.1 DESCRIPTION OF WORKS

C3.1.1 Employer's Objectives

The employer's objectives are to fast track the delivery of public infrastructure using plant and local labour in the project for Construction of Kutama Sinthumule Sports Facility.

C3.1.2 Location of the Works

The project is located in Kutama Sinthumule Villages in Louis Trichardt of the MAKHADO LOCAL MUNICIPALITY under Vhembe District of the Limpopo Province

Coordinates:

Latitude 23°05'49.3"S

Longitude 29°41'57.2"E.

C3.1.3 Proposed scope of works

The proposed scope of works for the sports facility includes the following

1.1. Construction of Football/ Rugby field and Athletics Track

- The football/rugby field with kikuyu surface, irrigation and drainage system and kerbing on the outside edge of the field
- 1 precast concrete grandstand with a capacity to accommodate 600 people

1.2. Construction of Combo courts

- 1 Tennis/ Netball court
- 1 Basketball/ Volleyball court
- 2 spectator stands, 4 benches and 2 tennis umpire chairs

1.3. Construction of parking area and access roads

- The parking area for cars and access roads will be constructed by ripping the existing 150mm layer and re-compacted it to 90% MOD ASSHTO and overlay with 80mm thick interlocking paving bricks.
- Parking area for the buses will be rip and re-compacted

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1.4. Construction of change rooms

- Change rooms with ablution facilities and store rooms will be constructed under the grand stand

1.5. Construction of sewerage facilities

- A septic tank and sewer reticulation system facility

1.6. Construction of storm water infrastructure

1.7. Electrical & Mechanical installation

- Bulk supply of electricity with lights to the field, the combo courts and ablution facility
- Electrical installation to all new buildings

1.8. Construction of Enviroloo toilets

- A block of enviroloo toilets with 5 seater female, 4 seater male with urinals, and 1 disabled toilet

1.9. Construction of water supply line

- Drilling and equipping a borehole and installation of 60kl elevated tank to cater for water supply
- Internal water reticulation to buildings, irrigation and standpipes

1.10. Construction of perimeter fencing and access control

- Perimeter fencing will be done with Cochrane Clear Vu with 2 vehicular access gates
- 2 security guard houses on each of the gates

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C3.1.6 General Information

C3.1.6.1 Drawings

The reduced drawings contained in Annexure C5.2 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.

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.

C3.1.6.2 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.

C3.1.6.3 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.

C3.1.6.4 Additional Requirements for Construction Activities

C3.1.6.4.1 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.

C3.1.6.4.2 The contractor shall submit proposals in connection with directional signs to the engineer for approval.

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C3.1.6.5 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.

C3.1.6.6 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.

C3.1.7 Labour Regulations

A27 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.

A28 Applicable labour laws

The Ministerial Determination for Special Public Works Programmes, issued in terms of the Basic Conditions of Employment Act of 1997 by the Minister of Labour in Government Notice R347 in Government Gazette 33310 of 4 May 2012, available at: <http://www.sabinet.co.za> as reproduced below, shall apply to works described in the scope of work as being labour intensive and which are undertaken by unskilled or semi-skilled workers.

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C1.2 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

The Scope of Works to be constructed is detailed but not exactly limited to that in the Schedule of Quantities, Specification Document and Book of Drawings that form part of this Tender.

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 design and modifications thereto shall be communicated in writing and the Contractor and Engineer shall maintain master lists to record and track all transaction.

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C1.3 CONSTRUCTION

C3.3.1 STANDARD SPECIFICATIONS

Applicable SANS 1200 Standardized Specifications

The applicable standardized specifications for this Contract shall be the following:

- ✓ SANS 1200 A: General (1986)
- ✓ SANS 1200 AB: Engineer's Office (1986)
- ✓ SANS 1200 C: Site clearance (1980)
- ✓ SANS 1200 DB: Earthworks (1989)

C3.3.2 AMENDMENTS TO STANDARD SPECIFICATIONS

The following variations to standardized specifications and additional clauses are applicable to this Contract and are contained in the "Annexure to the Scope of Work".

- | | |
|--------|---------------------------------|
| ✓ PSA | General |
| ✓ PSC | Site Clearance |
| ✓ PSDB | Earthworks (Removal of Topsoil) |
| ✓ PSDM | Earthworks (Gravel Surfacing) |

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PSA **GENERAL**

PSA 1 **SCOPE**

REPLACE THE CONTENTS OF SUB-CLAUSE 1.1, INCLUDING THE NOTES, WITH THE FOLLOWING:

"1.1 This specification covers requirements, principles and responsibilities of a general nature which are generally applicable to civil engineering construction and building works contracts, as well as the requirements for the Contractor's establishment on the Site."

PSA 2 **INTERPRETATIONS**

PSA 2.3 **DEFINITIONS**

IN THE OPENING PHRASE BETWEEN THE WORDS "specification" AND "the following",

INSERT THE WORDS "the definitions given in the Conditions of Contract and".

a) General

ADD THE FOLLOWING DEFINITIONS:

"'General Conditions' and 'Conditions of Contract': The General Conditions of Contract specified for use with this Contract, together with the Special Conditions of Contract as applicable.

'Specified': As specified in the Standardized Specifications, the Drawings or the Project Specifications. 'Specifications' shall have the corresponding meaning."

b) Measurements and payment

REPLACE THE DEFINITIONS FOR "Fixed charge", "Time-related charge" AND "Value- related charge" WITH THE FOLLOWING

" 'Fixed charge': A charge that is not subject to adjustment on account of variations in the value of the Contract Price or the time allowed in the Contract for the completion of the work.

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'Time-related charge': A charge, the amount of which varies in accordance with the Time for Completion of the Works, adjusted in accordance with the provisions of the Contract.

'Value-related charge': A charge, the amount of which varies pro rata with the final value of the measured work executed and valued in accordance with the provisions of the Contract.'

PSA 2.4 ABBREVIATIONS

- a) Abbreviations actions relating to standard documents

ADD THE FOLLOW/NG ABBREVIATION:

"CKS: SANS Co-ordinating Specification

PSA 3 MATERIALS

PSA 3.1 QUALITY

ADD THE FOLLOWING AT THE END OF SUB-CLAUSE 3.1

"All manufactured materials supplied shall be new materials unless the contrary is specified. All materials specified to be in accordance with SANS Specifications Shall bear the SANS mark, where such a mark is available for the type of product."

PSA 3.3 ORDERING OF MATERIALS

The quantities set out in the schedule of quantities have been carefully determined from calculations based off data available at the time and should therefore be considered to be approximate quantities only. Before ordering materials of any kind the contractor shall check with the engineer whether or not the scope of the work for which the materials are required is likely to change substantially. No liability or responsibility whatsoever shall be attached to the employer for materials ordered by the contractor except when ordered in accordance with written confirmation issued by the engineer

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PSA 4 **PLANT**

PSA 4.1 **SILENCING OF PLANT**

REPLACE THE CONTENTS OF SUB-CLAUSE 4.1 WITH THE FOLLOWING:

"The Contractor's attention is drawn to the applicable regulations pertaining to noise and hearing conservation, framed under the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) as amended

The Contractor shall at all times and at his own cost, be responsible for implementing all necessary steps to ensure full compliance with such regulations, including but not restricted to the provision and use of suitable and effective silencing devices for pneumatic tools and other plant which would otherwise cause a noise level in excess of that specified in the said regulations.

Where appropriate, the Contractor shall further, by means of temporary barriers, effectively isolate the source of such noise in order to comply with the said regulations."

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PSA 4.2 CONTRACTOR'S OFFICES, STORES AND SERVICES

ADD THE FOLLOWING PARAGRAPH BEFORE THE EXISTING FIRST PARAGRAPH IN SUB-CLAUSE 4.2:

"The Contractor's buildings, sheds and other facilities erected or utilized on the Site for the purposes of the Contract shall be fenced off and shall contain all offices, stores, workshops, testing laboratories, toilet facilities, etc. as may be required by the Contractor. The facilities shall always be kept in a neat and orderly condition.

No personnel may reside on the Site. Only night-watchmen may be on the Site after hours."

DELETE "and first-aid services" IN THE SECOND PARAGRAPH OF SUB-CLAUSE 4.2 AND ADD THE FOLLOWING:

"The Contractor shall provide on the Site and in close proximity to the actual locations where the work is being executed, one toilet per 10 workmen, which toilets shall be effectively screened from public view and their use enforced. Such toilets shall be relocated from time to time as the location of the work being executed changes, so as to ensure that easy access to the toilets is maintained.

The Contractor shall, where applicable, make all necessary arrangements and pay for the removal of night soil."

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PSA 5 **CONSTRUCTION**

PSA 5.1 **SURVEY**

PSA 5.1.2 Preservation and replacement of survey beacons and pegs subject to the Land Survey Act

DELETE THE WORDS "in the vicinity of boundaries" IN THE SECOND SENTENCE OF SUB-CLAUSE 5.1.2 AND REPLACE THE WORDS "under the direction of" IN THE SAME SENTENCE WITH "in consultation and liaison with".

ADD THE FOLLOWING AFTER THE SECOND SENTENCE OF SUB-CLAUSE 5.1.2:

"The Contractor and the Engineer shall record on the said list, their concurrence or disagreement (as the case may be) regarding the completeness and accuracy of the details recorded therein."

REPLACE THE THIRD SENTENCE OF SUB-CLAUSE 5.1.2 WITH THE FOLLOWING

"At the completion of the Contract, the Contractor shall expose all pegs that were listed at the commencement of the construction as being in order and the Contractor shall arrange with a registered Land Surveyor for the checking of the positions of all such pegs and the replacement of those that the Land Surveyor's check reveals have become disturbed or damaged. The Contractor shall, as a precedent to the issue of the Certificate of Completion, provide to the Engineer, a certificate from the registered land surveyor, certifying that all the pegs listed at the commencement of construction in accordance with the provisions of this clause, have been checked and that those found to have been disturbed, damaged or destroyed have been replaced in their correct positions, all in accordance with the provisions of the said Act.

The costs of all checking, replacement and certification as aforesaid shall be entirely for the Contractor's account. This, with the provision always that the Contractor shall not be held liable for the cost of replacement of pegs which:

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- a) cannot reasonably be re-established in their original positions by reason of the finished dimensions of the permanent works, and
- b) The Contractor can prove beyond reasonable doubt to the satisfaction of the Engineer, were disturbed, damaged or destroyed by others beyond his control."

PSA 5.3 PROTECTION OF EXISTING STRUCTURES

REPLACE "Machinery and Occupational Safety Act, 1983 (Act No 6 of 1983)"
WITH

"Occupational Health and Safety Act, 1993 (Act No 85 of 1993), as amended,"
AND INSERT THE FOLLOWING AFTER "(Act No. 27 of 1956)": "as amended

PSA 5.4 LOCATION AND PROTECTION OF EXISTING SERVICES

PSA 5.4.1 Location of existing services

Before commencing with any work in an area, the Contractor shall ascertain the presence and actual position of all services which can reasonably be expected by an experienced and competent contractor to be present on, under, over or within the Site.

Without in any way limiting his liability in terms of the Conditions of Contract in relation to Damage to property and interference with services, the Contractor shall, in collaboration with the Engineer, obtain the most up-to-date plans as are available, showing the positions of services existing in the area where he intends to work. Neither the Employer nor the Engineer offers any warranty as to the accuracy or completeness of such plans and because services can often not be reliably located from plans, the Contractor shall ascertain the actual location of services depicted on such plans by means of careful inspection of the Site.

Thereafter, the Contractor shall, by the use of appropriate methodologies, carefully expose the services at such positions as are agreed to by the Engineer, for the purposes of verifying the exact location and position of the services.

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Where the exposure of existing services involves excavation to expose underground services, the further requirements of sub-clauses 4.4 and 5.1.2.2 Of SANS 1200 D (as amended) shall apply.

The aforesaid procedure shall also be followed in respect of services not shown on the plans But which may reasonably be anticipated by an experienced contractor to be present or potentially present on the site.

All services, the positions of which have been determined as aforesaid at the critical points, shall henceforth be designated as 'known services' and their positions shall be indicated by the Contractor on a separate set of drawings, a copy of which shall be furnished to the Engineer without delay

As soon as any service which has not been identified and located as described above is encountered on, under, over or within the site, it shall henceforth be deemed to be a known service and the aforesaid provisions pertaining to locating, verifying and recording its position on the balance of the site shall apply. The Contractor shall notify the Engineer immediately when any such service is encountered or discovered on the Site.

Whilst he is in possession of the Site, the Contractor shall be liable for all loss of or damage as may occur to

- a) known services, anywhere along the entire lengths of their routes, as may reasonably be deduced from the actual locations at which their positions were verified as aforesaid, due cognizance being taken of such deviations in line and level which may reasonably be anticipated, and
- b) any other service which ought reasonably to have been a known service in accordance with the provisions of this clause,

The Contractor shall also be liable for consequential damage in regard to (a) and (b), whether caused directly by the Contractor's operations or by the lack of proper protection.

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No separate payment will be made to the Contractor in respect of his costs of providing, holding available on the Site and utilizing the said detecting and testing equipment, nor for any costs incurred in preparing and submitting to the Engineer the Drawings as aforesaid. These costs shall be deemed included in the Contractor's other tendered rates and prices included in the Contract.

Payment to the Contractor in respect of exposing services at the positions agreed by the Engineer and as described above will be made under the payment items (if any) as may be provided for in the respective sections of the specifications pertaining to the type of work involved.

PSA 5.4.2 Protection during construction

The Contractor shall take all reasonable precautions and arrange its operations in such a manner as to prevent damage occurring to all known services during the period which the Contractor has occupation and/or possession of the Site.

Services left exposed shall be suitably protected from damage and in such a manner as will eliminate any danger arising therefrom to the public and/or workmen, all in accordance with the requirements of the prevailing legislation and related regulations.

Unless otherwise instructed by the Engineer, no services shall be left exposed after its exact position has been determined and all excavations carried out for the purpose of exposing underground services shall be promptly backfilled and compacted. In roadways, the requirements of sub-clause 5.9 of SANS 1200 DB should be observed. In other areas compaction is to be to 90% modified AASHTO density.

PSA 5.4.3 Alterations and repairs to existing services

Unless the contrary is clearly specified in the Contract or ordered by the Engineer, the Contractor shall not carry out alterations to existing services. When any such alterations become necessary, the Contractor shall promptly inform the Engineer, who will either make arrangements for such work to be executed by the owner of the service, or instruct the Contractor to make such arrangements himself

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Should damage occur to any existing services, the Contractor shall immediately inform the Engineer, or when this is not possible, the relevant authority, and obtain instructions as to who should carry out repairs. In urgent cases, the Contractor shall take appropriate steps to minimise damage to and interruption of the service. No repairs of telecommunication cables or electric power lines and cables shall be attempted by the Contractor.

PSA 5.7 SAFETY

REPLACE THE CONTENTS OF SUB-CLAUSE 5.7 WITH THE FOLLOWING:

"Pursuant to the provisions of the Conditions of Contract, and without in any way limiting the Contractor's obligations thereunder, the Contractor shall at his own expense (except only where specific provision (if any) is made in the Contract for the reimbursement to the Contractor in respect of particular items), provide the following:

- a) Provide to its Employees on the site of the works, all safety materials, clothing and equipment necessary to ensure full compliance with tile provisions of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) as amended (hereinafter referred to as the Act) at all times, and shall institute appropriate and effective measures to ensure the proper usage of such safety materials, clothing and equipment at all times;
- b) Provide, install and maintain all barricades, safety signage and other measures to ensure the safety of workmen and all persons in, on and around the site, as well as the general public;
- c) Implement on the site of the works, such procedures and systems and keep all records as may be required to ensure compliance with the requirements of the Act at all times;
- d) Implement all necessary measures so as to ensure compliance with the Act by all subcontractors engaged by the Contractor and their employees engaged on the works;
- e) Full compliance with all other requirements pertaining to safety as may be specified in the Contract.

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The Employer and the Engineer shall be entitled, although not obliged, to make such inspections on the site as they shall deem appropriate, for the purpose of verifying the Contractor's compliance with the requirements of the Act. For this purpose, the Contractor shall grant full access to the site of all parts of the site and shall co-operate fully in such inspections and shall make available for inspection all such documents and records as the Employer's and/or Engineer's representative may reasonably require.

Where any such investigations reveal, or where it comes to the Engineer's attention that the Contractor is in any way in breach of the requirements of the Act or is failing to comply with the provisions of this clause, the Engineer shall, in accordance with the provisions of Clause 39 of the Conditions of Contract, be entitled to suspend progress on the works or any part thereof until such time as the Contractor has demonstrated to the satisfaction of the Engineer, that such breach has been rectified.

The Contractor shall have no grounds for a claim against the Employer for extension of time and/or additional costs if the progress on the works or any part thereof is suspended by the Engineer in terms of this clause, and the Contractor shall remain fully liable in respect of the payment of penalties for late completion in accordance with the provisions of Clause 43(1) of the Conditions of Contract should the Contractor fail to complete the Works on or before the specified due completion date in consequence of the suspension.

Persistent and repeated breach by the Contractor of the requirements of the Act and/or this clause shall constitute grounds for the Engineer to act in terms of Sub-clause 55(1) (5) of the Conditions of Contract and for the Employer to cancel the Contract in accordance with the further provisions of the said Clause 55 (GCC 2015)”

ADD THE FOLLOWING SUB-CLAUSES TO CLAUSE 5:

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PSA 5.9 SITE MEETINGS

The Contractor or his authorised agent will be required to attend regular site meetings, which shall normally be held once a month on dates and at times determined by the Engineer, but in any case whenever reasonably required by the Engineer.; Unless otherwise indicated in the Contract or instructed by the Engineer, such meetings unless be held at the Contractor's offices on the site. At such monthly meetings, matters such as general progress on the works, quality of work, problems, claims, payments, and safety shall be discussed, but not matters concerning the day-to-day running of the Contract.

PSA 5.10 TRAFFIC ACCOMMODATION

a) Scope

It is a condition of this contract that traffic is accommodated taking into account the provisions of the latest edition of the South African Road Traffic Signs Manual (SARTSM). The latest version for use in the accommodation of traffic is volume 2, chapter 13 of the June 1999 edition. Copies of this publication are available from Government Printers - Arma Steyn - Tel:(012) 334 4500, e-mail: asteyn@print.pwv.gov.za.

b) Channelisation devices and barricades

"The use of drums as channelisation devices shall be not permitted. Drums may However be used to set up barriers.

Delineators shall comply with the requirements of SANS 1555;

- i. comply with the manufacturing and reflective requirements of the SARTSM for TW 401 and TW 402 signs and the blades shall be reversible with dimensions as indicated on the drawings.;
- ii. have smooth and round edges and be mounted on a post and base. All components shall be of durable plastic material
- iii. have the lower edge of the reflective part of the delineator mounted not lower than 250mm above the road surface;
- iv. be capable of withstanding the movement of passing vehicles and gusting wind up to 60km/h in typical working conditions without falling over. To achieve this, the base shall be at least 0,18m² and ballasted by sandbags with sand
- v. together with its mounting be designed such that it will collapse in a safe manner under traffic Impact
- vi. minimum size 1000mm x 250mm.

Traffic cones manufactured in a fluorescent red-orange or red plastic material may use only at short term lane deviations during daylight. Cones shall not be

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used on their own, but shall be interspersed with delineators at ratio no exceeding 3:1. Cones used on all deviations shall be 750mm high. Lane closures which continue into the night time shall be demarcated by delineators only.

c) Warning Devices

“All construction vehicles and plant used on the works shall be equipped with rotating amber flashing lights and warning boards as specified. All vehicles and plant before being allowed onto the site shall obtain a clearance permit from the Engineer.”.

PSA 6 **TOLERANCES**

ADD THE FOLLOWING SUB-CLAUSE TO CLAUSE 6:

"PSA 6.4 **USE OF TOLERANCES**

No guarantee is given that the full specified tolerances will be available independently of each other, and the Contractor is cautioned that the liberal or full use of any one or more of the tolerances may deprive him of the full or any use of tolerances relating to other aspects of the work Except where the contrary is specified, or when clearly not applicable, all quantities for measurement and payment shall be determined from the 'authorised' dimensions. These are specified dimensions or those shown on the Drawings or, if changed, as finally prescribed by the Engineer, without any allowance for the specified tolerances. Except if otherwise specified, all measurements for determining quantities for payment will be based on the 'authorised' dimensions If the work is constructed in accordance with the 'authorised' dimensions plus or minus the tolerances allowed, the calculation of quantities will be based on the 'authorised' dimensions regardless of the actual dimensions to which the work has been constructed.

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PSA 7 TESTING

PSA 7.1 PRINCIPLES

PSA 7.1.1 Checking

REPLACE THE LAST SENTENCE WITH THE FOLLOWING:

"The Contractor shall obtain the services of an independent testing laboratory at his own expense (refer to Clause 8 in Portion 1 of the Project Specifications) to carry out the checks prescribed in the various standardized specifications."

PSA 7.1.2 Standard of finishes work not to specification

REPLACE THE WORDS "Where the engineer's checks reveal ..." WITH "Where the checks by the approved laboratory reveal ..."

PSA 7.1 APPROVED LABORATORIES

REPLACE THE CONTENTS OF SUB-CLAUSE 7.2 WITH THE FOLLOWING:

"Unless otherwise specified in the relevant specification or elsewhere in the Project Specification, the following shall be deemed to be approved laboratories in which design work, or testing required in terms of a specification for the purposes of acceptance by the Engineer of the quality of materials used and/or workmanship achieved, may be carried out:

- a) A
ny testing laboratory certified by the South African National Accreditation Systems (SANAS) in respect of the nature and type of testing to be undertaken for the purposes of the Contract
- a) Any testing laboratory owned, managed or operated by the Employer or the

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Engineer;

- b) Any testing laboratory established and operated on the Site by or on behalf of the Employer or the Engineer.
- c) Any other laboratory that the Engineer approves in his absolute discretion."

PSA 8 MEASUREMENT AND PAYMENT

PSA 8.1 MEASUREMENT

PSA 8.1.1 Method of measurement, all sections of schedule

DELETE THE WORDS "and South West Africa".

PSA 8.1.2 Preliminary and General Item or section

PSA 8.1.2.1 Contents

REPLACE THE LAST SENTENCE OF SUB-CLAUSE 8.1.2.1(b) WITH THE FOLLOWING:

"Separate items will be scheduled to cover the fixed, value-related and time-related components (If the Contractor's preliminary and general costs."

PSA 8.1.2.2 Tendered Sums

REPLACE THE CONTENTS OF THIS SUB-CLAUSE WITH THE FOLLOWING:

"Except only where specific provision is made in the Specifications and/or the Schedule of Quantities for separate compensation for any of these items, the Contractor's tendered sums under items PSA 8.3 and PSA 8.4 shall collectively cover all charges for:

r

- risks, costs and obligations in terms of the Conditions of Contract and of this standardized specification;

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- head-office and site overheads and supervision; h
- profit and financing costs; p
- expenses of a general nature not specifically related to any item or items of the permanent or temporary work; e
- providing such facilities on site as may be required by the Contractor for the proper performance of the Contract and for its personnel, including, but without limitation, providing offices, storage facilities, workshops, ablutions, services such as water, electricity, sewage and rubbish disposal, access roads and all other facilities required, as well as for the maintenance and removal on completion of the works of these facilities and cleaning-up of the site of the Contractor's establishment and reinstatement to not less than its original condition, and p
- providing the facilities for the Engineer and his staff as specified in the Contract and their removal from the site on completion of the Contract." p

PSA 8.1 PAYMENT

PSA 8.2.1 Fixed-charge and value-related items

REPLACE THE CONTENTS OF SUB-CLAUSE 8.2.1 WITH THE FOLLOWING:

PSA 8.2.1.1 Fixed-charge items

"Payment of fixed charges in respect of item 8.3.1 will be made as following:

- a) EIGHTY PER CENT (80%) of the sum tendered will be paid when the facilities have been provided and approved;
- b) The remaining TWENTY PERCENT (20%) will be paid when the works have been completed, the facilities have been removed and the site of the

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Contractor's establishment has been cleared and cleaned to the satisfaction of the Engineer.

No adjustment will be made to the sum tendered in respect; of item 8.3.1 should the value of the works finally executed or the time for completion vary in any way from that specified in the tender.

PSA 8.2.1.2 Value-related items

Payment for the sum tendered under item 8.3.2 will be made in three separate instalments as follows:

- a) T
he first instalment, which is 40% of the sum, will be paid when the Contractor has fulfilled all his obligations to date under this specification, the General Conditions of Contract and the Special Conditions of Contract, and when the value of work certified for payment, excluding materials on site and payments for preliminary and general items, is equal to not less than 5% of the total value of the work listed in the Schedule of Quantities.
- b) T
he second instalment, which is 40% of the sum, will be made when the amount certified for payment, including retention moneys but excluding this second instalment, exceeds 50% of the tender sum.
- c) T
he final payment, which is 20% of the sum, will be made when the works have been certified as completed and the Contractor has fulfilled all his obligations to date under this Specification, the General Conditions of Contract and the Special Conditions of Contract.
- d) S
ould the value of the measured work finally completed be more or less than the tender sum the sum tendered under item 8.3.2 will be adjusted up or down in accordance with the provisions of Clause 50 of the Conditions of Contract, and this adjustment will be applied to the third instalment

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PSA 8.2.2 Time-related items

REPLACE THE CONTENTS OF SUB-CLAUSE 8.2.2 WITH THE FOLLOWING:

"Subject to the provisions of sub-clauses 8.2.3 and 8.2.4, payment under item 8.4.1 (time - related item) will be made monthly in equal amounts, calculated by dividing the sum tendered for the item by the tendered Contract period in months, provided always that the total of the monthly amounts so paid for the item is not out of proportion to the value of the progress of the works as a whole."

PSA 8.3 SCHEDULED FIXED-CHARGE AND VALUE-RELATED ITEMS

REPLACE THE CONTENTS OF SUB-CLAUSE 8.3.1 WITH THE FOLLOWING:

PSA 8.3.1 Fixed preliminary and general charges..... Unit: sum

The sums tendered shall include full compensation for all fixed-charge preliminary and general charges as described in sub-clause PSA 8.1.2.2. Payment will be made as described in sub- clause PSA 8.2.1.1

PSA 8.3.2 Value-related preliminary and general charges..... Unit: sum

The sums tendered shall include full compensation for all value-related preliminary and general charges as described in sub-clause PSA 8.1.2.2. Payment will be made as described in sub- clause PSA 8.2.1.2."

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PSA 8.4 SCHEDULED TIME-RELATED ITEMS

REPLACE THE CONTENTS OF SUB-CLAUSE 8.4 WITH THE FOLLOWING:

PSA 8.4.1 Time-related preliminary and general charges..... Unit: sum

The sum tendered shall include full compensation for all time-related preliminary and general charges as described in sub-clause PSA 8.1.2.2. Payment will be made as described in sub-clause PSA 8.2.2."

PSA 8.5 SUMS STATED PROVISIONALLY BY THE ENGINEER

REPLACE THE CONTENTS OF SUB-CLAUSE 8.5 WITH THE FOLLOWING:

PSA 8.5.1 Works executed by the Contractor..... : Unit: Prov Sum

The Contractor will be reimbursed in substitution of the Provisional Sums (if any) allowed in the Schedule of Quantities for work to be executed by the Contractor, in the amounts determined in accordance with the provisions of Clause 45 of the Conditions of Contract."

PSA 8.6 PRIME COST ITEMS

REPLACE SUB-CLAUSE 8.6 WITH THE FOLLOWING:

PSA 8.6.1 PRIME COST SUMS

- | | | |
|----|---|----------|
| a) | <u>description of item to which Prime Cost Sum applies</u> Unit: PC Sum | <u>D</u> |
| b) | <u>charge required by Contractor on sub item (a) above</u> Unit: % | <u>C</u> |

Subitems (a) and (b) will be provided in the Schedule of Quantities for each different item to which a Prime Cost Sum applies.

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The Contractor shall be reimbursed under subitem(s) (a) in substitution of the respective Prime Cost Sums included in the Contract, the actual price(s) paid or payable by him in respect of the goods, materials or services supplied, but excluding any charges for the Contractor's labour, profit, carriage, establishment or other charges related to such goods, services or materials.

The Contractor shall be paid under subitem (b), the respective percentage, as stated by the Contractor in his tender, of the amount certified by the Engineer for payment under the related subitem (a). The percentages tendered by the Contractor for each respective subitem (b) included in the Schedule of Quantities shall be deemed to be in full and final compensation to the Contractor in respect of any charge by the Contractor for labour, carriage profit, establishment and for any other charges related to the goods, services or materials supplied under the related subitem (a).

If the Contractor shall have omitted within his tender to insert a tendered percentage under Subitem (b), or tendered a zero percentage, the Contractor's tendered rate for subitem (b) shall be deemed to be zero and the Contractor shall not be entitled to any payment under subitem (b).

Note in connection with additional tests required by the Engineer:

When a PC sum is included in the Schedule of Quantities for additional tests required by the Engineer, the Contractor shall be responsible for both the cost of normal testing as described in sub-clause PS 8.2 in portion 1 of the Project Specifications and for the cost of any additional test that indicates that the specifications have not been complied with."

PSA 8.7 DAYWORK

REPLACE THE CONTENTS OF SUB-CLAUSE 8.7 WITH THE FOLLOWING:

"Measurement and payment shall be in accordance with the provisions of Sub- clause 37(2) of the Conditions of Contract."

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PSA 8.10 COMPLIANCE WITH OHS ACT AND REGULATIONS (INCLUDING THE CONSTRUCTION REGULATIONS 2014).....

Unit: sum

The tendered sum shall include full compensation to the Contractor for compliance with all the requirements of the OHS Act and Regulations (including the Construction Regulation 2015) at all times for the full duration of the Contract, as described in PS 8.7 of Portion 1 of the Project Specifications. The successful tenderer shall provide the engineer with complete breakdown of this tendered sum.

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

PSA 8.11 SUPPLY, MAINTAIN AND DE-ESTABLISH OFFICE ACCOMMODATION, CARPORT FOR ENGINEER INCLUDING SITE MEETING VENUE AND CONTRACT NAMEBOARD AND MAINTAINING THE FACILITIES FOR THE DURATION OF THE CONTRACT PERIOD AS DEFINED IN CLAUSE C3.4.2.2..... Unit sum

The sum tendered shall include full compensation for the cost of providing the facilities, including the provision of all services.

Payment will be made as follows:

- a) E
EIGHTY PER CENT (80% of the sum tendered will be paid when the facilities have been provided and approved;
- b) T
The remaining TWENTY PER CENT (20%) will be paid when the works have been completed, the facilities have been removed and the site of the Contractor's establishment has been cleared and cleaned to the satisfaction of the Engineer.

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PSA 8.3.18**Final finishing and cleaning up of the site of the works**.....Unit:
sum

The tendered sum shall include full compensation for the clearing, disposal of material, finishing, tidying and all other work required to finish and clean up the Site of the works and affected areas by removing excess earth, stones, boulders, debris and other waste material, by clearing storm water inlets and outlets and pipe barrels, by clearing the surfacing of all dirt, mud and foreign material, and by neatly finishing off all junctions, intersections and kerbing.

All material resulting from the finishing operations shall be disposed of to a spoil site furnished by the Contractor.

The tendered rate shall make provision for the reinstatement of existing driveways to their original condition where these have been affected by the works, as these items will not be measured and paid for separately.

PSAB **ENGINEER'S OFFICE**

PSAB 3 **MARERIALS**

PSAB 3.1 **NAMEBOARDS**

REPLACE THE FIRST SENTENCE OF SUB – CLAUSE 3.1 OF SABS 1200AB WITH THE FOLLOWING:

The Contractor shall supply and erect at locations approved by the Engineer, the number of contract nameboards specified in Portion 1 of the project specification, which, unless otherwise specified in the Contract, shall comply with the recommendations for the standard board of the South African Association of Consulting Engineers, with regards to size, painting, decoration and detail, and the requirements described hereunder.

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PSAB 3.2 OFFICE BUILDING(S)

REPLACE THE WORDS: “as scheduled” IN PARANTHESIS IN THE FIRST LINE OF SUB – CLAUSE 3.2 OF SABS 1200AB WIITH: “as specified in Portion 1 of Project Specifications”;

AND REPLACE SUB – CLAUSE 3.2(j) OF SABS 1200AB WITH THE FOLLOWING:

“(j) a heater and fan or air-conditioning unit capable of both heating in summer and cooling in winter”.

PSAB 3.3 CAR – PORT

The Contractor shall construct the number of car – ports specified in Portion 1 of Project Specifications, for the sole use of the Engineer and his Staff, Each car – port shall be constructed so that the vehicle parked under it is always protected against the direct rays of the sun. The car – port area shall be at least 20m2 and the floor shall be covered with a layer of crushed stone to alleviate dusty and muddy conditions. The car – port(s) shall be positioned so the as to provide easy and convenient access to the Engineer’s office.”

PSAB 4 PLANT

PSAB 4.1 TELEPHONE

REPLACE SUB-CLAUSE 4.1 OF SABS 122AB WITH THE FOLLOWING:

“The Contractor shall, subject to the availability from Telkom, at its own cost arrange for the provision in the Engineer’s Office(s), of a telephone service, independent of the Contractor’s telephone service, with the number of exchange lines and extensions specified in Portion 1 of Project Specifications. The telephone service shall be available for use by the Engineer and his personnel all the time.

Subject to satisfactory transmission and reception quality in the vicinity of the Site, the Contract shall further provide the number of cellular telephones and associated service contracts from a reputable cellular service provider, as specified in Portion 1 of the Project Specifications, for the exclusive use of the engineer and his staff. The Contractor shall further insure the cellular phones against loss or damage from whatever cause arising, and shall ensure that all

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cellular phone accounts are promptly paid on the due dates for payment. The Contractor shall further, at its own cost, ensure the prompt repair of all cellular phones provided under this clause, when reasonably required by the Engineer."

ADD THE FOLLOWING NEW SUB-CLAUSES TO CLAUSE 4 OF SABS 1200AB:

PSAB 4.4 SURVEY AND EQUIPMENT

The Contractor shall provide on-site and make available for the exclusive use of the Engineer and his staff, the survey equipment listed in Portion 1 of the Project Specifications.

All survey equipment provided by the Contractor shall be in good condition, properly calibrated and fit for the purpose.

In addition to survey equipment provided by the Contractor for the exclusive use of the Engineer and his staff, the Contractor shall make available for use by the Engineer, the further survey equipment listed in Portion 1 of the Project Specifications, at all times when such is reasonably required by the Engineer and his staff for the purposes of the Contract.

PSAB 5 CONSTRUCTION

PSAB 5.4 TELEPHONE

REPLACE THE CONTENTS OF SUB-CLAUSE 5.4 OF SABS 1200AB WITH THE FOLLOWING:

PSAB 5.4 Cellular Telephones

The Contractor shall advise the cellular service provider of any faults which develop in the cellular telephone service and/or the cellular telephone handsets and shall, in such circumstances, arrange for the earliest possible restoration of the said service.

The costs of any necessary repairs and/or the replacement of components to the handsets of the cellular telephones shall be for the Contractor's account.

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The Contractor shall ensure that all accounts for cellular phone calls and the respective service contracts are promptly paid. The Contractor shall, on production of an itemised statement, be reimbursed only the cost of the Engineer's cellular telephone calls."

All survey equipment provided by the Contractor shall be kept fully serviceable at all times by the Contractor. The Contractor shall have any defective equipment repaired or replaced at its own cost within 12 hours after notification by the Engineer's staff.

Where required by the Engineer, the Contractor shall at its own cost, promptly arrange for the re-calibration of survey equipment provided.

PSC **SITE CLEARANCE**

PSC 3 **MATERIALS**

PSC 3.1 **DISPOSAL OF MATERIAL**

ADD THE FOLLOWING:

"The Contractor shall obtain his own dumping sites for the disposal of material and all transport costs shall be included in the rates tendered for site clearance."

"The Contractor shall obtain his own dumping sites for the disposal of material and all transport costs shall be included in the rates tendered for site clearance."

PSC 5 **CONSTRUCTION**

PSC 5.1 **AREAS TO BE CLEARED AND GRUBBED**

ADD THE FOLLOWING:

"Pipeline routes shall be cleared to a distance of 1,5 m on both sides of the pipeline Centre line. Route pegs or markers shall not be destroyed or damaged during clearing operations,"

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PSC 5.2 CUTTING OF TREES

PSC 5.2.3 Preservation of trees

PSC 5.2.3.2 Individual trees

REPLACE THE LAST SENTENCE WITH THE FOLLOWING:

"An amount of R100.00 will be deducted from moneys due to the Contractor as a penalty for every tree that is damaged or removed unnecessarily."

PSC 5.5 RECLEARING OF VEGETATION

ADD THE FOLLOWING:

"When areas have to be re-cleared on the written instructions of the Engineer, such re-clearing shall be carried out at the Contractor's own cost and the Contractor is therefore advised not to clear the areas too soon."

PSC 8 MEASURENT AND PAYMENT

PSC 8.2 PAYMENT

PSC 8.2.1 Clear and grub

REPLACE THE FIRST LINE WITH THE FOLLOWING:

"The area designated by the Engineer to be cleared and grubbed will be measured in square metre to the nearest square metre or,

ADD THE FOLLOWING ITEMS IN SUBCLAUSE 8.2:

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PSC 8.2.11 Take down and re – erect existing fences.....Unit: m

The rate shall cover the cost of taking down the fences, coiling wire, sorting, stacking and guarding all materials, the cost of loading, transporting and off-loading such materials, the. Cost of re-erecting the fence in such position as indicated by the Engineer using the dismantled material, the cost of temporary bracing of the fencing sections not taken down and the cost of appurtenant materials that may be required to restore the fence to its original condition before dismantling.

PSC 8.2.11 Removal topsoil to spoil to site furnished by Contractor.....Unit: m3

The tendered rate shall include full compensation for removing topsoil to a depth of 150 mm and for loading and transporting the material to spoil sites furnished by the Contractor."

PSD EARTHWORKS

PSD 8 MEASUREMENT AND PAYMENT

PSD 8.3 SCHEDULED ITEMS

PSD 8.3.1 Site Preparation

REPLACE SUB-CLAUSES 8.3.1.1 AND 8.3.1.2 WITH THE FOLLOWING:

"Where Site preparation such as clearing, grubbing, the removal of large trees or the removal stockpiling of topsoil is required, the provisions and scheduled items of SABS 1200 C shall apply."

PSD 8.3.2 Bulk Excavation

REPLACE THIS ITEM WITH THE FOLLOWING:

"8.3.2.1 Excavate in all materials and use for embankment or backfill as ordered, from:

- a) necessary excavation..... Unit : m3

N

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b) D
esignated Borrow pits..... Unit : m³

c) C
ommerical Sources Unit : m3

The unit of measurement shall be the cubic metre measured in place in accordance with Sub-clause 8.2 of SABS 12000.

Separate items will be scheduled for embankments and backfills for different parts of the works.

The tendered rates shall cover the cost of complying with all the precautions required in terms of Sub-clause 5.1 of SABS 12000 (as amended), in addition to the cost of excavating in all materials, basic selection, loading, transporting within the applicable free haul distance, off-loading, spreading or backfilling, watering, compacting, final grading, complying with the requirements of for tolerances, providing for testing, finishing and tidying, all in accordance with the specifications.

In addition to the foregoing, the tendered rate for sub-item (b) shall, further include for the costs of royalties (if applicable), whilst the tendered rate for sub-item (c) shall also include for the costs of finding a source of suitable material, for making arrangements with the owner of the source, for procuring the material, for the payment of all requisite royalties, charges or damages, and for transporting the material to the Site regardless of the distance involved. No payment will be made for the removal of overburden or stockpiling at the commercial source and no extra over payment shall apply for excavating in intermediate, hard or boulder material."

"8.3.2.2 Excavate in all materials and disposeUnit: m3

The unit of measurement shall be the cubic metre of material excavated, measured in place in accordance with Sub-clause 8.2 of SABS 12000.

Separate items may be scheduled for excavations for different parts of the Works.

The tendered rates shall cover the cost of complying with all the precautions required in terms of Sub-clause 5.1 of SABS 12000 (as amended), in addition to

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the cost of excavation, basic selection, loading, transporting within the applicable free haul distance, off-loading at the spoil site, maintaining and finishing the spoil site, all in accordance with the specifications.

"8.3.2.3 Extra-over items 8.3.2.1(a), 8.3.2.1(b) and 8.3.2.2 for

a)	I
intermediate excavation.....Unit: m3	
b)	H
ard rock.....Unit: m3	
c)	B
oulder excavation, Class A.....Unit: m3	
d)	B
oulder excavation, Class B.....Unit: m3	

The rate shall cover the additional cost of the operations enumerated in Sub-clauses 8.3.2.1 and 8.3.2.2 above for any portion of the excavation that is classified as intermediate, hard rock, boulder excavation class A or boulder excavation class B as applicable. (See Drawing 0-2)."

PSD 8.3.2 Restricted excavation

REPLACE THE WORDS "in 1 m increments" AT THE END OF THE FIRST SENTENCE OF SUB-ITEM (a) WITH "in the increments indicated in the Schedule of Quantities".

REPLACE "in 5.2.2: i - 5.2.2.3 (inclusive)" AT THE END OF SUB-CLAUSE (a) WITH "in Sub-Clauses 5.2.2.1 to 5.2.2.5.Cinclusive)".

PSD 8.3.4 Importing of Material

DELETE SUB-ITEM (a) OF 8.3.4.

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PSD 8.3.4 Overhaul

ADD THE FOLLOWING:

"No overhaul shall apply to material from commercial sources or to material disposed of on sites provided by the Contractor or disposed by other means employed by the Contractor."

PSD 8.3.8 Existing Services

PSD 8.3.8 Location

REPLACE ITEM 8.3.8.1 WITH THE FOLLOWING:

"8.3.8.1 Hand Excavation for Locating and Exposing Existing Services:

- | | | |
|----|--|---|
| a) | | I |
| | n roadways..... Unit : m ³ | |
| b) | | I |
| | n all other areas..... Unit : m ³ | |

The unit of measurement shall be the cubic metre of material excavated, measured in place according to the authorised or actual dimensions of the excavation, whichever is the lesser.

The tendered rates shall cover the cost of excavating in all materials by means of hand tools within authorised dimensions and at locations approved by the Engineer in accordance with the requirements of Sub-clause PSA 5.4.1, for all precautionary measures necessary to protect the services from damage during excavation and backfilling, and for subsequent backfilling and compacting. Compaction of material in all areas except in roadways shall be to 90% of the modified AASHTO density.

The tendered rate for hand excavation in roadways shall include compensation for compacting excavated or selected backfill material to 93% of modified AASHTO density. Reinstating layerworks and surfacing shall be measured and paid for in terms of SABS 120008.

The tendered rates shall also include for keeping excavations safe, for dealing

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with surface and subsurface water, for removing surplus excavated material from the Site, for transporting all material within the free-haul distance, and for supplying adequate supervision during both excavation and backfilling operations. Overhaul, if applicable, will be measured and paid for in terms of SABS 120008."

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PSDM 5 CONSTRUCTION

PSDM 5.2 METHODS AND PROCEDURES

PSDM 5.2.2 Cut and Borrow

PSDM 5.2.2.2 Use of material

ADD THE FOLLOWING PARAGRAPH:

"(e) Commercial sources

The provisions of Sub-clause PSD 5.2.2.5 of SABS 1200 D as amended shall apply."

PSDM 5.2.3Treatment of the road-bed

PSDM 5.2.3.2Removal of unsuitable ground

REPLACE THE SECOND SENTENCE OF PARAGRAPH (a) WITH THE FOLLOWING:

"The excavated spaces shall then be backfilled with approved imported material compacted to the required density."

ADD THE FOLLOWING SENTENCE TO PARAGRAPH (b):

"Unsuitable excavated material will be paid for as cut to spoil."

PSDM 5.2.3.3Treatment of road-bed

ADD THE FOLLOWING PARAGRAPH:

"(c) Three-pass roller compaction

Any portion of the roadbed that is shown on the drawings or is specified or is directed by the Engineer to be given three-pass roller compaction because of its

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inadequate natural density, shall be prepared by shaping where necessary and compacting With a roller, complying with the requirements specified below.

Compaction shall comprise three complete coverages by the wheels of the specified roller over every portion of the area that is being compacted. While it is not the intention that the Contractor should apply water to the roadbed for this type of compaction, and while no rigid moisture control will be exercised during compaction, the Contractor shall nevertheless satisfy the Engineer that everything is being done to take full advantage of favourable soil moisture conditions during the rainy season, and that such compaction is as far as possible carried out when the roadbed is neither excessively dry nor excessively wet.

The Engineer has the authority to decide when conditions are favourable for compaction and where such compaction is to be carried out at any particular time and he has the right to instruct the Contractor to water the roadbed at the Contractor's expense when, in the opinion of the Engineer, the Contractor failed, neglected or refused to comply with these requirements.

The rollers to be used for roller-pass compaction shall conform to the following requirements:

Grid roller: The grid roller shall have a mass of not less than 13, 5 t when ballasted, shall be loaded to this mass if required, and shall be moved at a speed of not less than 12 km/h.

Vibratory roller: The vibratory roller shall be capable of exerting a combined static and dynamic force of not less than 120 KN/m width for every metre of loose-layer thickness at an operating frequency not exceeding 25 Hz and shall move at a speed not exceeding 4 km/h."

PSDM 5.2.4 FILL

PSDM 5.2.4.3 Finishing

Topsoiling

REPLACE THE SECOND SENTENCE WITH THE FOLLOWING:

"The thickness of the topsoil shall be as directed by the Engineer."

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SPECIFICATION FOR PLAIN AND REINFORCED CONCRETE

The standardized specification for Civil Engineering Construction of the African Bureau of standardized shall apply throughout in respect of this in addition to the addition and saving the exceptions set out below:

A copy of the said specification shall be furnished by the contractor and shall be kept on the site.

PROJECT SPECIFICATION

1. Applicable standardized and particular specification

For the purposes of this contract the following standardized specification shall apply
SANS 12200 G: CONCRETE (STRUCTURAL)

Depending on the engineers prescribed design and/or method of construction or deviation therefrom by the contractor with written approval of the engineers, one or more of the following specification, each of which is Golden Rewards specification, shall apply.

SPECIFICATION FOR PRECAST CONCRETE

SPECIFICATION FOR FORMWORK

The contractor will be furnished with the above specifications that are applicable.

2. The reinforcing steel shall be inspected by the engineer after the. Fixing of steel, the cleaning of shuttering and the positioning of the spacer blocks have been completed, prior to concrete casting.

3. All beams, bands and slabs shall have the following amber, unless otherwise shown on the drawings:

Cantilever: $\text{span} \div 200$

Other span: $\text{span} \div 500$

4. Should a requirement of the project specification be inconsistent with requirement of the said standardized specification, the requirement of the project specification shall precedence.

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5. Add the following to the relevant Sub-clauses of the said SANS specification 1200 G:

5.1 EXPLANATION OF TERMS

Precast concrete (2.4)

Concrete components of the general quality describe in this specification, which have been cast and cured either elsewhere of or on the site and placed in position to form an integral part of the structure

5.2 MATERIAL

5.2.1 Alternative type of cement (3.2.2)

Replace the contents of the Sub-clause with the following:

"Only GEM I 42, 5 (Portland cement) or GEM 11/A-V 42,5 (Portland fly Ash cement) or GEM 11/A-S 42,5 (Portland slag cement) or GEM 11/B-S 42,5 (Portland slag cement) according to SANS 50197-1 (SABS ENV - 197-1), may be used. The cement may consist of more than 20% siliceous fly ash or 30% granulated blast furnace slag, blended with the OPC (Ordinary Portland Cement). Should the contractor wish to use any other type of cement he shall obtain the engineer's prior written approval (see page 8.1.2.3 and 8.1.3.3)".

5.2.2 Storage cement (3.2.3)

Cement shall not be kept in storage chloride for more than 12 weeks without the engineer's permission.

5.2.3 Storage of aggregates (3.4.3)

Where aggregate of differing chloride content are stockpiled on the site, strict control shall be exercised over their used for differing classes of concrete.

5.3 FIXING

Welding of reinforcement is not permitted.

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5.4 DURABILITY

The exposure conditions for concrete are classified as "moderate" add the following values to table 5:

"The maximum water/cement ratio for moderate sections, general reinforce concrete, exterior portions of mass concrete, as well as for internal concrete in the buildings under conditions of moderate exposure, is 0,67

The maximum water/cement ratio for concrete slabs on the ground under very severe conditions, is 0, 45 notwithstanding the aforementioned, the cement slabs on the Ground under no circumstances be less than:

Structure concrete of 25 MPa surfaces - 265 kg/m³ Exposed concrete, trafficable surfaces,

and Surfaced bends - 280 kg/m³

5.5 STRENGTH CONCRETE (5.5.1.7)

The production of concrete at central production site is permitted. The shrinkage of concrete to be cast in floor systems, shall not exceed 0, 02 tested as per SABS 1085. Three tests shall be conducted on the mix design to confirm compliances. Test result shall be made available before the concrete is used on site.

5.6 Holes, chases and fixing blocks (5.3)

Fixing blocks and fixture may be embedded in concrete, provided that its strength or any other desirable features (such as the appearance of the member) is not, in the opinion of the engineer, impaired thereby.

5.7 PERMISSIBLE DEVIATIONS (5.3)

Degree of Accuracy II shall apply, except for precast work and off-shutter exposed concrete surfaces where degree of Accuracy shall apply. Each specified permissible deviation shall be binding by itself. No cumulative effect of permissible deviations will be considered. Replace clause 6.2.3-d5 with the following

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Permissible deviation Degree of accuracy		
III	II	I
mm	mm	mm
5	3	2
50	30	10

None of the prescribed permissible deviation will be deemed as permission for violating the legal boundaries of properties by any part of a structure.

(The above permissible deviation also applies to slip-form concrete, unless another set of permissible deviation has been accepted in writing by the Engineer beforehand. Such amended permissible deviations shall clearly make provision for interfaces between structures erected with the aid of slip-form concrete and those erected with aid of conventional concrete.

The maximum permission deviation from a 3 m long straight line connecting two points on surface of a finished floor, is 5 mm.

5.8 ACCEPTANCE CRITERIA FOR STRENGTH CONCRETE (7.3)

Test results obtained by a ready - mixed concrete production plant as part of its quality control system are not acceptable for evaluation purposes in terms of Sub-clause 7.3. but test samples shall be taken from ready - mixed concrete on location.

5.9 REMOVAL OF FORMWORK (5.2.5)

The Contractor shall make provision for the continued support of beams and slabs while the form work is being removed and/or for back-propping of beams, slabs, etc. The propping may be required simultaneously on more than one level directly underneath one another. The requirements for continuous propping and/or back propping shall be calculated to a theoretical model that is acceptable to the engineer, and details shall be submitted for the engineer's approval. Data required for such calculation, e.g. design loads and structure dimensions, will be supplied by the engineer on request.

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5.10 CURING AND PROTECTION

Should a curing compound be allowed by the Engineer then it shall 5.5.8

Be a resin based curing compound. Curing of columns, shaft and walls be done by either retaining the form work from the required period of time or covering with plastic sheeting. On lesser shafts and walls the Engineer may allow compound for curing.

6. MEASURING AND PAYMENT

This section shall be deleted.

**SPECIFICATION FOR SMOOTH SUFACED AND EXPOSED-AGGREGATE
SURFACE FINISHES**

1. SCOPE

This specification two classes of the concrete surface finishes a smooth surface finish and an exposed-aggregate surface finish.

2. FORMWORK

All formwork for the two types of surface finishes shall be new and free from any matter, indentions and warps that will impart irregularities to the concrete surface.

Except for round columns, where steel form may be used, all formwork shall be in timber panels and boards. No differential movement between adjacent panels will be allowed.

Exposed-aggregate concrete requires quality form workmanship. Formwork must withstand the greater vibration normally associated with placing exposed-aggregate concrete.

Forms must be tight and accurately aligned at butt joints, since the slightly misalignment at form joints may be visible in the expose surface showing up under certain lighting and shadow condition.

The joints in formwork must be sealed or caulked to prevent the leakage of water and fines. A thin plastic adhesive tape is preferred. If joints are not sealed, a dark line will appear on the finished surface.

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An important consideration in cast-in-site concrete is the treatment of form ties to prevent the rusting of the ties and subsequent staining of the wall. Form ties can be of the type that is withdrawn from concrete or has plastic cones so that ties will break off no closer than 40 mm to the surface of the concrete to leave a hole not larger than 20 mm in diameter. Tie-rod holes may be left exposed in carefully predetermined patterns to eliminate patching (if stainless-steel ties are used), or must be patched immediately after the stripping of the forms.

The stripping time for formwork depends on several factors, such as safety, the resulting effect on the concrete, and the most favourable time for exposing aggregate by way of a particular exposure technique.

3. TOLERANCE

Surface regularity relates to the shape of the surface with reference to a 3 m straight-edge (or a template in the case of a curved surface) placed on the surface.

The tolerance on surface regularity is expressed as a distance by which the surface tested may deviate from a straight edge or template held against the surface.

The tolerance on regularity is expressed as a distance by which the surface tested may deviate from a straight-edge or template held against the surface.

For the purpose of this specification, the distance shall not exceed 2 mm, unless otherwise allowed by the engineer.

4. SMOOTH SURFACE FINISHING

This surface finish shall be smooth and without blemish or discoloration. All projections shall be removed, irregularities shall be rubbed or treated to give a smooth surface of uniform texture, appearance and colour.

a) General

Any remedial treatment to surfaces shall be agreed on with the engineer following inspection immediately after removal of formwork and shall be carried out without delay. No surface may be treated before inspection by the engineer.

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b) Repairs

Small areas of honeycombing or other impactions, as well as isolated surface air and water bubbles, shall be filled in with a mortar consisting of the cement-and-sand portion of the concrete mix used.

For the repair of large or deep of honeycombing, special methods technique, such as pneumatically applied mortar, pressure grouting, epoxy bonding agents, etc., may be used as agreed on by the engineer

All patched and repairs shall be kept continuously wet for at least 5 days.

c) Rubbing of surfaces

If the finishing of expose surfaces does not comply with the requirements for the uniformity of texture and appearance, the contractor shall, when instructed to do so by the engineer, rub down the exposed surfaces of the entire structure of any part therefore as specified below, entire at his own cost. Before rubbing; all repairs must be completed.

The surface shall be saturated with water for at least one hour. Initial rubbing be carried out with a medium coarse carborundum stone, using a small amount of mortar on the face, in the portion specified in (b) above. Rubbing shall be continued until all form marks, projections and irregularities have been removed and a uniform surface has been obtained.

The paste produced by the rubbing shall be kept in place. The final rubbing shall be carried out with a fine carborundum stone and water. This rubbing shall continue until the entire surface is of a smooth, even texture and uniform in colour. Thereafter the surface shall be washed with water and brushed to remove surplus paste and powder.

5. EXPOSED-AGGREGATE SURFACE FINISH

a) AGGREGATES

All course and fine aggregate required for the production of concrete with an exposed-aggregate surface shall be on the site before concreting commences. Both the stockpiles of course and the aggregate shall be individually mixed to obtain, stockpiles that are of uniform colour throughout.

Coarse aggregate shall be of a nominal size of 20 mm. The type of rock from which it is delivered will be specified in the bill of quantities.

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b) Mixing concrete

Expose-aggregate concrete requires good mixing, which should continue for at least one minute after all material have been charged to the mixer. Uniform of mixing time should be carefully controlled from batch to obtain uniform of colour.

c) Casting and placing the concrete

Segregation must be prevented by restricting the slump to the lowest value consistent with good consolidation. The slump value of the concrete should not exceed 75 mm.

Low-slump concrete does not flow readily down a chute, and construction methods should allow the concrete to be dropped vertically in all handling operations, since the mixes can be dropped for consideration distances without segregation.

Once in the forms, the concrete can be consolidate easily by means of internal vibration but requires ample vibration to ensure proper compaction and the elimination of honeycomb areas. The concrete should be place in lifts not exceeding 500 mm, with the vibrator inserted each lift at intervals not exceeding 500 mm in any direction. Vibrators should be placed in the concrete rapidly to penetrate approximately 75 mm of the previous layer, and withdrawn slowly, this will minimize the occurrence of air being entrapped between the concrete and the form, and it will blend to the two layers. Insufficient vibration rather than over over-vibration more often than not causes problems. The forms should therefore de designed to with stand longer period of high-frequency vibration.

Vibrators should not use closer than 75 mm from the formed surface which is to be exposed. Within this limit of time the coarse aggregate will be driven away from the form face and will cause a mortar line on the visible surface. A smaller-diameter vibrator should be used in thin sections.

d) Curing concrete

The concrete shall be cured by established standard procedures.

e) Exposing of aggregate

The use of surface retarders is not recommended for vertical casting. It is difficult to obtain an even effect. Deep elements cast vertically require particular care to prevent over-retarded areas from forming at the bottom and under-retarded areas at the top. The concrete can brush against the formwork during and carry the retarder with it to bottom. One solution is to place sheeting over the form and

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withdraw it as the level of the concrete rises. Also, the bleed water may carry the retarder to the top or in small channels along the surface.

If forms are exposed to sunlight too long before placing, retarder action may be nullified and large under-retarder areas may result. The same could happen if rain falls on forms treated with a retarder prior to the concrete being placed.

The retarder should be dry before concrete is placed,

The simplest and perhaps the most inexpensive of exposing aggregates are by washing and brushing the surface. If the operation is done before the concrete has gained much strength, it will not be necessary to use a surface retarder. A stiff brush together with flushing with water is all that is needed.

Plastic-bristle brushes are preferred because they will not soften in water. Wire brushes may be required occasionally for particularly stubborn areas.

f) Patching of damaged surfaces

It is easier to patch exposed aggregate than plain smooth concrete elements. First, the damage area should be chipped out and cut back to depth slightly deeper than maximum size of the exposed aggregate (i.e. go down 25 mm for 20 mm aggregate).

The sides of the hole should be at right angle to the surface. No undercutting is necessary. Then the area must be soaked with water to ensure a good bond of the patch. The use of a scrubbing brush with this operation is good practice. (If a bonding agent is used, the area must be left dry).

After the patching area is well soaked without any water being present, a mixture of cement and water the consistency of a thick paint must be brushed in. The damage area now is ready to receive the patching mix must be brushed.

The patching concrete contains the same materials as those used in the concrete, minus the coarse aggregate. If the matrix was made with grey cement, a small amount of white cement or silica flour must normally be added to the patching mix because the lower water-cement ratio of the patch causes it to dry darker than the original concrete. The amount of white material to be added varies, but about 25% is average.

Trial mixes are essential for determining exact quantities. These mixes should be allowed to age 7 to 14 days before final judgment. Small sample panels (300mm square) should be cast during production and later broken for use as guides in matching mix colour. The patching mix must be stiff, but not so stiff that it exposes

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aggregates cannot be pressed into it.

The patching mix should be compacted into the hole immediately after the neat cement slurry coat has been applied, or has been applied, or if a bonding agent is used, any time during the agent's period of tackiness. The mix should be vigorously hand-tamped, and then struck off level with the surrounding matrix.

g) Cleaning of surfaces

Exposed aggregates can be cleaned after at least one week's delay by being washed with 5% to 10% concentration of hydrochloric acid, which removes the dull cement film which has remained as a result of some exposure techniques, especially the washing and brushing. The acid is normally applied to prewetted surface by brush, but it can also be sprayed.

The surface is wetted to reduce acid penetration. All traces of acid should be removed, as soon as possible before panel dries, by flushing with plenty of clean water. The best procedure is to use two men, one applying acid while the other one hoses down the surface.

6. TRIAL SURFACE

The contractor shall construction trial structure as columns as beams with smooth surfaces and walls with exposed-aggregate surface to serve as samples for subsequent work.

Such trial structure and their surfaces shall be approved by the Architect before any permanent structure may be constructed.

The number and size of each type of structure will be specified in the bill of quantity.

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■ SPECIFICATION FOR CONCRETE SCREED

1. PREPARATION OF EXISTING SLAB

All laitance on the surface of the slab must be removed completely. Mechanized plant such as scrabbles or blasters must be used.

After the mechanical cleaning of slab surface expose the course aggregate, all dust debris must be removed, and the surface must thoroughly wetted and kept wet for at least 12 hours before application of the screed.

2. CONCRETE SCREED

Only GEM I 1 42, 5 (Portland cement) or GEM 11/A-V 42, 5 (Portland fly ash cement) or GEM 11/A-S 42, 5 (Portland slag cement) or GEM 11/B-S 42, 5 (Portland slag cement) according to SANS 50197-1 9(SABS ENV 197-1), may be used. The cement may not consist of more than 20% siliceous fly ash or 30% granulated blast furnace slag, blended with the OPC (Ordinary Portland Cement).

Course aggregate maximum size: 10mm

28 – Day cube strength: 35 MPa.

The use of an approved plasticizer is recommended the water content of the mix to the absolute workable minimum.

The mix design must be submitted to the engineer for approval

3. APPLICABLE OF CONCRETE SCREED

Remove all surface water from slab. Apply a grout to the slab surface which consist of a 1:1 mix of cement and clean fine sand with just enough water to provide the consistency of as slurry.

The grout is to be vigorously brushed into the scrabbled with brooms. On completion of this operation, the surplus grout must be brushed off to leave only a thin coating.

The screed must be placed while the grout is still visibly wet.

The screed must be paid and compacted in one layer. Care must be taken to obtain the maximum compaction of the concrete screed.

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4. FINISHING WITH MECHANICAL TROWEL

Power floating should not commence until such time as the concrete has lost its sheen and barely shows footprints.

All laitance on the surface of the fresh concrete screed resulting from the compaction of concrete prior to mechanical troweling. Over-troweling, causing an excessive cement-water paste to the surface, must be strictly avoided.

5. CURING

Curing should commence as soon as finishing operations have completed and should be continue for at least 7 days. The methods of curing must be approved by the engineer.

6. JOINTS

The concrete screed should be divided into panels by joints approximately 3 m apart. The length: width ratio of the panels should be limited to 1, 5:1.

The joints should be formed by cutting grooves 3mm wide by 25mm deep into screed. These joints must be aligned to the structure slabs or the slabs on fill, and must be cut within 8 hours of placing the screed.

PSMJ SEGMENTED PAVING

PSMJ 3 MATERIAL

PSMJ 3.3 SAND FOR BEDDING

Sand for bedding and jointing shall be free from substances that may be deleterious to blocks.

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PSMJ 5 **CONSTRUCTION**

PSMJ 5.1.1 **New Work**

Where paving is to be laid on a newly constructed earthwork or on an existing Subgrade that is too low, the Subgrade and sub base shall be constructed in accordance with the requirements of SANS 1200ME, respectively, and shall conform to the tolerance requirements of 6.2

PSMJ 5.2 **EDGE RESTRAINTS**

Edge restraints consisting of kerbs or channels or other approved edge strips as scheduled or given on the drawings shall be constructed on the sub base before any units are laid.

PSMJ 5.3 **PLACING AND COMPACTION OF SAND BED**

Bedding shall be spread over the sub base and evenly screeded in the loose condition so as to achieve a compacted thickness of $25 \pm 10\text{mm}$. Where sand is spread, its moisture content shall be $6 \pm 2\%$.

PSMJ 7 **TESTING**

PSMJ 7.4 **BLOCKS**

The relevant tests given in SANS 1058 shall be used determine whether blocks comply with requirements for wet strength.

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PARTICULAR SPECIFICATION

PA FENCING

CONTENTS

PA 01	SCOPE
PA 02	TYPE OF FENCE
PA 03	MATERIALS
PA 04	CLEARING OF FENCE LINE
PA 05	INSTALLING POSTS STANDARDS
PA 10	INSTALLING GATES
PA 11	GENERAL REQUIREMENTS AND TOLERANCE
PA 12	MEASUREMENT AND PAYMENT

PA 01 SCOPE

This Particular specification and covers the erection of new fences.

PA 02 TYPE OF FENCE

The fencing shall be a concrete palisade (security fence) and shall be erected in accordance with the dimensions shown on the drawings.

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PA 03 MATERIALS

PA 03.01 Posts, Stays and Standards

PA 03.01.01 Posts, stays and standards shall be of the type and size indicated on the drawings. Posts shall include gate posts, training posts and corner posts

PA 03.04 Concrete Palisade

PA 03.04.01 Concrete palisade fence shall be as shown on the drawings.

PA 03.05 Gate

PA 03.05.01 Concrete used for fencing shall comply with the requirements of SANS 1200g.

PA 04 CLEARING OF FENCE LINE

Strip clearing for the fence shall be carried out in accordance with SASS 1200 C and will be measured and paid for under section 1200 C of the schedule of Quantities.

PA 05 UNSTALLING POSTS AND STANDARD

Strip clearing for the fence shall be carried out in accordance with SASS 1200 C and will be measured and paid for under section 1200 C of the schedule of Quantities.

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PA 03.05 Gate

PA 03.05.02 Posts shall be accurately set in holes and, where indicated, shall be provided with concrete bases to the dimensions shown on the drawings.

PA 03.05.03 Holes shall be dug to the full specified depth. Where, due to the presence of rock, the holes cannot be excavated by hand or by pneumatic tools and the contractor has to resort to the use of explosives, he will be paid separately for the drilling and blasting operations required.

PA 10 INSTALLING GATES

Gates shall be installed at the positions indicated on the drawings or pointed out on site.

PA 11 GENERAL REQUIREMENTS AND TOLERANCES

PA 11.01 The completed fences shall be plumb, taunt, true to line and to the ground contour, and with all posts firmly set.

PA 11.02 The height of the lower fencing wire above the ground at posts and standards shall not vary by more than 25mm from that shown on the drawings.

PA 11.03 Anchoring of a fence to structures shall be done as shown on the drawings.

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PA 12 MEASUREMENT AND PAYMENT

PA 12.01 Supply and Erection of New Fencing Material

a) Concrete Palisade (As per drawing)Unit : m

PA 12.02 Supply and Erect New Gates

a) New gate (As per the drawing)..... Unit : No

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PARTICLAR SPECIFICATION

PD ENVIRONMENTAL PROTECTION AND CONTROL SPECIFICATIONS

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PD3	VEGETATION CLEARANCE
PD4	PROTECTION OF VEGETATION
PD5	PROTECTION OF FAUNA
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PD23 COMPLIANCE WITH ENVIRONMENTAL PROTECTION SPECIFICATIONS

PD24 SUBCONTRACTED WORK

PD25 MEASUREMENT AND PAYMENT

PD1 PLANS

Prior to establishment of the site camp(s), the Contractor shall produce a plan showing the positions of all buildings, laydown yards, vehicle wash areas, fuel storage areas, batching areas and other infrastructure for approval by the Engineer or the Environmental Officer.

PD2 USE OF LAND

The Contractor shall not use the land forming the Site of, or connected with the Works, for any purpose whatsoever other than for the proper carrying out of the Works under the Contract and shall place any camps that may be required for himself and his employees only on sites approved by the Engineer. No trees or bushes shall be damaged or cut down by the Contractor or by any of his employees whether for use on the works or otherwise without the written consent of the Engineer or the Environmental Officer and then only where and in the manner as they may direct.

PD3 VEGETATION CLEARANCE

PD3.1 Woody vegetation

Prior to the start of construction, woody vegetative matter shall be stripped. This material shall either be spread randomly throughout the surrounding veld so as to provide biomass for the other microorganisms and habitats for small mammals and birds, or it may be stockpiled for later redistribution over the reinstated top soiled surface.

No vegetative matter shall be burnt or remove for firewood.

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PD3.2 Herbaceous vegetation

During clearing of woody vegetation no basal cover or grass and topsoil shall be removed and damage to this layer shall be minimized as far as possible.

PD4 PROTECTION OF VEGETATION

The Contractor shall ensure that all works are undertaken in such a manner that vegetation outside the Works area is not damaged under any circumstances.

PD4.1 Vegetation outside the Works area

The following provisions shall apply with respect to the protection of areas of vegetation adjacent to the marked Works areas.

No tree or shrub outside the Works area shall be felled, lopped, cut or pruned until it has been clearly marked for this purpose by the Engineer or the Environmental Officer. The method of marking will be specified by the Engineer or the Environmental Officer, and the Contractor will be informed in writing.

No tree outside the Works area shall be burned for any reason.

For every tree protected by these specifications which is removed or, in the opinion of the Engineer or Environmental Officer, is unduly damaged by the Contractor, the Contractor shall pay a penalty of R5 000.00 per tree to the client.

PD4.2 Vegetation within or adjacent to the Works area

No tree or shrub within the works area shall be felled, lopped, cut or pruned without the prior written approval of the Engineer or the Environmental Officer.

Trees which have been selected for preservation by the Engineer or the Environmental Officer within or adjacent to the Works area shall be fenced around

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their drip line. The fence shall be clearly marked with danger tape. No open fires shall be allowed within this fenced area, nor shall vehicles be parked underneath these trees.

If trees are located within the working width of the pipeline, the pipeline shall be aligned to avoid these trees wherever possible.

PD4.3 Transplantation of rare and endangered plant species

Prior to vegetation clearing any rare or endangered plant species which have been identified by the Environmental Officer or Engineer must be removed and transplanted as instructed by these persons.

PD4.3.1 Transplanting of small trees (1 to 1,5m height) and shall shrubs (0,5 to 1m height).

- a) Trees and shrubs shall only be transplanted between the months April and September. Deciduous trees and shrubs shall be transplanted only when they are in leafless conditions.
- b) Holes for transplanting trees and shrubs shall be dug before these plants are dug out. Trees shall be planted in holes of 1m x 1m x 1m and shrubs shall be transplanted in holes of 600mm x 600mm
- c) Trees and shrubs shall be planted so that their stems or trunks are at the same depth as in their original location. The orientation of the transplanted plants must be the same as in their original location (i.e. the north-facing side must remain north facing).
- d) Transplanted plants shall be pruned to limit transpiration. Plants shall also be sprayed with an evapotranspiration retardant liquid if they are evergreen.
- e) Transplanted plants shall be watered once a week for 5 weeks and thereafter once every 2 weeks.

PD4.3.1 Transplanting of Aloes, succulents and bulbous plants

- a) Aloes, succulents and evergreen bulbous plants may be transplanted at any time of the year. Deciduous bulbous plants shall be transplanted when they are leafless.
- b) Aloes and bulbous plants shall be planted in similar soil conditions and to the same depth as they were before removal.
- c) Transplanted aloes and bulbs shall be watered once directly after transplanting to settle the soil.

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PD4.4 Alien vegetation

The Contractor shall remove all alien vegetation from the works area for the duration of construction. Such vegetation will be identified by the Environmental Officer and the method of eradication will be specified by him.

PD5 PROTECTION OF FAUNA

The Contractor shall ensure that all Works are undertaken in a manner which minimizes the impact on the local fauna and shall apply the following specifications with respect to fauna management and protection.

Under no circumstances shall any animals be handled, removed, killed or interfered with by the Contractor, his employees, his subcontractors or his subcontractor's employees.

The Contractor and his employees shall not bring any domestic animals onto the site.

The Contractor shall ensure that the work site is kept clean and tidy and free from rubbish which would attract animal pest species.

There shall be no feeding of animals.

The Contractor shall ensure that domestic and native animals belonging to the local community are kept away from unprotected works.

PD6 ARCHAEOLOGICAL ARTEFACTS

The Contractor shall engage an archaeologist to demarcate archaeological sites identified during the impact study.

Archaeological sites shall be protected by a three strand fence which will be at least 2m outside the extremities of the site. The fence shall be clearly marked with danger tape.

Should the Contractor expose any archaeological artifacts during excavation, work on the area where the artifacts were found shall cease immediately and the Engineer or the Environmental Officer shall be notified as soon as possible.

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Upon receipt of such notification, the Engineer or the Environmental Officer will arrange for the excavation to be examined by an Archaeologist as soon as practicable. Aching upon advice from the Archaeologist, the Engineer will advise the Contractor of necessary actions to be taken. The Engineer will take all necessary actions to ensure that delays are minimized.

Under no circumstances shall archaeological artifacts be removed, destroyed or interfered with by the Contractor, his employees, his subcontractors or his subcontractor's employees.

The Contractor shall ensure that none of his employees gain access to any archaeological areas (whether fenced or unfenced), except when authorized to do so by the Engineer or the Environmental Officer.

PD7 SCENIC QUALITY

The Contractor shall not establish or undertake any activities which, in the opinion of the Resident Engineer or Environmental Officer, are likely to adversely affect the scenic quality of the area. The Engineer may direct the Contractor to refrain from such activities or to take ameliorative actions to reduce the adverse effect of such activities on the scenic quality of the environment.

No painting or marking of natural features shall be done. Marking for surveying and other purposes shall only be done with pegs and beacons.

No painting or marking of natural features shall be done. Marking for surveying and other purposes shall only be done with pegs and beacons.

All packed rock and exposed rock cuttings shall be treated in order to blend their colour with the colour of the natural weathered rocks of the adjacent environment.

PD8 WORKING AREA

The area of construction along the pipelines shall be contained within 5m servitude. Any work done outside the servitude, e.g. stockpiling of excavated material, use for access, etc shall only be done after discussion with and obtaining the written approval of the affected land owners.

The servitude shall be temporarily fenced for the portion under construction at anyone time. The fence shall be progressively erected and removed as the work proceeds. The location and extent of the fence shall be determined by the Engineer or the Environmental Officer.

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PD9 ACCESS ROADS

No new permanent access roads shall be developed by the Contractor other than those determined or approved by the Engineer.

Existing roads shall be used as far as possible for inspection purposes.

Topsoil shall be stripped as described under item PD12 "Topsoil" prior to construction and reinstated on completion of use of the road.

PD10 FIRES

No open fires shall be permitted except in areas specifically prepared and controlled for this purpose.

PD11 FENCING

Fencing shall be erected around sensitive natural or cultural elements to protect them from damage. No pedestrian or vehicular access shall be allowed to such fenced areas.

In places where temporary fencing is required, the Contractor shall erect such fencing when and where required by the Site Engineer, and re-erect and maintain temporary fencing as necessary. Temporary fencing shall remain in position either until it is replaced by permanent fencing or until completion of the whole of the Works, unless the Contractor requires, or the Engineer or the Environmental Officer directs, its earlier removal. The Contractor shall erect and maintain the aforementioned temporary fencing in the locations and for the period described in the Contract.

If temporary fencing is removed temporarily for the execution of any part of the Works it shall be reinstated as soon as practicable by the Contractor.

The clearing for permanent fencing shall be limited to the removal of trees and shrubs within 1m of the fence line. There shall be no removal of the grass cover or topsoil within this width.

Any fences damaged by the Contractor shall be repaired as soon as practicable at his cost.

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PD12 TOPSOIL

PD12.1 Source of topsoil

Topsoil shall be stripped from all areas that are to be utilized during the construction period and where permanent structures and access is required. These areas will include all areas to be excavated, temporary and permanent access roads, construction camps and borrow Pits.

Topsoil shall be stripped after clearing of woody vegetation and before excavation or construction commences.

The topsoil is regarded as the top 300mm of the soil profile irrespective of the fertility and composition of the soil.

PD12.2 Topsoil stripping

Soil shall be stripped to a minimum depth of 150mm or to the depth of bedrock where soil is shallower than 150mm. herbaceous vegetation, overlying grass and other fine organic matter shall not be removed from the stripped soil.

The topsoil is regarded as the top 300mm of the soil profile irrespective of the fertility and composition of the soil.

PD12.3 Topsoil stockpiling

Stripped topsoil shall be stockpiled on sites adjacent to where it has been stripped which have been approved by the Engineer. Soil stockpile shall not take the form of windrows, unless this can be placed far enough away from the working area. This is to prevent the soil from being spread out or mixed with the other spoil during construction.

Topsoil stripped from different soil zones shall be stockpiled separately and clearly identified as such. Topsoil obtained from different sites shall not be mixed.

Soil stockpiles shall not be higher than 2,5m, and the slopes of soil stockpiles shall not have a vertical horizontal gradient exceeding 1:2, 5.

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No vehicles shall be allowed access onto the stockpiles after they have been placed. Topsoil stockpiles shall be clearly demarcated in order to prevent vehicle access and later identification as the resource for rehabilitation and vegetation establishment.

Soil stockpiles shall not be allowed to become contaminated with oil, diesel, petrol, garbage or any other material which may inhibit the later growth of vegetation in the soil.

After topsoil stockpiling has been completed, the Contractor shall apply soil conservation measure to the stockpiles to the approval of the Engineer or Environment Officer.

PD12.4 Topsoil placement

Topsoil shall be placed to a minimum depth of 150mm over all areas where it has been stripped and over disused borrow pits after construction in those areas has ceased. Topsoil placement shall be done concurrent with construction as soon as construction in an area has ceased.

All areas onto which topsoil is to be spread shall be graded to the approximate original landform with maximum slopes of 1:2, 5 and shall be ripped prior to topsoil placement. The entire area to be topsoiled shall be ripped parallel to the contours to a minimum depth of 150mm.

Topsoil shall be placed in the same soil zone- from which it had been stripped. However, if there is insufficient topsoil available from a particular soil zone to produce minimum specified depth, topsoil of similar quality may be brought from other reservoir sites.

Where insufficient topsoil that has been stripped by the Contractor to provide the minimum specified depth, the Contractor shall obtain suitable material from other sources at no cost to the employer. The suitability of the substitute material shall be determined by means of a soil analysis which is acceptable to the engineer or the environmental officer.

No vehicle shall be allowed access onto topsoil after it has been placed

After topsoil placement is complete, cleared and stockpiled vegetation matter shall be spread randomly by hand over the topsoil area as instructed by the Environmental Officer.

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PD13 BORROW PITS AND QUARRIES

If a borrow pit is to be developed or an existing one is to be extended, all topsoil from the area that is to be quarried must be stripped and stored for later rehabilitation of the pit.

Stripping and excavation actions shall be progressive in such manner that those parts of a borrow pit or quarry where work is complete can be rehabilitated while other areas are still being quarried.

Cut slopes of borrow pits and quarries shall not have a vertical horizontal gradient of not steeper than 1:3, preferably 1:5.

Borrow pits shall be used as dump sites for excess rock spoil. On completion of spoiling the pits shall be reshaped and covered with a layer of topsoil. On no account may spoil or rock be placed in drainage ways without prior consent being obtained from the Engineer.

Stormwater cut off drains shall be provided at the top of the cut slope, where identified as necessary by the Engineer, to prevent erosion of the rehabilitated surface of the borrow pit quarry.

No borrow pit shall be used as a dump site for refuse material or for toxic material ego cement, oil, diesel, rubber and similar materials.

PD14 EROSION PREVENTION

The Contractor shall take measures, to the approval of the Engineer, to ensure that there is no undue stormwater damage and soil erosion resulting from the construction activities inside and outside the construction camp and Works areas.

Surface stormwater shall, where possible, not be allowed to be concentrated and to flow down cut or fill slopes without erosion protection measures being in place.

Overflow and/or scour channels shall be lined with stone pitching along their length and at their points of discharge to prevent soil erosion. The point of discharge shall be at a point where there is dense natural grass cover. These channels shall not discharge straight down the contours but shall be aligned at such an angle to the contours that they have the least possible gradient.

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PD15 EARTHWORKS

All cut and fill forms should be rounded on the edges to allow them to blend with the surrounding landforms.

PD16 SPOIL AND WASTE MATERIAL

The Contractor shall load and haul excess spoil to fill in the borrow pits or to dump sites approved by the engineer. The dumped material must be finally rounded off to have slopes not steeper than 1:3.

The Contractor shall remove all foundations and similar waste and transport all such waste material off site to dump areas which have been approved by the Engineer.

PD17 BLASTING

Contractor shall take measure to limit flying rock during blasting operations.

Fly rock 150mm and larger which falls beyond and cleared working area shall be collected and removed together with the rock spill.

When blasting under power lines the Contractor shall arrange for power to be temporarily switched off or have the lines moved or comply with the requirements of ESCOM who will be advised in reasonable time of the intention to blast.

PSD18 PREVENTION OF OIL POLLUTION

Waste run-off water from the vehicle wash bays, workshops and diesel/fuel tank areas shall be collected in a series of covered conservancy tanks with oil baffles/traps. The oil sludge thus collected shall be disposed of at an approved toxic waste disposal site. Water from conservancy tanks shall be drained to retention areas to allow silt settlement.

Above mentioned areas should be dished concrete floor slabs which drain into the conservancy tanks.

All old oils shall be retained for re-cycling by the supplier.

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All soil contaminated by oil, fuel, etc. Shall be collected immediately and disposed of at an acceptable disposal site to the approval of the Engineer or the Environmental Officer.

PD19 REFUSE DISPOSAL

The Contractor shall dispose of all refuse generated by him or his subcontractor on a weekly basis at an approved refuse disposal site.

PD20 ABLUTION FACILITIES

Portable toilets shall be placed within easy access of the Contractor's employees. These shall be moved to follow the progression of the works.

PD21 CLEARANCE OF SITE ON COMPLETION

On completion of the Works the Contractor shall clear away and remove from the works areas all constructional plant, surplus rock and other materials, foundations, plumbing and other fixtures, rubbish and temporary works of every kind. Areas thus cleared shall be graded and scarified to restore the ground to its original profile as near as practicable before topsoil placement.

PD22 ENVIRONMENTAL AWARENESS OF EMPLOYEES

The Contractor shall arrange that all his employees and those of his subcontractors receive environmental training before the commencement of construction to the satisfaction of the Engineer or Environmental Officer, in order that these employees:-

- a) Acquire a basic understanding of the key environmental features of the work site and environs;
- b) Are thoroughly familiar with the requirements of the Environmental Protection and Control Specifications as they apply to the Works;

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- c) Receive basic training in the identification of archaeological artifacts, and rare and endangered flora and fauna that may be encountered along the route;
- d) Are made aware of any other environmental matters which are deemed to be necessary by the Engineer or the Environmental Officer.

PD23 COMPLIANCE WITH ENVIRONMENTAL PROTECTION SPECIFICATIONS

All persons employed by the Contractor or his subcontractors shall abide by the requirements of these Specifications as they apply to the works.

Any employees of the Contractor or his subcontractors found to be in breach of any of the Environmental Protection Specifications may be ordered by the Engineer to leave the site forthwith.

The order may be given orally or in writing. Confirmation of an oral order will be given as soon as practicable but lack of confirmation in writing shall not be a cause for the offender to remain on site. No extension of time will be granted for any delay or impediment to ". Contractor brought about by a person ordered to leave the site.

Supervisory staff of the Contractor or his subcontractors shall not direct any person to undertake any activities which would place such person in contravention of the Environmental Protection and Control Specifications.

For every tree protected by these specifications which is removed or, in the opinion of the Engineer or the Environmental Officer, is unduly damaged by the Contractor, the Contractor shall pay a penalty of R5000.00 per tree.

PD24 SUBCONTRACTED WORK

Subcontractors and their employees shall comply with all the requirements of the Environmental Protection and Control Specifications that apply to the Contractor. Absence of specific reference to the subcontractor in any specification does not imply that the subcontractor is not bound by that specification.

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PD25 MEASUREMENT AND PAYMENT

The reinstatement of borrow pits, pipe trenches and work areas shall be included in the contractor's rates for earthworks and excavations. Erosion protection such as construction of berms for stormwater drainage shall be included in the rates for pipe trenches and excavations of earthworks. Only gabions, where instructed by the Engineer will be paid separately.

PAIRTICUALR SPECIFICATION

PE DEALING WITH ESKOM SERVICES

- PE1 The Contractor is responsible for liaison with and compliance with 'Eskom's requirements regarding works in close proximity to or crossing of Eskom Services. Contractor is responsible for any damage done to Eskom Services by the Contractor's staff or labourers, or sub-contractors.
- PE 2 Eskom's rights, services and equipment must be acknowledge at all times and may not be interfered or tampered with.
- PE3 All work within Eskom's servitude area must be done in accordance with the requirements of the Occupational Heal and safety Act, Act No 85/19:n. Special attention must be given to the clearances between Eskom's conductors, structures, cable and electrical apparatus and the proposed construction work.
- PE4 No mechanical equipment, including mechanical excavators and high lifting machinery, may be used within Eskom's services and equipment, without prior permission in writing and supervision of Eskom's authorized area representative. Permission must be obtained at least 10 (ten) days prior to the commencement of any work or blasting within the servitude area.

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- PE5 No construction work may be executed closer than 6 metres from any of Eskom's power line structures or stay wires.
- PE6 Eskom shall not be liable for the death of or injury to any person or for the loss of or damage to any property caused in whatsoever manner by the Contractor, his employees, agents or contractors. The Contractor indemnifies Eskom against all claims including claims for consequential damages by third parties which includes but is not limited to claims as a result of damage to, or interruption of or interference with Eskom's services or equipment. The Contractor's attention is drawn to section 27(3) of the Electricity Act of 1987.
- PE7 Eskom shall at all times have unobstructed access to and from its servitude area and power line structures.
- PE8 Prior to the commencement of work, the Contractor must obtain permission from the registered owner of the property over which Eskom's servitude is registered.

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C3.4.3.1. OCCUPATIONAL HEALTH AND SAFETY ACT 1993: HEALTH AND SAFETY SPECIFICATION

PARTICULAR SPECIFICATION

COHERENT HEALTH & SAFETY SECIFICATION

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ANNEXURE A

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ANNEXURE F

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These health & safety specifications have been compiled in terms of the Occupational Health & Safety Act no. 85 of 1993 and Construction Regulations of 7 February 2014 as amended. It must be clear that this document is a management tool and should be used by the Principal Contractor and Contractors to comply with the Act and regulations.

Should there be any contradiction between this document and the Act; the Act must take preference except where explicitly stated. Similarly, where this document is silent on a specific health & safety requirement, the Act must be used as the minimum requirement.

Should you be unclear about anything set out in this document, please contact this office. These specifications are site specific and include all works to be done by the principal contractor. The principal contractor will be responsible for all the work on site.

Every endeavour has been made to address the most critical aspects relating to Health and Safety issues to assist contractors in adequately providing for Health and Safety of employees on site. However, the Principal Contractor is required to ensure they stay compliant with statutory requirements and construction programs and processes and include such aspects in their Health and Safety file.

These health and safety specifications was prepared by H.Heyneke registered at the South African Council for the Project and Construction Management Professions (SACPCMP) as a Construction Health and Safety Manager (CHSM 162/2016) and Candidate Construction Health and Safety Agent (Can CHSA 146/2018)

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1. INTRODUCTION AND BACKGROUND

1.1 Background to the Health and Safety Specifications

The Construction Regulations (February 2014) places the onus on MAKHADO Local Municipality to prepare coherent health & safety specifications, highlighting risks not successfully eliminated during design. The MAKHADO Local Municipality also can set the tone and standard of occupational health & safety on the construction site.

1.2 Responsibility and Accountability

It is imperative to understand the process of determining legal accountability, as the OHS-Act is the only criminal Act still administered by the Department of Labour. It assumes that the CEO is overall accountable even though he may delegate some of his responsibilities. This principal is entrenched in Section 37(1) of the Act. This is generally referred to as the REASONABLE MAN TEST. SECTION 37: Acts or omissions by employees or Mandataries

1.3 Purpose of the Health and Safety Specifications

The purpose of this specification document is to provide the relevant Principal Contractor (and sub-contractor) with any information other than the standard conditions pertaining to construction sites which might affect the health and safety of persons at work and of persons in connection with the use of plant and machinery during Construction work.

1.4 Implementation of the Health and Safety Specifications

To brief the Principle and Sub Contractor on the significant health and safety requirements and aspects of the project. This shall include the provision of the following information and requirements namely:

- a) safety considerations affecting the site of the project and its environment.
- b) health and safety aspects of the associated structures and equipment;
- c) required submissions on health and safety matters from the Principal Contractor (and Sub Contractor).
- d) the Principal Contractor's (Sub - Contractors) health and safety plan.

To serve to ensure that the Principal Contractor (and Sub Contractors) is fully aware of what is expected from them with regards to the Occupational Health and Safety Act, 85 of 1993 and the Regulations made there-under including the applicable safety standards, and in

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particular in terms of Section 8 and 44 of the Act. To inform the Principal Contractor that the Occupational Health and Safety Act, 85 of 1993 in its entirety shall apply to the contract to which this specification document applies. The Construction Regulations promulgated on 7 February 2014 and incorporated into the above Act by Government Notice R 84, published in Government Gazette 37305 shall specifically apply to all persons involved in the construction work pertaining to this project.

“Purpose of the Act” –To provide for the health and safety of persons at work and the health and safety of persons in connection with the use of plant and machinery; the protection of persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work; to establish an advisory council for occupational health and safety; and to provide for matters connected therewith.

“Agent” –means a competent person who acts as a representative for a MAKHADO Local Municipality.

“MAKHADO Local Municipality” –means any person for whom construction work is performed.

“Construction manager” means a competent person responsible for the management of the physical construction processes and the coordination, administration and management of resources on a construction site;

“Construction site” means a workplace where construction work is being performed.

“Construction supervisor” means a competent person responsible for supervising construction activities on a construction site.

“Construction work” means any work in connection with –

- a) The construction, erection, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure; or
- b) The construction, erection, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system; or the moving of earth, clearing of land, the making of excavation, piling, or any similar civil engineering structure or type of work;

“Contractor” means an employer who performs construction work.

“Designer” means

- a) A competent person who prepares a design.

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Checks and approves a design.

Arranges for a person at work under his or her control to prepare a design,

Including an employee of that person where he or she is the employer; or

Designs temporary work, including its components.

b) An architect or engineer contributing to or having overall responsibility for a design.

c) A building services engineer designing details for fixed plant.

d) A surveyor specifying articles or drawing up specifications.

e) A contractor carrying out design work as part of a design and building project; or an interior designer, shopfitter, or landscape architect.

“Health and Safety File” –means a file, or other record containing the information by the Construction Regulations.

“Health and Safety Plan” –means a site, activity or project specific documented plan in accordance with the MAKHADO Local Municipality’s health and safety specification.

“Health and Safety Specification” –means a site, activity or project specific document prepared by the MAKHADO Local Municipality pertaining to all health and safety requirements related to construction work.

“Method Statement” –means a document detailing the key activities to be performed to reduce as reasonably as practicable the hazards identified in any risk assessment.

“Principal contractor” means an employer appointed by the MAKHADO Local Municipality to perform construction work.

“Risk Assessment” –means a program to determine any risk associated with any hazard at a construction site, to identify the steps needed to be taken to remove, reduce or control such hazard.

1.5 Abbreviations:

GMR: General Machinery Regulations

OHS Act: Occupational Health & Safety Act. Act 85 of 1993

Constr Reg: Construction Regulation 2014

ORHVS: Operating Regulations for High Voltage Systems

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PPE: Personal Protective Equipment

2. OCCUPATIONAL HEALTH & SAFETY MANAGEMENT

2.1 ROLES

MAKHADO Local Municipality / Agent

- a) Prepare a baseline risk assessment and issue a health and safety specification to the Principal Contractor, Designer and include the specification in tender documentation.
- b) The MAKHADO Local Municipality or the appointed MAKHADO Local Municipality Agent will appoint each Principal Contractor for this project or phase/section of the project in writing for assuming the role of Principal Contractor as intended by the Construction Regulations.
- c) The MAKHADO Local Municipality or the appointed MAKHADO Local Municipality Agent shall discuss, negotiate, and approve the contents of the specified project health and safety plan submitted by the Principal and Sub Contractor.
- d) The MAKHADO Local Municipality or his Agent will take reasonable steps to ensure that the health and safety plan of the Principle and Sub Contractor is correctly implemented and maintained. Monthly audits shall be conducted to monitor the compliance.
- e) In the event of design changes the MAKHADO Local Municipality or the appointed Agent on his behalf will ensure that enough resources will be provided to implement the work safely.
- f) The MAKHADO Local Municipality or his appointed Agent on his behalf will prevent the Principal Contractor and/or the Contractor from commencing or continuing with construction work should the Principal Contractor and/or the Contractor at any stage in the execution of the works be found to:
 - have failed to have complied with any of the administrative measures required by the Construction Regulations in preparation for the construction project or any physical preparations necessary in terms of the Act;
 - have failed to implement or maintain their health and safety plan.
 - have executed construction work which is not in accordance with their health and safety plan.

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have acted in any way which may pose a threat to the health and safety of any person(s) present on the site of the works or in its vicinity, irrespective of him/them being employed or legitimately on the site of the works or in its vicinity

Designer

- Must consider the health and safety specifications of the MAKHADO Local Municipality.
- Before the tender process, the designer must make available a report to the MAKHADO Local Municipality about:
 - o All the relevant health and safety information about the design of the relevant structure that might affect the pricing of the construction work.
 - o The geotechnical –science aspects, where appropriate.
 - o The loading that the structure is design to withstand.
- Inform the MAKHADO Local Municipality in writing of any known or anticipated dangers or hazards related to the project.
- Make available all relevant information required for the safe execution of the work upon being designed or when the design is subsequently altered.
- During the design consider the hazards relating to any subsequent maintenance to be performed with the minimum risk.
- During the design stage cognizance of ergonomic design principals must be applied to minimize ergonomic related hazards in all phases of the life cycle of a structure.

2.2 Implementation of the Health and Safety Specifications (Drafting of the coherent Health & Safety Plan)

These health & safety specifications document forms an integral part of the contract, and the Principal Contractor is expected to use it when compiling its project-specific coherent health & safety plan. The Principal Contractor must forward a copy of these specifications to all Contractors at their bidding stage so that they can in turn prepare coherent health & safety plans relating to their operations.

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3. OCCUPATIONAL HEALTH & SAFETY MANAGEMENT SYSTEM ELEMENTS

3.1 Scope of the Project

These Specifications set out the requirements for eliminating or if this is not possible, for minimising as far as reasonably practicable, the risk of incidents and injuries occurring at MAKHADO Local Municipality. This document covers work to be undertaken of the project and sets out the rules and procedures for engagement on the project. The scope also addresses legal compliance, MAKHADO Local Municipality standards, hazard identification and risk assessment, risk control, and the promotion of a health and safety culture amongst those working on the project. The health & safety specifications also make provision for the protection of those persons other than employees.

3.3 Interpretations

3.3.1 Application

This specifications document is a legal compliance document compiled in terms of the OHS Act & Construction Regulations 2014 and is therefore binding. The document must be read in conjunction with other relevant legislation.

3.3.2 Definitions

The definitions as listed in the OHS Act 85/1993 and Construction Regulations (February 2014) shall apply.

3.4 Minimum Administrative Requirements

3.4.1 Notification of Intention to Commence Construction Work

The Principal Contractor must notify the Provincial Director of the Department of Labour in writing before construction work commences. A copy of this notification must be held in the Principal Contractor's health & safety file on site. The fax transmission slip will serve as proof of notification.

See attached **Annexure "F" Page 212**

3.4.2 Assignment of the Principal Contractor's / Contractors' Responsible

Persons to Supervise and Co-ordinate Health and Safety on Site. The Principal Contractor and all Contractors must make supervisory appointments as well as other relevant appointments in writing (as stipulated by the OHS Act and Construction Regulations 2014).

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See attached **Annexure 'B'** for more detail on what health & safety management appointments are relevant on this project.

3.4.3 Competence of the Principal Contractor's / Contractors' Appointed Competent Persons

The Principal Contractor and Contractors' competent persons for the various risk management portfolios must fulfil the criteria as stipulated in terms of the definition 'Competent' in accordance with the Construction Regulations (February 2014).

3.4.4 Compensation for Occupational Injuries and Diseases Act 130 of 1993 (COIDA)

The Principal Contractor must have in its possession a letter of good standing issued by its Compensation Assuror as proof of registration.

Contractors must also hold proof of workman's compensation assurance registration in the form of a letter of good standing and forward a copy to the

Principal Contractor before they begin work on site. Contractors must always be in good standing while carrying out work on site.

3.4.5 Health and Safety Organogram

Including all appointed risk management competent persons. In cases where appointments have not yet been made, the organogram shall reflect the intended positions.

The organogram must be updated when there are changes in the Site Management Structure and dated accordingly. The organogram merely serves as a quick reference to who is responsible for what risk portfolio in what area.

3.4.6 Preliminary Hazard Identification and Risk Assessments, Progress Hazard Identification and Risk Assessments Reviews.

The Principal Contractor must cause preliminary hazard identification and risk assessment to be performed under the leadership of a competent person before commencement of construction work. On this project detailed task specific risk assessments based on the proposed sequence of work (method of work) must be compiled. Generic risk assessments will not be accepted.

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The assessed risks, together with written safe work procedures for the 'medium & high-risk' rated activities must form part of the coherent site-specific health and safety plan submitted for approval by House of Safety. The risk assessments must include:

- a) A list of hazards identified as well as potentially hazardous tasks;
- b) The risks which may result based on the list of hazards and tasks;
- c) A set of safe work procedures to be implemented with the aim of eliminating or if this is not possible, reducing and/or controlling the risks as far as reasonably practicable to ALARP (as low as reasonably practicable);
- d) A monitoring and review procedure of the risk assessments as they change i.e. how will the risk assessments be reviewed, when will they be reviewed and by whom.

The Principal Contractor must ensure that all Contractors inform, instruct and train their workers regarding any hazards, the associated risks and the related safe work procedures to be implemented before any work commences and thereafter at regular intervals as the risks change and as new risks develop. This training should be carried out in the form of toolbox health & safety talks. Contractors must conduct their own toolbox talks and submit proof of these talks in the form of attendance registers to the Principal Contractor at least every two weeks. Every worker on site must undergo such toolbox safety talks with the attendance registers kept in the Principal Contractor's safety file.

Contractors must conduct their own hazard identifications and risk assessments specific to their operations and forward a copy to the Principal Contractor.

The Principal Contractor when required must report on the status of these Contractor risk assessments to the MAKHADO Local Municipality i.e. at audits.

3.4.7 General Record Keeping

The Principal Contractor and all Contractors must keep and maintain all the necessary Health and Safety records to demonstrate compliance with these Coherent Specifications, the OHS Act 85/1993, and the Construction Regulations (February 2014). The Principal Contractor must also ensure that all records of incidents/injuries, emergency procedures, training, planned maintenance inspections, monthly contractor audits, etc. are kept in the health & safety file(s) held in the site office. The Principal Contractor must ensure that every Contractor keeps its own health & safety file, maintains the file, and makes it available on request (the file must include the Contractor's health & safety plan and all relevant records). Such 'Contractor safety files' must be audited by the Principal Contractor monthly with audit reports kept as proof.

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3.4.8 Injury / Incident Reporting and Investigation

Injuries are to be categorised into first aid; medical; disabling (lost day); and fatal. When reporting injuries to the MAKHADO Local Municipality, these categories must be used. The Principal Contractor must investigate all injuries. All Contractors must report injuries to the Principal Contractor immediately and the Principal Contractor must inform the MAKHADO Local Municipality immediately. All incidents reportable in terms of the provisions of Section 24 of the OHS Act must be reported to the local Dept. of Labour in the prescribed manner.

3.4.9 Consolidation of Health & Safety Documentation

It is the duty of the Principal Contractor to ensure that all documentation required to be kept or generated during the construction phase is consolidated into one set of documents that must be handed over to the MAKHADO Local Municipality upon completion of the construction work. This consolidated safety file(s) should include instructions from the design team that will be required for the continued safe operation and maintenance of the new structure(s).

3.4.10 Offences and Penalties

Penalties may be imposed on the Principal Contractor and Contractors for ongoing non-compliance with the provisions of the MAKHADO Local Municipality 's coherent health & safety specifications, the Principal Contractor's coherent health & safety plan, site health & safety procedures and rules. Non-compliances identified during safety agent audits and visits will be categorised into one of three levels based on severity. These will be as follows: Life threatening situation - a prohibition order will be issued by means of a written instruction in the site instruction book or an explanation in an audit report. This activity must be seized immediately, and corrective measures taken. Serious injury possible – a contravention notice will be issued with a time frame for compliance stipulated. Minor or no injury may result – an improvement notice will be issued. The corrective measures stipulated in the audit report must be taken. The methodology used to decide the above levels will be causally linked to the risk assessments of the Principal Contractor and contractors, MAKHADO Local Municipality Standards. The decision of the safety Agent will be final.

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3.5 Principal Contractors, Contractors and Sub-contractors

3.5.1 Principal Contractor's and Contractors' Requirements

The Principal Contractor must ensure that all Contractors appointed by them comply with these Specifications, the Principal coherent health & safety plan as well as the OHS Act, Construction Regulations (February 2014), and other relevant legislation that may relate to the activities directly or indirectly. A Contractor, when appointing other Contractors as 'Sub-contractors', shall mutatis mutandis ensure compliance as if it was the Principal Contractor. The Principal Contractor may only allow a Contractor to begin work on site after receiving a coherent health & safety plan which must include a project specific hazard identification, risk assessments and safety measures. The Principal Contractor must test competency and finally approve his sub – contractor coherent site-specific health and safety plan. The Principal Contractor must audit each of its contractors monthly, with audit reports kept in the health & safety file on site. The audit must include an administrative assessment as well as a physical inspection of the contractor's site activities. The Principal Contractor must stop any Contractor from carrying out construction work that is not in accordance with the Principal Contractor's and/or Contractor's health & safety plan or if there is an immediate threat to the health and safety of persons.

The Principal Contractor shall take all reasonable steps necessary to ensure co-operation between all contractors to enable each of those contractors to comply with the provisions of the Construction Regulations;

The Principal Contractor shall take all reasonable steps to ensure that each contractor's coherent health and safety plan is implemented and maintained on the construction site: Provided that the steps taken shall include periodic audits at intervals mutually agreed upon between the Principal Contractor and contractors, but at least once every month;

The Principal Contractor must ensure that where changes are brought about to the design and construction, that sufficient health and safety information and appropriate resources are made available to contractors to allow them to execute the work safely;

The Principal Contractor must ensure that every contractor is registered and in good standing with a recognised compensation fund or with a licensed compensation insurer prior to work commencing on site;

The Principal Contractor must ensure that potential contractors submitting tenders have made provision for the cost of health and safety measures during the construction process;

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The Principal Contractor shall discuss and negotiate with the contractor the contents of the coherent health and safety plan and shall finally approve that plan for implementation;

The Principal Contractor shall hand over a consolidated health and safety file to the MAKHADO Local Municipality upon completion of the construction work and shall include a record of all drawings, designs, materials used and other similar information concerning the completed structure;

The Principal Contractor may only appoint a contractor to perform construction work when such Principal Contractor is reasonably satisfied that the contractor he or she intends to appoint, has the necessary competencies and resources to perform the construction work safely and that the contractor is an approved MAKHADO Local Municipality contractor.

3.5.2 Principal Contractor / Contractor Competency Assessment

The Principal Contractor must be reasonably satisfied that the contractors it intends to appoint have the necessary competencies and resources to safely conduct the work they will be appointed for. This should be established at tender stage and before appointments are made. One of the preferred ways of determining whether a contractor is competent is to make sure the contractor is an accredited contractor for MAKHADO Local Municipality. Once the contractor is appointed, but before it begins work on site a site- specific safety plan must be discussed and negotiated with the Principal Contractor. Such safety plan must be approved for implementation by the Principal Contractor.

The Principal Contractor and Contractors should submit the following documentation for perusal and verification by the MAKHADO Local Municipality and Principal Contractor respectively:

- Coherent health & safety plan as compiled for this project; (including Risk assessments, safe work procedures, fall protection plan, PTW Issuer/PTW Holder certificates
- Management Structure as envisaged at tender (organogram);
- Letter of Good Standing with the Compensation Commissioner or FEM.
- Proof of health & safety training and other related training; (CV and certificates)
Legislative appointment letters
- Notification of Construction work; (proof notification was done)

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3.5.3 Pricing for Occupational Health & Safety Compliance

All parties bidding to do work on this construction project must ensure that they have made provision for the cost of complying with this Specifications document as well as with the OHS Act and incorporated Regulations as a minimum requirement in their tender documentation. It must also be taken into consideration that time is money, which implies that sufficient time must be allowed for the implementation of the minimum OHS standards. No additional claims will be entertained at a later stage should a compliance requirement be prescribed in the OHS Act, incorporated regulations or in this Specifications document.

3.5.4 Contractors' Coherent Health & Safety Plans [Construction Regulations 7]

1. Introduction:

The Construction Regulations (2014) aims to improve overall management and co-ordination of Health, Safety and Welfare throughout the Construction Phase and reduce the large number of serious and fatal injuries and cases of ill health, which occur every year in the Construction Industry.

In terms of the Construction Regulations (2014), the Principal Contractor is required to develop a Health and Safety Plan before work commences on site and review it throughout the Construction Phase. The degree of detail required in the Health and Safety Plan and the time and effort in preparing it should be in proportion to the nature, size and level of Health and Safety risks involved in the project. Projects involving minimal risks will call for simple, straightforward plans. Large projects or those involving significant risks such as this project will need much more detail.

2. What should the construction health & safety plan cover?

The Construction Health and Safety Plan should set out the arrangements for ensuring the Health and Safety of everyone carrying out the construction work as well as all other persons who may be affected by it. The index of this plan must be in line with Annexure:

3.5.5 Communication and Management of the work

The Principal Contractor must indicate in its health and safety management plan that it has made provision for the following:

- a. Management structure and responsibilities

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- b. Health and Safety goals for the project and arrangements for monitoring and review of Health and Safety performance i.e. safety meetings; contractor meetings; risk assessment review, etc
- c. Arrangement for:
 - i. Regular liaison between parties on site i.e. meetings
 - ii. Consultation with the work force i.e. toolbox talks
 - iii. The exchange of design information between the MAKHADO Local Municipality, designers, and Contractors on site
 - iv. Selection and control of Contractors i.e. selection criteria inspections; audits, etc.
 - v. Site health & safety induction and onsite training i.e. toolbox talks
 - vi. Welfare facilities, first aid, emergency planning and fire prevention strategy
 - vii. The reporting and investigation of injuries and incidents including near misses what the intended system will be
 - viii. The production, approval and review of risk assessments, safe work procedures and method statements and how does the company's risk assessment system work.
- d. Site specific rules and procedures.

3.6 MAKHADO Local Municipality identified Hazards and Potentially Hazardous Situations

Other possible risks you need to consider.

- 1. Existing services
- 2. Interface with the public
- 3. Hazardous chemical such as solvents, cleaning agents, cement, fuels, oils, epoxies, etc.
- 4. Site security
- 5. Relocation and protection of existing services
- 6. Finishing trades

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3.6.1 Unforeseeable Hazards

The Principal Contractor must immediately notify Contractors as well as the MAKHADO Local Municipality, in writing, of any hazardous or potentially hazardous situations that may arise during the performance of construction activities so that the necessary precautions may be taken before such work begins.

3.7 Site Operational Requirements

3.7.1 Health and Safety Representative(s)

The Principal Contractor and all Contractors must ensure that Health and Safety Representative(s) are appointed under consultation with the employees. The H&S representatives must be competent to carry out their functions. The appointments must be in writing. The Health and Safety Representatives should carry out monthly inspections, keep records of the inspections and report all findings to the Responsible Person or safety officer forthwith and at monthly health & safety committee meetings. At least one Health & safety representatives are required by all Employers on site.

3.7.2 Health and Safety Committees

The Principal Contractor must ensure that project health and safety committee meetings are held monthly with minutes kept. Meetings must be chaired by the

Principal Contractor's Responsible Person [CR 7(1) person]. All Contractors' Responsible Persons and Health & Safety Representatives must attend the

Principal Contractor's monthly health & safety meetings. The Principal

Contractor's appointed supervisors must also attend health & safety meetings.

The following topics must be tabled at meetings: management appointments and risk management portfolios; sub-contractor legal compliance issues; injuries and incidents; hazards and risk assessments (present and foreseen); safety procedures; method statements for upcoming activities; planned inspections and registers/record keeping, etc. The committee chairperson must sign off and date the minutes.

3.7.3 Health and Safety Training

3.7.3.1 Induction

The Principal Contractor must ensure that all site personnel including all sub-contractors undergo the agreed health & safety induction training session held and managed by the

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P/Contractor before any worker starts work on the project. A record of attendance must be kept in the health & safety file. Workers must carry proof of inductions on their person while on site i.e. identification passport cards or like be agreed.

3.7.3.2 Awareness

The Principal Contractor must ensure that, on site, periodic toolbox health & safety talks take place at least once every two weeks. All site personnel including all sub-contractors must attend safety talks at such intervals and keep proof thereof. These talks should deal with risks relevant to the construction work at hand i.e. they should be based on the job-specific risk assessments and safe work procedures. Records of attendance must be kept in the P/contractor's health & safety file. All contractors' employees must attend safety awareness toolbox talks carried out by their supervisors; the attendance registers must be copied to the Principal Contractor together with information on the information discussed at the session.

3.7.3.3 Competence

All competent persons must have the knowledge, experience, training, and qualifications specific to the work they have been appointed to supervise, control and/or carry out. This must be assessed on a regular basis e.g. training, evaluation, and periodic audits by the MAKHADO Local Municipality, progress meetings, etc. The Principal Contractor is responsible to ensure that Competent Contractors are appointed to carry out construction work on site.

3.7.4 Health & Safety Audits, Monitoring and Reporting

The Principal Contractor is obligated to conduct monthly audits on all Contractors appointed by it and keep audit reports in its health & safety file. Contractors must audit their sub-contractors and keep records of these audits in their health & safety files, made available on request. The MAKHADO Local Municipality /Agent will conduct monthly audits on the Principal Contractors' safety management plan.

3.7.5 Emergency Procedures

The procedure must detail the response procedures including the following key elements:

- List of key competent personnel;
- Details of emergency services;
- Actions or steps to be taken in the event of the specific types of emergencies;

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- Evacuation procedures: including routes and exits to be available on a drawing.
- Emergency procedure(s) must include, but shall not be limited to fire; spills; injury to employees; damage to material / equipment / plant; use of hazardous substances; bomb threats; major incidents/injuries; evacuation; etc.
- The Principal Contractor must advise the MAKHADO Local Municipality in writing forthwith, of any emergency situations, together with a record of action taken/action to be taken.
- A contact list of all service providers (Fire Department, Ambulance, Police, Medical and Hospital, etc.) must be maintained and made available to site personnel.
- The emergency plan will need to be reviewed from time to time as conditions/environment changes i.e. as building work increases in extent.

3.7.6 First Aid Boxes and First Aid Equipment

The Principal Contractor and all Contractors must appoint First Aider(s) in writing. The Principal Contractor must appoint at least one First Aider to start with, which first aider must be certificated. Copies of valid certificates are to be kept on site. The Principal Contractor must provide at least 1 (one) first aid box, adequately always stocked. Due to the nature of this project i.e. satellite workstations/areas, further first aid boxes must be provided close to the various workstations to allow for quick, effective treatment of injured persons. As the work progresses and the structure increases in height, extra first aid

3.7.7 Personal Protective Equipment (PPE) and Clothing

The Contractor must ensure that all site workers are issued with and wear the appropriate PPE as indicated in their risk assessments. The Contractors must always make provision and keep adequate quantities of SANS approved PPE on site according to their risk assessments. Safety harnesses are mandatory wherever work takes place in an elevated area where safe working platforms or ladders are not possible. Overalls clearly indicating the Contractor's logo must be worn and all sub-contractors must conform to this requirement. Eye protection must be worn by those working grinders, skill saws, and highpressure water cleaners. Even those workers near these operations will also be required to wear such eye protection. Safe footwear will be required by all workers. A high visibility vest is mandatory on a MAKHADO Local Municipality site.

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3.7.8 Occupational Health and Safety (OHS) Signage

The Principal Contractor must provide adequate on-site OHS signage. Including but not limited to: 'construction work - no unauthorised entry', 'beware of overhead work', 'hard hat area', first aid – to be posted up at all work areas/zones. Signage must also be posted up at strategic locations to warn the public of diversions, alternative through ways and other irregularities caused by construction work (pedestrians and motorists). Signs are also required as per law e.g. scaffolding and other potential risk areas/operations such as exposed edges and openings and trenches/excavations where persons are at work. Safety signs and awareness posters will also be required in strategic locations on site such as frequently used access routes, stairways, and entrances to structures and buildings where the workers will continuously be made aware of health & safety. Health & safety signage must be well maintained including weekly inspections, cleaning, replacement, and repair.

3.7.9 Public and Site Visitor Health & Safety

Public walkways and roadways must be kept clean and free of construction materials to prevent any negative impact on the public. Public roadways and walkways will have to be cleaned on a regular basis – daily inspections to be conducted by the Principal Contractor with action to be taken without delay (daily). Site visitors must be briefed on the hazards they may be exposed to as well as what measures are in place or should be taken to control these hazards. The Construction Regulations require that a record of these 'inductions' be kept on site. It is advised that a visitor book with site rules leaflet be kept at the reception/site office and all visitors to be directed to such point where they must read through the site safety information and sign the visitor book. It will be the

Principal Contractor's prerogative to decide whether site visitors require supervision while on site. Visitor hard hats must be kept in the site office.

3.7.10 Access to Site

Where any permits are necessary from the local authorities, this will be the Principal Contractor's responsibility. The road surface of all public and private roadways and pavements/pedestrian walkways must remain in a reasonably clean state, free of excessive sand, stone, water, or other construction related materials. The access gate(s) must be controlled, and visitors must sign in and report to the site office for further instruction.

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3.7.11 Night Work (After Hours)

No night work will be allowed within the hazardous zone on this project without prior approval from the MAKHADO Local Municipality /MAKHADO Local Municipality 's Agent and the Construction Health and Safety Agent. Additional health and safety requirements will then be applicable.

3.7.12 Transport of Workers

The Principal Contractor and other Contractors may not transport: Persons together with goods or tools unless there is an appropriate area or section to store the tools or equipment; Contractors must adhere to the National Road Traffic Act.

3.7.13 Construction Health & Safety Officer

A full-time construction safety officer (in terms of Construction Regulation 8) will be required on this project. The construction health and safety officer must be registered with SACPCMP. The construction officer will be required to carry out at least the following duties:

a) Health & safety audits and inspections on site including administrative and Physical audits of all Contractors' health & safety plans, files and activities, and record findings in the form of audit reports to be kept in the health & safety file; b) Assess, and finally approve contractor safety plans;

3.8 Physical Requirements

3.8.1 Earthworks (including Trenching and excavations)

The Principal Contractor and relevant Contractors must make provision in their tender for the shoring of excavations where the soil conditions warrant it or if this is not possible cut it back -excavation walls must be battered back to a safe angle, termed the safe angle of repose. The Principal Contractor has the following options: first option is to shore or brace the excavation, should this not be practical then such excavation must be battered back to the safe angle of repose (second option). Should the first two options not be deemed necessary by the Contractor, then permission must be given in writing by the appointed competent excavation supervisor (third option). Where uncertainty pertaining to the stability of the soil exists, the decision of a professional engineer or professional technologist competent in excavations shall be decisive. Such permission must be in writing. The following is relevant to excavations:

- Excavations/trenches are inspected before every shift and a record of these inspections is kept;

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- Safe work procedures have been communicated to the workers;
- The safe work procedures are always enforced and maintained by the Principal Contractor's and Contractors' responsible persons;
- Excavations next to permanent or temporary roadways - ensure that no load material, plant or equipment is placed or moved near the edge of an excavation where it is likely to cause its collapse and thereby endangering the safety of any person, unless precautions such as the provision of sufficient and suitable shoring or bracing are taken to prevent the sides from collapsing;
- Ensure that where the stability of an adjoining building, structure or road is likely to be affected by the making of an excavation, steps are taken that may be necessary to ensure the stability of such building, structure or road as well as the safety of persons
- Cause convenient and safe means of access to be provided into every excavation in which persons are required to work and such access shall not be further than 6m from the point where any worker within the excavation is working;
- Ascertain as far as is reasonably practicable, the location and nature of electricity, water, gas, or other similar services which may in any way be affected by the work to be performed. The necessary steps must then be taken to render the circumstances safe for all persons involved;
- Cause every excavation which is accessible to the public or which is adjacent to public roads or thoroughfares, or where the safety of persons may be endangered, to be
- Adequately protected by a barrier or fence of at least one meter in height and as close to the excavation as is practicable; and provided with warning illuminates or any other clearly visible boundary indicators at night or when visibility is poor;
- Cause warning signs to be positioned next to an excavation within which persons are working or carrying out inspections or tests

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3.8.2 Edge Protection, Barricading and Penetrations (CR 10)

A Contractor must ensure that—

- All unprotected openings in floors, edges, slabs, hatchways, and stairways are adequately guarded, fenced, or barricaded or that similar means are used to safeguard any person from falling through such openings;
- No person is required to work in a fall risk position, unless such work is performed safely as contemplated in sub-regulation (2);
- A detailed Fall Arrest and Rescue Plan will be drafted and implemented on site.
- The above-mentioned plan will be demonstrated on instruction of the MAKHADO Local Municipality's Agent.

3.8.3 Deliveries, Waste Removal, Stacking/Storage of Materials

The Principal Contractor and other relevant contractors must ensure that there is an appointed stacking supervisor and all materials, formwork and all equipment is stacked and stored safely, on level, compact ground, out of access ways and no more than three times the minimum base width in height. Pallets of bricks may not be stacked more than two above each other and must be on timber pallets. No construction materials or equipment may be stacked or stored in public areas unless authorised by the MAKHADO Local Municipality and fenced off as per the MAKHADO Local Municipality's requirements. Waste materials must be kept within designated construction zones. The Principal Contractor will be responsible for co-ordinating and managing this function.

3.8.4 Fire Extinguishers and Fire Fighting Equipment

The Principal Contractor and relevant Contractors shall provide adequate, regularly serviced firefighting equipment located at strategic points on site, specific to the classes of fire likely to occur. The appropriate notices and signs must be posted up as required. A minimum of four 9 kg dry chemical powder fire extinguishers must be available in and around the site office establishment and stores. Fire extinguishers must also be placed at all work zones/areas, in strategic locations. Wherever 'hot work' is taking place, additional fire extinguishers must be on hand. Contractors are responsible for ensuring compliance with hot work procedures and must be in possession of method statements detailing the safe working procedures. 'Hot work' includes all work that generates a spark or flame and may therefore result in a fire.

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Further, during the finishing stages of the construction phase when the finishing trades are on site, fire extinguishers will be required at strategic locations within the work areas – to be supplied and managed by the Principal Contractor.

3.8.5 Traffic Control

The Principal Contractor shall ensure that a fulltime traffic safety officer be appointed in writing, upon the commencement of construction activities. The traffic safety officer shall be tasked with regular inspections and movement of road traffic signs as per the approved traffic accommodation plans and will report to the safety officer. The principal Contractor must prepare a site specific a Traffic Accommodation Plan that should be signed off by the relevant appointed Engineer on this project. This document must indicate the potential risk to the public or environment posed by all vehicles travelling to and from the areas of construction for the purpose of the construction work and proposes methods to eradicate or minimize these risks. Such a plan must include the following aspects:

- Design of Traffic Management Plan
- Site specific base line risk assessment
- Protection of employees
- Protection of pedestrians
- Specific signage and distances applicable
- Applicable training
- Appointments of road safety officers
- Management after hours/weekend/adverse weather conditions
- Setup and clearing of signage

Only SABS approved temporary road signage must be used. Note that the Principal Contractor must always enough signage available. The Principal Contractor will also put in place flagmen to control the entry and exit of vehicles to and from the site onto the public road. These flag personnel must be highly visible and must have been trained. Flag personnel may not use cell phones while on duty.

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3.9 Plant, Machinery and Equipment

3.9.1 Construction Vehicles & Mobile Plant

“Construction Plant” includes all types of plant including but not limited to, cranes, piling rigs, excavators, construction vehicles, compaction plant, batch plants and lifting equipment. The Principal Contractor must ensure that such plant complies with the requirements of the OHS Act, Construction Regulations (Feb 2014) and any manufacturers specifications. The Principal Contractor and all relevant contractors must inspect and keep records of inspections on construction vehicles and mobile plant used on site. Only authorised/competent persons in the possession of the necessary training certificates and in possession of a certificate of medical fitness may operate construction vehicles and mobile plant.

Appropriate PPE and clothing must always be provided and maintained in good condition. Reverse alarms must be installed on construction vehicles i.e. trucks, digger loaders, etc. Vehicles and pedestrian traffic must be safely separated, preventing any unnecessary interfacing. Any vehicle or mobile plant using any public road must be roadworthy and carry a certificate proving this. Likewise, any operator of such construction vehicle or mobile plant will have to carry the necessary driver's license.

3.9.2 Pressure Equipment

The Principal Contractor and all relevant Contractors must comply with the Pressure Equipment Regulations, including: Providing competency and awareness training to the operators/users; Providing the relevant PPE and clothing;

Inspecting equipment regularly (every 3 months) and keeping records of these inspections;

Providing appropriate firefighting equipment (Fire Extinguishers) on hand;

Ensuring that oxygen and acetylene bottles are secured in an upright position, do not show signs of corrosion or damage, and have flash back arrestors fitted on both torch & bottle ends of hoses.

3.9.3 Hired Plant and Machinery

The Principal Contractor must ensure that any hired plant and machinery used on site is safe for use and complies with the minimum legislated requirements. The necessary requirements as stipulated by the OHS Act and Construction Regulations shall apply. The Principal Contractor shall ensure that operators hired with machinery are competent and that competency and medical certificates are kept on site in the health & safety file. Any load test requirements and inspections in terms of legislation must be complied with and copies of

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load test certificates and inspections must be kept in the health & safety file. All relevant contractors

3.9.4 General Machinery

The Principal Contractor and relevant contractors must ensure compliance with the Driven Machinery Regulations, which includes carrying out risk assessments on the machines, inspecting machinery regularly, appointing a competent person to inspect and ensure maintenance, issuing PPE and relevant clothing, and training those who use machinery.

3.9.5 Electrical Installations and Portable Electrical Tools

The MAKHADO Local Municipality will ensure as far as possible that the Principal Contractor is made aware of the positions of all electrical power lines. The Principal Contractor must notify the MAKHADO Local Municipality should it not be sure of the location of any electrical power lines. The Principal Contractor must comply with the Electrical Installation Regulations, the Electrical Machinery Regulations, and the Construction Regulations (CR 24).

The Principal Contractor must keep a copy of the Certificate of Compliance (CoC) for its temporary electrical power supply. A revised CoC is required whenever the installation is altered or changed in any way. All temporary electrical installations must be inspected at least weekly by a competent person appointed in writing with records kept. Portable electrical tools and equipment must be visually inspected daily with records kept. It is advised that the P/Contractor appoints the electrical contractor to inspect the temporary electrical installation on a weekly basis with feedback given in a report so that any maintenance and repairs can be undertaken. Such appointed inspector must 'stop' or isolate any distribution board that is unsafe for use.

3.10 Occupational Health

3.10.1 Industrial Hygiene (exposure to physical and chemical stress factors)

Exposure of workers to occupational health hazards and risks is quite common in any work environment, especially in construction. Occupational exposure is a major problem, and all Contractors must ensure that proper health and hygiene measures are put in place to prevent exposure to these hazards. Prevent inhalation, ingestion, and adsorption through the skin of hazardous chemical substances.

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3.10.1.1 Noise induced hearing loss is a highly underrated occupational

condition. Occupational noise emitted by construction machinery and power tools must be controlled as far as possible by implementing engineering solutions such as noise dampening, regular maintenance, servicing, and inspection, screening off the noise, and reducing the number of persons exposed. Personal protective equipment such as earmuffs and earplugs must also be used in conjunction with engineering controls to reduce noise exposure to below the acceptable levels.

3.10.1.2 Ergonomics is the study of how workers relate to their workstations.

We advise the Principal Contractor and Contractors to take this into consideration when conducting risk assessments, thereby improving the worker-task relationship, which will in turn improve productivity and reduce chronic conditions such as back strains, joint problems and mental fatigue, amongst others.

3.10.2 Hazardous Chemical Substances (HCS)

The Principal Contractor and other relevant contractors must provide the necessary training and information as far as the use, transport, and storage of HCS. The Principal Contractor must ensure that the use, transport, and storage of HCS are carried out as prescribed in the HCS Regulations. The Principal Contractor and contractors must ensure that all hazardous chemicals on site have Material Safety Data Sheets (MSDS) on site and the users are made aware of the hazards and precautions that need to be taken when using the chemicals. The First Aiders must be made aware of the MSDS's and how to treat HCS incidents appropriately. Copies of the MSDS's must be kept in the first aid box and in the store. All containers must be clearly labelled. Flammable substances must be stored separately, away from other materials, and in a well-ventilated area (appropriate cross ventilation). A competent person should be appointed to be in control of this portfolio. Stores must be well ventilated, preventing the build-up of flammable and toxic gases/vapours. Should fuel storage containers be used, they must conform to the general environmental legislation and Environmental Management Plan (if a requirement on this site). The necessary safety signage must be posted up – 'no naked flames', 'no smoking'. Two 9 kg DCP fire extinguishers must be placed near to the fuel containers, but not within 5 m of the containers. These extinguishers are over and above the minimum four required for the offices and stores.

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3.10.3 Welfare Facilities

The Principal Contractor must supply sufficient toilets (1 toilet per 30 workers), clean, lockable changing facilities, hand washing facilities, soap, toilet paper, and hand drying material. Waste bins must be strategically placed around site and emptied regularly. Workers must not be exposed to hazardous materials/substances while eating and must be provided with adequate,

sheltered eating areas complete with benches and tables. Stores may not double up a change rooms or mess areas.

3.10.4 Alcohol and other Drugs

No alcohol and/or other drugs will be allowed on site. No person may be under the influence of alcohol or any other drugs while on the construction site. Any person on prescription medication must inform his/her superior, who shall in turn report this to the Principal Contractor forthwith. Any person suffering from any illness/condition that may have a negative effect on his/her /anyone else's health or safety performance must report this to his/her superior, who shall in turn report this to the Principal Contractor forthwith. Any person suspected of being under the influence of alcohol or other drugs must be sent home immediately, to report back the next day for a preliminary inquiry. The Contractor concerned must follow a full disciplinary procedure and a copy of the disciplinary action must be forwarded to the Principal Contractor for its records.

3.10.5 COVID- 19

Response plan

This International pandemic will force the contractors and clients to think about the workplace that the employees work in and the applicable PPE to safeguard the employees against this COVID 19 virus. MAKHADO Local Municipality have drawn up a checklist with all the necessary equipment and guidelines that will need to be in place before construction can start. The checklists are written using the above-mentioned acts, regulations, and guidelines. This checklist is listed as annexure A. The SHE committee shall have a meeting in the first

week of starting to discuss the plan forward with COVID 19. Access control. The client and the contractor will remain responsible to ensure that the correct measures are taken at the entrance of the construction site. The contractor shall have a thermometer available at each entrance to measure the temperature of each of the employees and visitors that enters and

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exits the site. The following is equipment and processes that will need to be in place at each entrance:

NOTE: This shall be done when entering the site as well as exiting the site every time

- Employee or security available at each gate
- Every entrance to site must have a thermometer
- Every entrance shall have a sanitation bottle to sanitize every person entering the sites hands
- Every person shall complete the sign in register that will enable the contractor to track the person in case of a possible positive case
- Non-essential visitors will not be allowed to enter the site
- All persons entering the site shall have a mask or a face shield on when entering, if not no access will be given to the person
- All hand sanitizer that is used must have 70% alcohol and the certificate must be available on site

Documents that need to be updated

Document control will be a critical path to ensure that all employees knows the exact risks and mitigation factors around the COVID 19 virus.

- Baseline risk assessment shall be written on COVID 19 to ensure all the risks is covered and discussed to the employees
- Health and safety policy would need to be changed to address the COVID 19 pandemic
- All safe work procedures shall cover COVID 19
- COVID 19 guideline or procedure shall be drawn up and available in the safety file and discussed to all employees. This procedure will explain how the contractor will ensure that the virus does not spread during construction
- A guideline on what the process will be if an employee or a visitor is showing symptoms of the COVID 19 virus
- COVID 19 Toolbox talks shall be held with all employees to explain to the employees what the COVID 19 virus is

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- Applicable Checklist & register should be in place to ensure that all the measures that is stipulated in the Client OHS Spec, Baseline Risk assessment, COVID procedure and contractor OHS Plan
- Sign in register will need to be available at every site entrance where the employee or site security can write down the temperature of the employee or Visitor
- All Health and safety related policies will need to be revised to ensure that COVID 19 is cover and explained in all of them in the applicable manner
- COVID 19 manager shall be appointed on site. This employee shall be on site full-time.

Hand sanitation points

Hand sanitation points will need to be placed at strategic places as well as the high-risk area. The first place where sanitation station shall be placed is at all site entrances. High risk areas will be identified by the following:

- Areas where employees are in frequent and/or close contact (i.e. within 1,5 Meter of people)

The high-risk areas will have additional sanitation stations, all employees shall wear mask or face shield when working closer than 1, 5 Meter from the nearest employee. Employees will be trained to wash hands more frequently or to use sanitizer more frequently.

The hand sanitizer that will be used shall have more than 70% of Ethyl alcohol. This needs to be ensured by the safety office on site as well as a Material Safety Data Sheet (MSDS) available close by for confirmation of the 70%. The hazardous chemical register shall be available in the flammable store. This register shall also include the hand sanitizer. Hand washing posters shall be available at all hand washing stations to ensure that all employees know what the correct way is of washing your hands to cover all the areas. Informational posters about COVID 19 shall also be visible at these areas to ensure that employees know how the virus spreads and how to prevent spreading. The sanitisation stations will need to be cleaned on a regular basis.

Cleaning & disinfecting

All work surfaces need to be cleaned and disinfected on a regular basis. The chemical that will be used to clean the surfaces must have a minimum of 70% Ethyl Alcohol and the MSDS for that specific sanitizer must be available in the safety file under the MSDS's section. Plant, site offices & construction sites shall be decontaminated before the start of the site. The

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contractor that decontaminated the site shall issue a certificate to explain it has been done and explain what chemicals was used. Offices

- All offices must have a biochemical hazardous bin with a medical waste bag that can be sealed
- The offices need to be cleaned on a regular basis
- If disposable gloves are being used, they must be discarded in the medical waste bin.
- Only employees that is working in the office will be allowed in the offices
- All visitors must arrange with office personnel if they have an appointment with one of the office employees to move outside and have the appointment outside or in a well-ventilated area and if possible, keep social distancing distance (1,5 Meter)
- Cleaners must focus on cleaning the following areas: desks, printers, door handles, kettles, microwaves & office equipment (cabinets, staplers, punchers) etc.
- No utensils shall be shared
- All employees shall sanitise their hands before and after using building plans Ablution Facilities
- All ablution facilities shall have a washing station or a sanitation station.
- Sufficient paper towels shall be available to dry off hands after sanitizing
- All ablution facilities must have a biochemical hazardous bin, with a medical waste bag that can be sealed
- Paper towels shall be discarded into the medical waste bin provided at the ablution facilities
- Ablution facilities must always be cleaned on a more regular basis to ensure a clean surface
- Chemical toilets ratio is reduced to 1-10 employees and flush toilets ratio is reduced 1-15 employees
- Cleaners must focus on the most touch areas when cleaning ablution facilities (toilet handles, door handles, taps, basins surfaces, toilet seats etc.) Eating areas The eating areas in construction is a high risk since the employees under normal circumstances would have sit within 1, 5 Meter of each other.

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- Eating areas will need to make bigger to accommodate all employees at once but still implement social distancing of 1, 5 Meter at least.
- All eating areas must have a biochemical hazardous bin, with a medical waste bag that can be sealed
- All Servite that was used or paper towels that was used to dry hands after using the sanitation station must be discarded in the hazardous bin.
- All eating areas shall have a washing station or a sanitation station
- Lunch breaks should be staggered between contractors / employees to ensure that during lunch the social distancing 1, 5 Meter can still be implemented.
- All chairs, Tabletops and drinking water taps need to be cleaned after each lunch break
- Notice board shall be placed at the eating area to ensure that all employees see all posters and notices
- Clean drinking water need to be supplied to all employees at the eating area Waste management. The waste management on site will be a critical path and will need to be monitored. The PPE and cleaning material that will be discarded will be medical (biological hazardous) waste. This will need to be separated from normal waste, all medical waste bins will need to have a waste bag that can seal and need to be removed by a registered service provider. Hazardous bins shall be foot operated to ensure employees do not touch the lid of the hazardous bin.

Paper towels

Paper towels shall be supplied to by the contractor at all sanitation stations and washing stations for employees to dry their hands. These towel papers will be discarded in the medical waste bins. The contractor shall ensure that sufficient paper towels is in storage for a fast and effective replacements

PPE

All disposable PPE shall be discarded in these medical waste bins. Disposable

PPE will be the following: dust masks, surgical masks etc.

Disinfectants

The sanitizers that will be available throughout the site if finished and not refilled will be discarded as medical waste. The contractor must ensure that sufficient stock of hand

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sanitizer and soap is available in the storeroom. This chemicals and soap shall be recorded as it is booked out of the storeroom.

Wastewater

The water that will be used at the hand washing points will need be stored in a container with a lid. This infected water will then need to be treated before the water can be discarded in a normal municipal sewage system.

Personal Protective Equipment (PPE)

COVID 19 be prevented from spreading using the correct PPE. The COVID 19 virus is spread by small droplets that can be enter the body at the face through the nose, mouth, and the eyes. This is the critical areas that must be protected at all cost to prevent the employees from getting the feared COVID 19 virus. The disposable PPE will be treated as biological hazardous waste as explained above in waste management

The Contractor shall supply all employees with 2 cloth masks (1 to wear, 1 to wash). The cloth masks will be checked every morning at the entrance of the gate to ensure that employees are washing the cloth masks. This is an example of a cloth mask: If the employees are working in a high-risk area, the contractor will need to have a look at alternative measures to protect the employee's eyes as well as mouth and nose area. Face shields is a perfect example of an alternative way to protect our workers. There are different types of face shields on the market, from loose face shields with a strap to face shield and hard hat combination. Below is an example of these alternative equipment that will need to be in place in high risk areas when possible: Employees will only be required to wear hand gloves when the task will require it (will be stipulated in the risk assessment). When for example the employee will do grinding work and the face shield will not last then the employee will be required to wear goggles and a normal dust mask.

Accommodation

When the contractor provides accommodation to the employees on site the following shall be in place:

- The quantity of employees must be looked at that is accommodated on site
- The restrictions on the number of employees using the same ablution facilities
- Cutlery & utensils shall not be shares between employees
- Social distancing between employees (at least 1,5 Meter) when in sleeping quarters and in cooking facilities

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- The employees shall practice good personal hygiene and shall sanitise areas that on a regular basis that is used by all employees
- Employees shall not share any personal belongings with each other forexample: clothes & towels

Transportation

The transportation of employees shall be monitored by the site safety officer as well as site management. Transportation will be arranged that all employees always implement the social distance of at least 1, 5 Meter from each other. Employee using transportation as well as drivers will always wear mask to prevent the spread of the virus. Employees shall sanitize their hands before using transportation and after using transportation. Transporting employees in big quantities must always be prevented if possible. All transport shall be disinfected before and after use. If employees drive with personal transport, sufficient parking must be made available

COVID 19 Signage's

The applicable signage's shall be displayed at all the applicable places for example all the notice boards that is identified in this document. The contractor shall as far as reasonably practicably post posters about COVID 19 to ensure that all employees know the essential information of the virus. The signage's will be essential to show employees with the use of pictograms what is the most important factors to keep in mind on site. All hand sanitation station shall have a sign that states it is a sanitation station and while have a poster to explain to employees exactly how to wash their hands to prevent getting infected. This is examples of signs that shall be visible all over site to keep reminding employees of the risks. The site entrances shall get additional signage's to explain to visitor and employees the applicable PPE for the site. These signs are examples of signs that shall be visible at the site entrances:

COVID 19 Posters

The contractor will be responsible to display posters on all notice boards on site as stipulated to ensure that employees are informed of the COVID 19 virus. The responsibility is with the contractor to communicate these posters to the employees and the train them on all the precaution measures and the keep them informed

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3 Omissions from the Site-Specific Health and Safety Specifications.

Every endeavor has been made to address the most critical aspects relating to Health and Safety issues to assist the contractor in adequately providing for the Health and Safety of employees on site. However, the Principal Contractor is required to ensure they stay compliant with statutory requirements and construction programs and processes and include such aspects in their Health and Safety File.

ANNEXURE A

The Principal Contractor and Contractors must submit compliance with Annexure 'A' before commencing on work on site. **Compliance with Annexure 'A' must be maintained and proven to the Safety Agent at audits.**

HSS = health & safety specifications OHS Act = occupational health & safety Act

CR = construction regulations COIDA = compensation for occupational injuries and diseases Act

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HSS Item no.	Requirement	Legal Reference	Compliance required:
A1	Health & Safety Plan (H & S Plan)	Constructions Regs.	Withing one weeks of receipt of these specifications
A2	Notification of intention to commence construction / building work	Complete schedule 1 (Construction Regs.)	Before commencement on site
A3	Assignment of responsible persons to supervise construction work	OHS Act ~ Section 16(2) appointee ~ all written appointments under the construction regulations 2014	Before commencement on site
A4	Competence of responsible persons in the form of CV's related work history of appointees	OHS Act ~ Section 16(2) appointee ~ all written appointments under the construction regulations 2014	Together with H & S Plan
A5	Compensation for occupational injuries and diseases – proof of registration and in good standing	COIDA or FEMA	Together with H & S
A6	Plan A6 Health and safety organogram showing all safety management portfolios and positions	MAKHADO Local Municipality requirement	Together with H & S Plan
A7	Initial hazard identification and risk assessment document	Construction regulations	Together with H & S Plan
A8	Fall protection plan (first draft) as defined in the construction regulations	Construction regulations	Together with H & S Plan

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ANNEXURE B

The Principal Contractor must make all the management appointments as set out below. Compliance with annexure 'B' to be maintained and proven to the safety agent at audits (Further appointments could become necessary as the project progresses).

Item no.	Appointment	Legal Reference	Requirement
B1	CEO Assignee	Section 16(2)	A competent person to assist the CEO in achieving compliance with the OHS Act – P/Contractor's / Contractor's Responsible person
B2	Construction Work Manager	CR 8(1)	A full time competent person to Supervise and be responsible for health & safety related issues on site. The person is appointed by the Section 16(2)
B3	Assistant Construction Work Manager	CR 8(2)	A full time competent person(s) to assist the CR 8(1) appointee with daily supervision of construction work safety. One of the CR8(2) appointees must be designated to fulfill the role of the CR6(1) when such person is not on site. Make this clear in the appointment letter
B4	Health & Safety Representative(s)	Section 17	A competent person(S) to be appointed to represent the workforce in H & S matters. Reps may attend safety meetings, conduct monthly site audits, attend incident / injury investigations and make recommendations as far as H&S goes.
B5	Health & Safety Committee Member(s)	Section 19	H&S reps, site supervisors / foreman and the safety officer should make up the committee, with the CR8(1) appointee chairing the committee.
B6	Incident Investigator	GAR 9	A competent person to head up the investigation team and co-ordinate incident / injury investigation on site.
B7	Risk assessment co-ordinator	CR9	A competent person to co-ordinate the drafting / reviewing / distribution of risk assessments on behalf of the principal contractor. The same applies to contractors. NQF Level 5
B8	Fall protection	CR10	A competent person to co-ordinate the drafting /

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	plan co-ordinator		reviewing / distribution of Fall Protection Plan. The same applies to contractors. NQF Level 4
B9	Emergency plan co-ordinator	Contractor Needs to be in line with service stationERP	A competent person to co-ordinate the drafting / reviewing / distribution of the site emergency procedures / evacuation plan. Such person must be fulltime on site so as to take charge of emergency situations.
B10	First Aider(s)	GSR 3	A certified person to address first aid situations and take charge of injuries. Level 1 certificate
B11	Lifting machine and lifting tackle supervisor	DMR 18	A competent P/Contractor employee to co-ordinate the management of lifting machines and tackle, ensuring that such equipment is safe for use at all times, inspected when necessary and repaired when required. The operators, banks men and contractors to liases with this person
B12	Scaffolding inspector	SANS 10085 – 2004	A competent person to inspect scaffolding before use and every time after bad weather, etc.
B13	Scaffold supervisor (P/Contractor)	SANS 10085 – 2004	A competent P/Contractor employee to supervise all scaffolding on site, ensuring that scaffolds are safe for use, inspected, extended / altered, repaired when required and that all trades are coordinated and authorised to work on such scaffolds
B14	Scaffolding erector	B14 SANS 10085 – 2004	A competent person(s) to erect scaffolding – leader of the scaffold team
B15	Formwork & support work supervisor (Temporary Works)	CR12	A competent person to supervise all formwork & support work erection & dismantling. This person must also ensure that the equipment is safe and that all the necessary inspections (pre, during, post & every day thereafter) are carried out & records kept by the competent inspectors. Design drawings must be available to this supervisor.
B16	Excavation supervisor / inspector	CR13	A competent person to supervise & inspect excavation work (daily) and ensure that excavations are safe. Records of inspections must be kept by this person.

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B17	Ladder inspector	GSR13A	A competent person to inspect ladders daily and ensure they are safe for use, keeping monthly record.
B18	Stacking supervisor	CR28	A competent person to supervise all stacking and storage operations
B19	Explosive powered tools inspector / supervisor	CR21	A competent person to inspect & clean the tool daily, store the tool in a safe location, ensure that cartridges are signed out and in, and control all operations thereof.
B20	Temporary electrical installations inspector	CR24	A competent person to inspect all temporary electrical installations. Including weekly inspections and record keeping.
B21	Portable Electrical Tool Inspector	CR 24	A competent person to co-ordinate / inspect portable electrical tools, leads and plugs.
B22	Fire-fighting equipment inspector	CR29	A competent person to co-ordinate & inspect firefighting equipment. Including ad-hoc checks and monthly inspections with records kept.
B23	Construction vehicles & mobile plant supervisor	CR23	A competent person(s) to co-ordinate the safety of all construction vehicles & mobile plant. Ensuring that daily inspections are done, and records kept, that safety measures are in place, that operators are certified and authorised to operate and that maintenance and services are carried out when required.
B24	Construction safety officer	CR8(6)	A competent person to fulfil the functions as set out in these HSS

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ANNEXURE C

The Principal Contractor and Contractors must comply with but not be limited to the requirements tabled below: Prove compliance with annexure 'C' at audits conducted by the safety agent.

Item no.	What	When	Output	Reviewed by MAKHADO Local Municipality Agent
C1	Construction – phase Health & Safety Plan	Monthly review	Principal Contractor to indicate the status of Contractors health & safety plans	
C2	Health & Safety File(s)	Open file when construction begins and maintain throughout	Have file on hand at audits. Contractors to report on their file at monthly health & safety audits by the Principal Contractor.	
C3	OHS Act and relevant Regulations	Monthly review	To be kept in the health & safety file on site.	
C4	Health & Safety Induction training, PTW Procedures	Every worker before he/she starts work	Attendance registers to be kept	
C5	Awareness Training (Tool Box Talks)	At least once a week	Attendance registers to be kept	
C6	Health & Safety Meetings	Monthly	Meeting minutes to be kept	
C7	Health & Safety Reports	Monthly	Report covering: • Incidents / injuries and investigations • Non conformances by employees & Contractors – reports • Internal H&S audit	

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			reports	
C8	Audits on contractors	Monthly	Report covering: <ul style="list-style-type: none"> • H&S File / Plan • WCA status • Appointment letters • Section 37(2) agreements • Risk assessment & safe work procedures • Physical site inspection • Any other contractor specific requirements 	
C9	Emergency procedure	Monthly evaluation of procedure	Compile written procedure as well as tel. Numbers	
C10	Risk assessments & fall protection plan	Updated and signed off	Documented risk assessments to be available	
C11	Method statements	Drawn up and distributed before workers are exposed to the risks	Documented set of method statements reviewed and signed off.	
C12	General Inspections	Daily	Report OHS Act compliance: <ul style="list-style-type: none"> • Excavations • Portable electrical tools • Formwork & support work • Explosive powered tools 	
C13	General Inspections	Daily	<ul style="list-style-type: none"> • Scaffolding • Temporary Electrical Installations 	
C14	General Inspections	Monthly	<ul style="list-style-type: none"> • Firefighting equipment • Ladders 	
C15	General Inspections	Monthly	<ul style="list-style-type: none"> • Lifting tackle • Oxy-acetylene cutting & welding sets 	

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			• Fall prevention and arrest equipment	
C16	General Inspections	6-Monthly	• Lifting machines	
C17	Load tests / performance tests	Annually / once erected, before use	• Lifting machines	
C18	List of Contractors	List to be updated weekly	Compile a list of contractors: Name, supervisor, company tel. Numbers and trade.	
C19	Workman's Compensation	Ongoing	Compile a list of Contractors workman's Compensation proof of good standing	
C20	Construction site rules & Section 37(2) Mandatory Agreements	Ongoing	Compile a list of all signed up Mandataries. Proof of agreement documents to be kept in H&S file.	

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ANNEXURE D

In terms of the Construction Regulations (2014), it is the MAKHADO Local Municipality's duty to ensure that the cost for health & safety has been provided for by the Principal Contractor, before appointment. Acting on behalf of our MAKHADO Local Municipality, we require the following health & safety costs to be included by the Principal Contractor. It must be made noticeably clear that these are just some of the health & safety costs to be included in your tender price. It is the duty of the Principal Contractor and Contractors to ensure that all aspects of the Occupational Health & safety Act 85/1993 and Construction Regulations are catered for. **Pricing for Occupational Health and Safety measures should include the following if applicable:**

ITEM	DESCRIPTION
1	Supply of all items of Personal Protective Clothing/Equipment & ensure use thereof for full compliance
1.1	Steel toe capped safety boots
1.2	Overalls
1.3	Reflective vests (high visibility)
1.4	Hard hats
1.5	Dust masks
1.6	Hearing protection
1.7	Hand gloves
1.8	Any other: Principal Contractor to specify
2	Supply and provision of Equipment for working at Heights & ensure use thereof for full compliance
2.1	Fall protection equipment (Safety Harness)
2.2	Double lanyard harness
2.3	Fall protection plan
2.4	Scaffolding access ladders/toe boards/handrails
2.5	Portable Ladders
2.6	Any other: Principal Contractor to specify:
3	Barricading: Supply & install, including removal upon completion to ensure full compliance to legislation
3.1	Rigid type barricading
3.2	Temporary fence barricading along perimeter of excavated area
3.3	Danger tape pre-warning tape

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3.4	Any other: Principal Contractor to specify:
4	Related Training
4.1	First Aid Training
4.2	Health and Safety Representative training
4.3	Emergency Rescue training
4.4	4.2 4.3 (Height) 4.4 Hazard Identification Training 4.5 4.6
4.5	Training of Personnel working at heights
4.6	Construction Plant Training
4.7	Legal Liability (OHSACT) Training
4.8	COID ACT Training
4.9	Scaffold Erector and Inspector Training
4.10	Any other: Contractor to specify: Working at elevated
5	Occupational Health and Safety Administration
5.1	Develop of a Site-Specific Health and Safety Plan and Hazard and Risk Assessment by Competent person
5.2	Develop of Fall Protection and Rescue Plan by a Competent Fall Protection Plan Developer.
5.3	Competent Occupational Health and Safety Officer/Consultant.
5.4	COVID-19 Requirements
6	Medical Surveillance
6.1	Medical Certificates of fitness for all Employees by an Occupational Health Practitioner
6.2	Medical Certificates of fitness for all EPWP Employees by an Occupational Practitioner during the duration of the Construction Project.
7	Facilities and Equipment
7.1	Sanitary facility for each sex and for every 30 workers.
7.2	Changing facilities for each sex.
7.3	Sheltered eating areas
7.4	First aid boxes
7.5	Fire extinguishers
7.6	Waste bins
8	Safety Signage
8.1	Sufficient and adequate safety signage on constructions site and at all flammable stores.

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ANNEXURE E

The Occupational health and Safety File must consist out of the following documentation:

INDEX 1

1	Appointment Letter from MAKHADO Local Municipality.
2	Notification of Construction work.
3	Letter of Good standing - COID
4	Copy of Public Liability Insurance Policy and UIF Registration
5	Health and Safety Specifications
6	Scope of Work
7	Tool and Machinery list
8	Method Statement of all work that will be conducted.
9	Risk Assessment Guide / Procedure
10	Baseline Risk Assessments
11	Safe Work Procedures for all Risks
12	Health and Safety Information from Designer
13	Medical Certificates/Copy of ID'S and Personal Information
14	All Health and Safety Related Policies
15	Section 37.2 Agreements
16	Induction Training Information
17	Site Specific Emergency numbers and Emergency Plan
18	Site Specific Fall Protection and Rescue Plan
19	Site Specific Fall Protection and Rescue Plan
20	Site Specific Health and Safety Plan
21	Incident / Accident Management Control
22	Traffic Management Plan
23	Contractor Control Procedures
24	Environmental Management
25	Hazardous Chemical Substance Register and MSDS
26	Example of Monthly Health and Safety Report
27	COVID – 19 Management Plan
28	Health and Safety Organogram and Occupational Health and Safety (Construction) Appointments – With Competencies
29	Certificates for all lifting equipment
30	Sample of all registers that will be used on site.
31	Copy of Construction Building Plans (A4)
32	Copy of the Occupational Health and Safety Act and Construction Regulations 2014

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ANNEXURE F

OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 (Regulation 4 of the Construction Regulations. 2014)

NOTIFICATION OF CONSTRUCTION WORK

1. (a) Name and postal address of principal contractor:

(b) Name and tel. No of principal contractor's contact person:

2. Principal contractor's compensation registration number:

3. (a) Name and postal address of MAKHADO Local Municipality:

(b) Name and tel. No of MAKHADO Local Municipality's contact person or agent:

4. (a) Name and postal address of designer(s) for the project:

(b) Name and tel. No of designer(s) contact person:

5. Name and telephone number of principal contractor's construction supervisor on site appointed in terms of regulation 8(1).

6. Name/s of principal contractor's sub-ordinate supervisors on site appointed in terms of regulation 8(2).

7. Exact physical address of the construction site or site office:

8. Nature of the construction work:

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9. Expected commencement date: _____

10. Expected completion date: _____

11. Estimated maximum number of persons on the construction site.

Total: _____ Male: _____ Female: _____

12. Planned number of contractors on the construction site accountable to principal

Contractor: _____

13. Name(s) of contractors already selected.

Principal Contractor

Date

MAKHADO Local Municipality's Agent (where applicable)

Date

MAKHADO Local Municipality

Date

➤ THIS DOCUMENT IS TO BE FORWARDED TO THE OFFICE OF THE DEPARTMENT
OF LABOUR PRIOR TO COMMENCEMENT OF WORK ON SITE. ➤

Copies:

1. Original to **Department of Labour**

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PART C4: SITE INFORMATION

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<u>C.4.2</u>	<u>LOCALITY PLAN</u>	213

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C.4.1 SITE INFORMATION

Makhado Local Municipality has identified an area in Kutama Sinthumule to upgrade and construct a sports facility that will serve the surrounding villages. Kutama Sinthumule Sports Facility is located about 28 km west of Makhado town along R522.

Name	Latitude	Longitude
Kutama Sinthumule Sports Facility	23° 05'49.3" S	29°41'57.2" E

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C.4.2 LOCALITY PLAN

Attached in the Book of Drawings

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PART C5: ANNEXURES

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PROFORMA DOCUMENTS

The following is a list of Proforma documents and examples that are required to be completed by the successful tenderer.

<u>C5.1.1</u>	<u>RETENTION MONEY GUARANTEE PROFORMA</u>	216
<u>C5.1.2</u>	<u>EXAMPLE OF ABE DECLARATION AFFIDAVIT</u>	219

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RETENTION MONEY GUARANTEE PROFORMA

EXAMPLE

.....Municipality
.....
.....
.....

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.

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TENDER NO : 36/2022

FOR

DESCRIPTION OF THE CONTRACT

“CONSTRUCION OF KUTAMA SINTHUMULE SPORTS FACILITY”

The guarantee is issued on behalf of

Registration No

(here in after 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 atfor and on behalf of

on this the day of in the year

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GUARANTOR:

AS WITNESS:

1. 2.

NAME (Print): NAME (Print):

ADDRESS ADDRESS

.....

.....

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EXAMPLE OF ABE DECLARATION AFFIDAVIT

(facsimiles will be provided by the Employer to be completed by ABEs)

1. Name of firm :
- Postal address :
- Telephone no. :Fax no
- Contact person :
- VAT registration no. :
2. Type of firm (tick as appropriate)
 - Partnership.....
 - One person business/sole trader.....
 - Close corporation: registration no.....
 - Date of registration.....
 - Company: registration no.....
 - Pty Ltd: registration no.....
3. Principal Business Activities :.....
4. Service/work to be performed on this contract:
5. Participation in this contract
 - as a Sub-contractor Yes/No
 - in a Joint Venture Yes/No
 - with main contractor Yes/No
 - with a sub-contractor Yes/No
6. List all partners, proprietors and shareholders:

Name	ID. No.	Citizen of RSA Yes/No	PDI status Yes/No	%owned

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7. List the last four contracts/assignments completed by your firm. If required, a separate sheet may be used and attached to this page. Reference may be called from the Employers of the projects listed.

PROJECT AND WORK PERFORMED	EMPLOYER (NAME, ADDRESS, TEL, FAX)	VALUE OF RANDS

Notes to tenderer:

Under column 1 state the assignment or contract (eg. Contract XYZ0123): Construction of rural roads) and follow this with the work carried out (eg. construction of pipe culverts).

Under column 2, if it was a sub-contract give the required details of the employer for the main contract and also of the Contractor who employed you.

Under column 3 give the value of the main contract (if any and if known) and also the value of the work carried out by you.

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8. Declaration

I,,
being duly authorised to sign on behalf of the firm, affirm that the PDI equity in this
business is as stated above and that the information furnished is true and correct.

Signature

Name (print)

Date

Signed on behalf of (print name)

Address

.....

Telephone no.

Commissioner of Oath

Date


Note: In the case of a Company a certificate of authority for signatory must be provided.

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CONTRACT DRAWINGS

BOOK OF DRAWINGS

CONSULTING LOGO:


 T2-Tech
ENGINEERS (PTY) LTD

CONSULTING ADDRESS:

T2-TECH ENGINEERS (PTY) LTD
16A, CHURCH STREET
P.O. Box 233
POLOKWANE,
0700

TEL: (018) 291 3322
FAX: (018) 295 2114
E-MAIL: office@t2tech.co.za
Website: www.t2tech.co.za

CLIENT LOGO:

The logo of Makhado Municipality is a shield-shaped emblem. At the top, the word "MAKHADO" is written in a blue arc. Below it is a green field with a yellow sunburst rising from the center. The shield is flanked by blue and white vertical stripes. At the bottom, a blue banner contains the motto "PEACE HARMONY PROGRESS" in white capital letters.

CLIENT ADDRESS:

MAKHADO MUNICIPALITY
Civic Centre
83 Krogh Street
Phutha Bag X2595
MAKHADO
0820

TEL: (015) 517 3000
FAX: (015) 515 1194

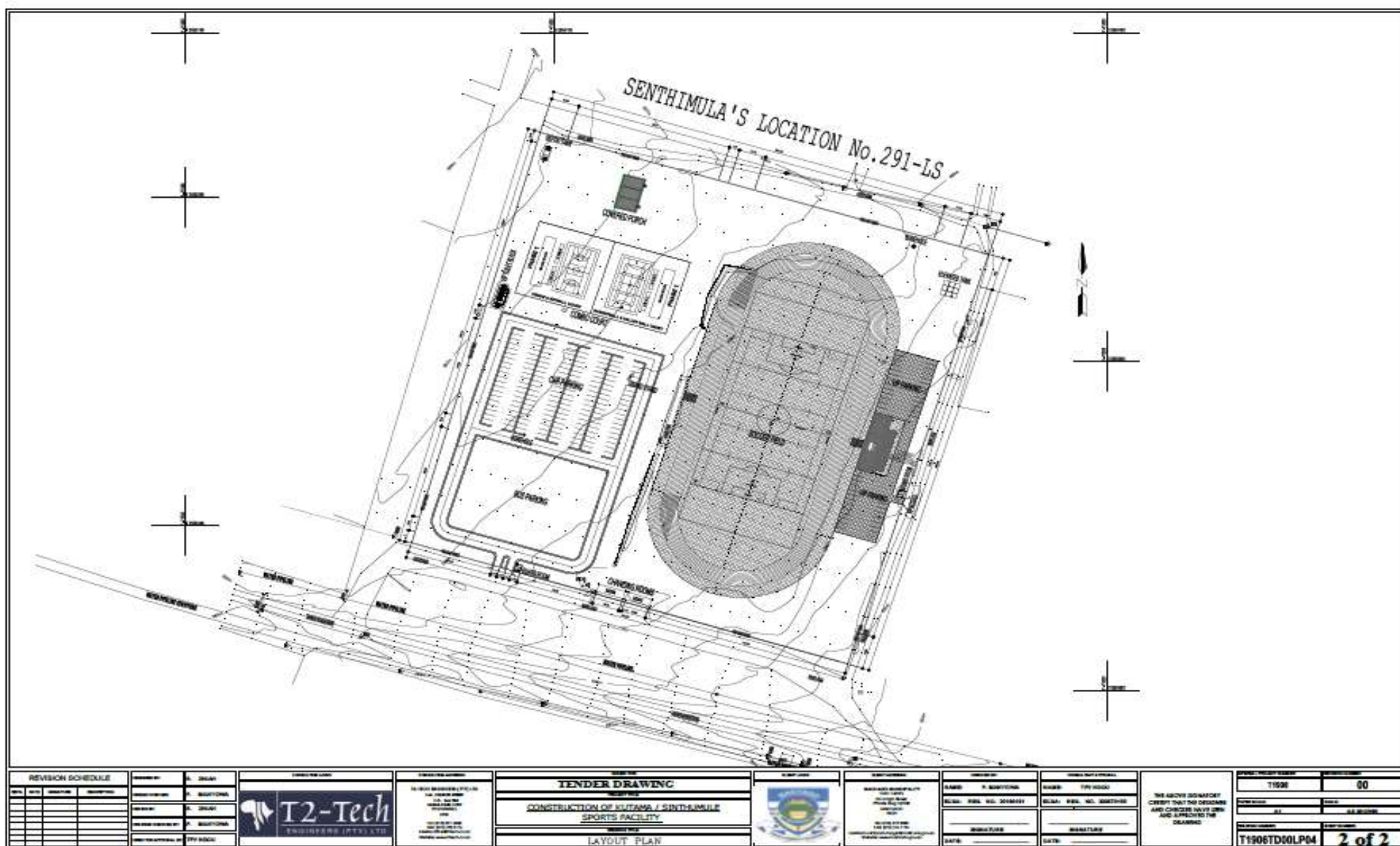
EMAIL: municipal.moining@makhado.gov.za
Website: www.makhado.gov.za

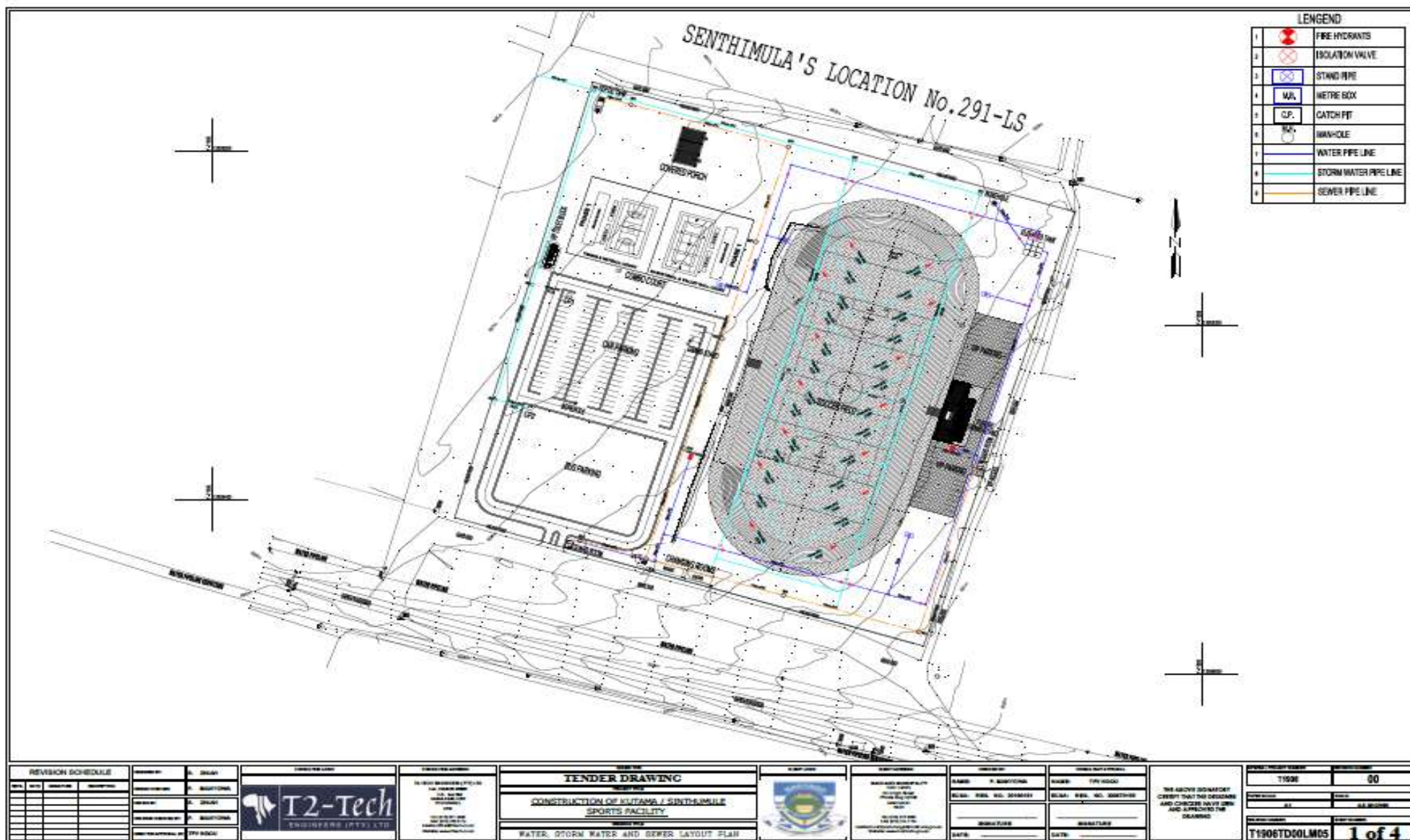
ISSUED FOR:
TENDER DRAWING
PROJECT TITLE:
<u>CONSTRUCTION OF KUTAMA / SINTHUMULE</u> <u>SPORTS FACILITY</u>

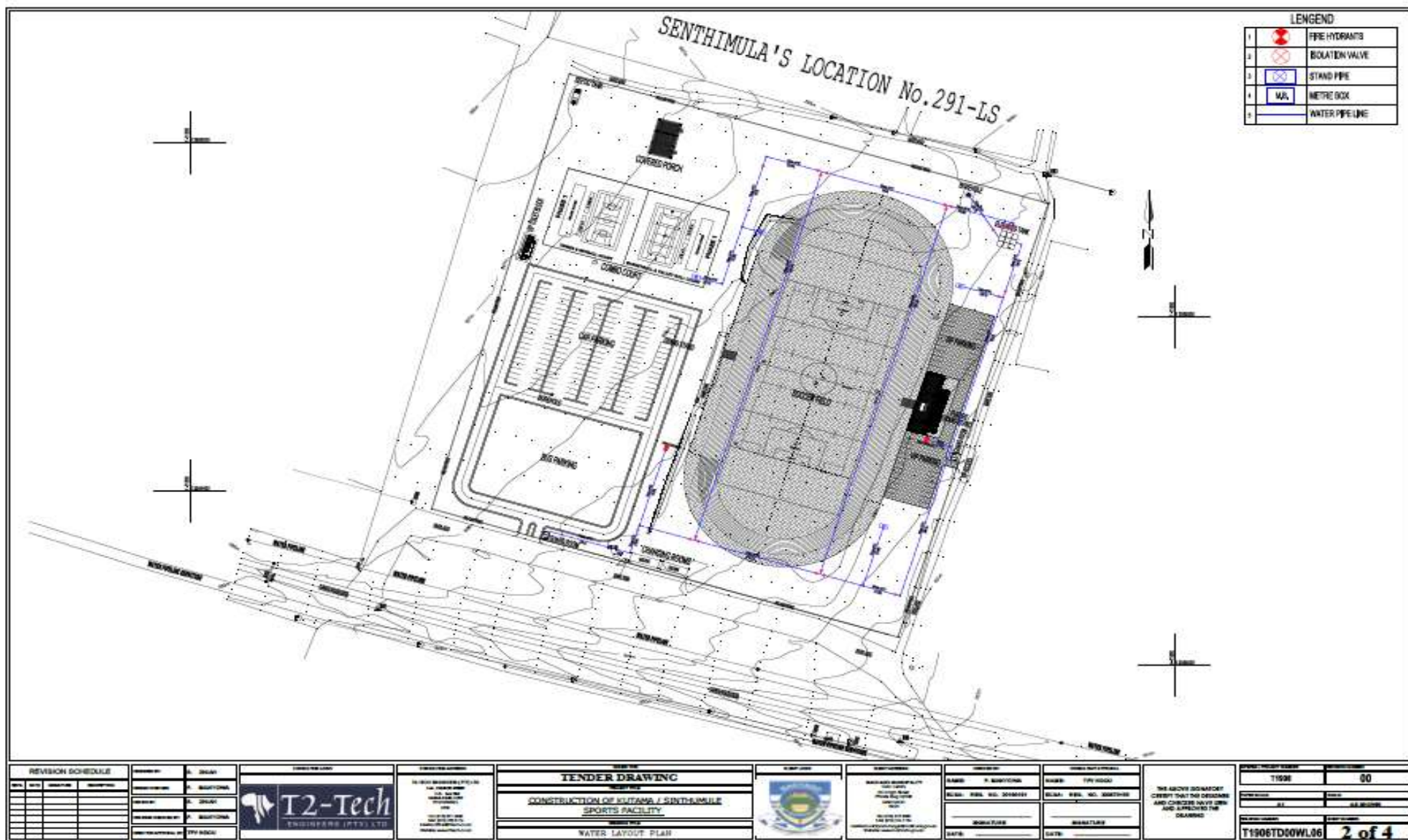
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NO.	DATE	REVISION	BY	DATE	REVISION	BY	DATE	REVISION	BY	DATE	REVISION	BY	DATE	REVISION	BY
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2	10/10/2019	ISSUED FOR TENDER	A. JAGANNATHAN												
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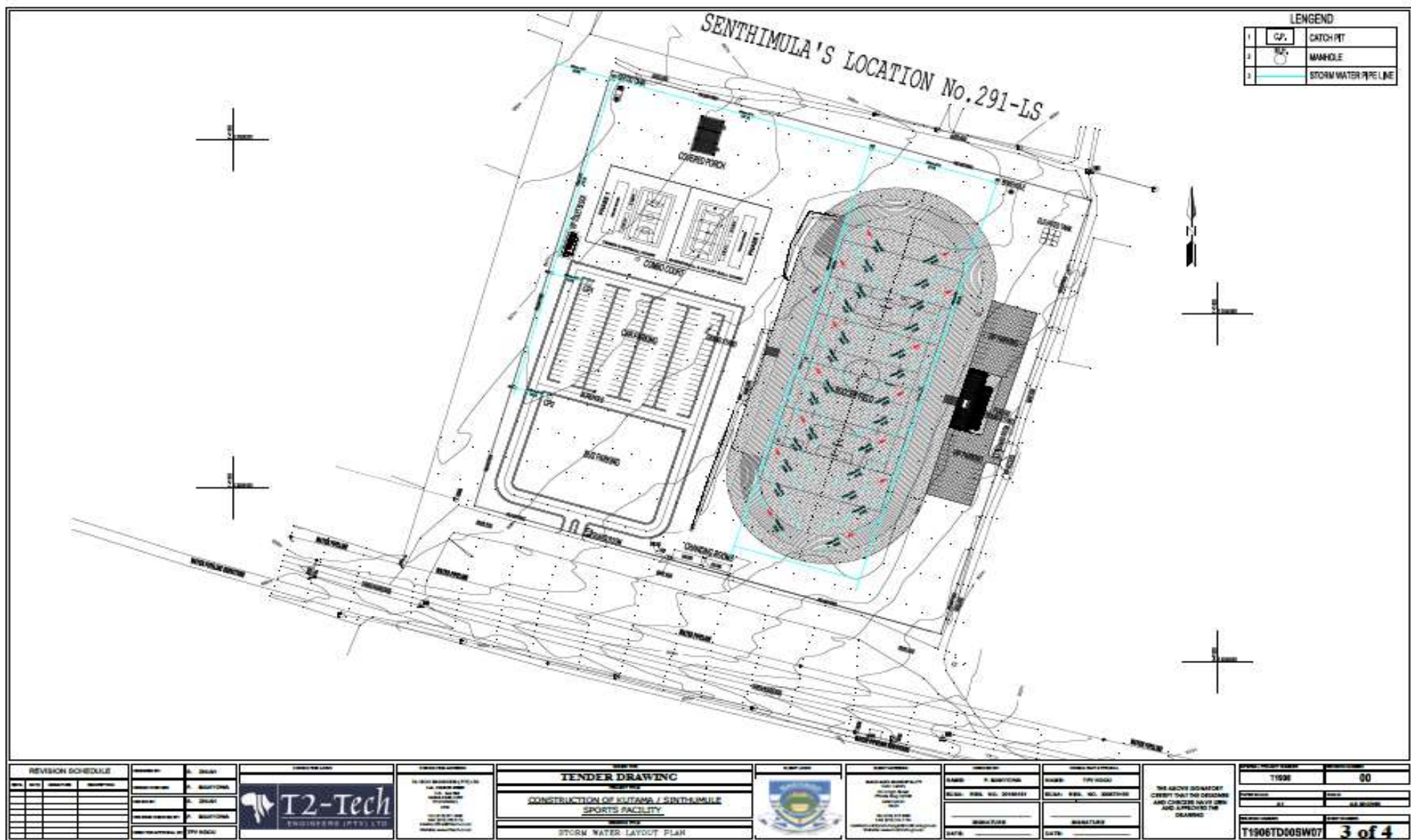
LIST OF DRAWINGS			
DRAWING No.	DRAWING TITLE:	DRAWING NUMBER:	SHEET NUMBER:
1.	Book of Drawings	T1906TD000DD01	1 of 1
2.	List of Drawings	T1906TD000DD02	1 of 1
3.	Locality Map	T1906TD000L003	1 of 2
4.	Layout Plan	T1906TD000LP04	2 of 2
5.	Water, Storm Water And Sewer Layout Plan	T1906TD000LP05	1 of 4
6.	Water Layout Plan	T1906TD000WL06	2 of 4
7.	Storm Water Layout Plan	T1906TD000SL07	3 of 4
8.	Sewer Layout Plan	T1906TD000SL08	4 of 4
9.	Sewer Layout Plan & Long Sections	T1906TD000SL09	1 of 3
10.	Storm Water Layout Plan & Long Sections	T1906TD000SL10	2 of 2
11.	Storm Water Long Sections	T1906TD000SL11	1 of 2
12.	Storm Water Long Sections	T1906TD000SL12	3 of 2
13.	Soccer Field Layout plan	T1906TD000SF13	1 of 5
14.	Rugby Field Layout Plan	T1906TD000RF14	3 of 5
15.	Athletics Track Layout Plan	T1906TD000AT15	3 of 5
16.	Layout Floor Plan	T1906TD000FP16	4 of 5
17.	Cross Section	T1906TD000CS17	5 of 5
18.	Layout Plan & Legend	T1906TD000LP18	1 of 3
19.	Drainage System	T1906TD000DS19	2 of 3
20.	Irrigation System	T1906TD000IS20	3 of 3
21.	Netball Court Layout Plan	T1906TD000NC21	1 of 3
22.	Tennis Court Layout Plan	T1906TD000TC22	2 of 3
23.	Netball AND Tennis Courts Court Details	T1906TD000DD23	3 of 3
24.	Basketball Court Layout Plan	T1906TD000BC24	1 of 3
25.	Volleyball Court Layout Plan	T1906TD000VC25	2 of 3
26.	Basketball AND Volleyball Courts Court Details	T1906TD000DD26	3 of 3
27.	Courts Court Cross Section	T1906TD000CS27	1 of 1
28.	Guard Room	T1906TD000GR28	1 of 1
29.	Abolition Block	T1906TD000AB29	1 of 3
30.	Abolition Block	T1906TD000AB30	2 of 3
31.	Abolition Block	T1906TD000AB31	3 of 3
32.	Covered Porch: Floor Layout Plan & Elevations	T1906TD000GR32	1 of 1
33.	Grand Stand	T1906TD000GS33	1 of 3
34.	Grand Stand	T1906TD000GS34	2 of 3
35.	Grand Stand	T1906TD000GS35	3 of 3
36.	Septic Tank Details	T1906TD000ST36	1 of 1
37.	Steel Gate	T1906TD000SG37	1 of 2
38.	Concrete Palisade Fencing	T1906TD000PF38	3 of 3
39.	Typical Sewer Details	T1906TD000SD39	1 of 2
40.	Typical Sewer Details	T1906TD000SD40	2 of 2
41.	Typical Water Details	T1906TD000WD41	1 of 2
42.	Typical Water Details	T1906TD000WD42	2 of 2

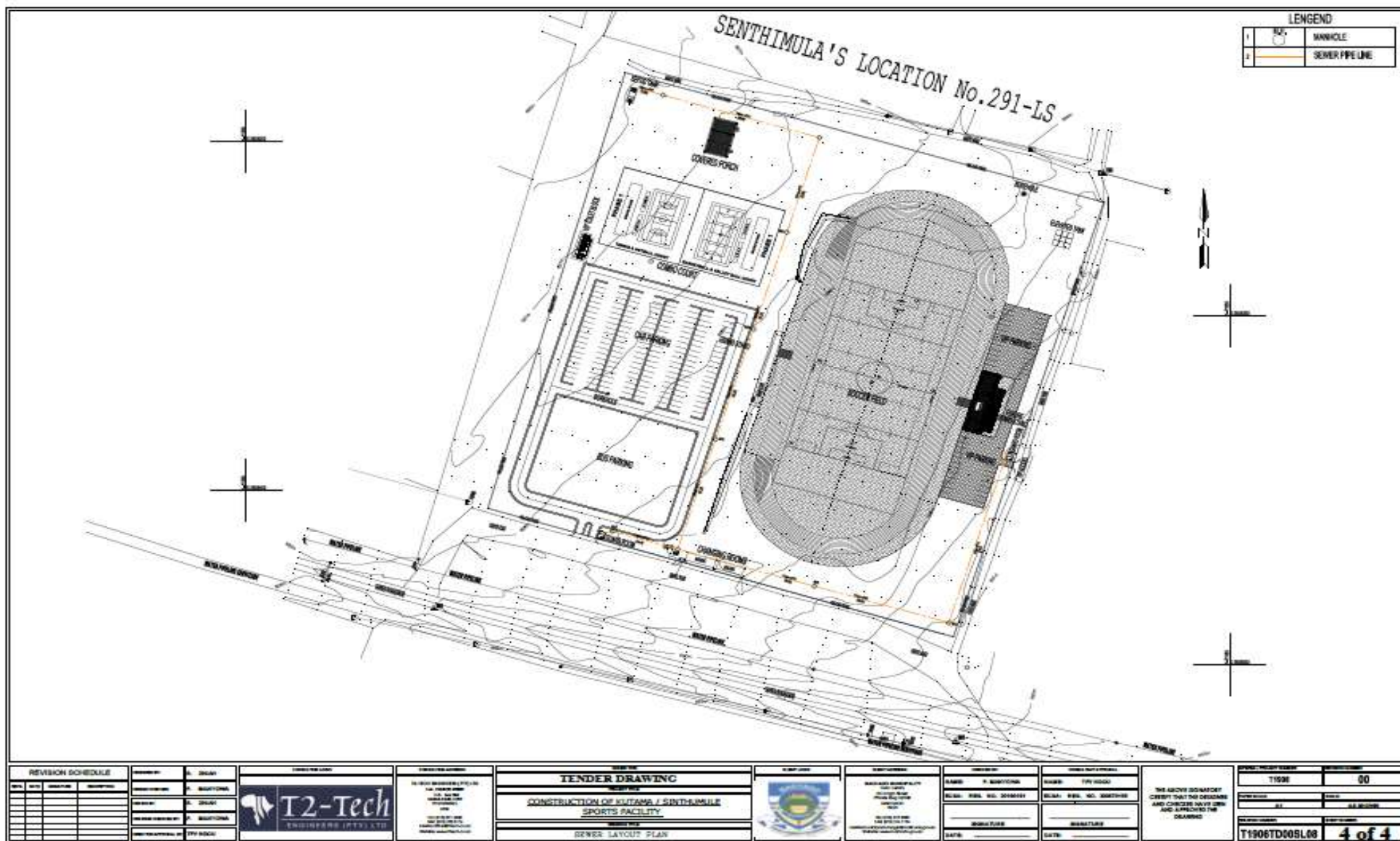
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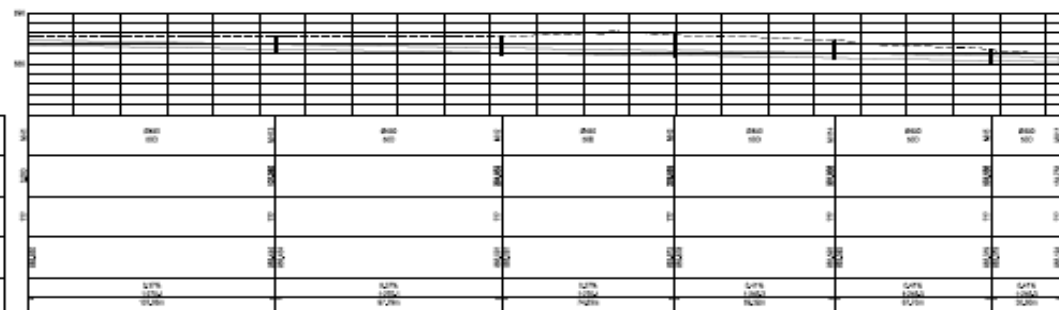




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 EGL -----
 HGL -----
 SCALES
 Horizontal 1:1000
 Vertical 1:200

DATUM 860.200

REFERENCE
DISTANCE (M)
GROUND LEVEL
PIPE INVERT LEVEL
SLOPE / LENGTH

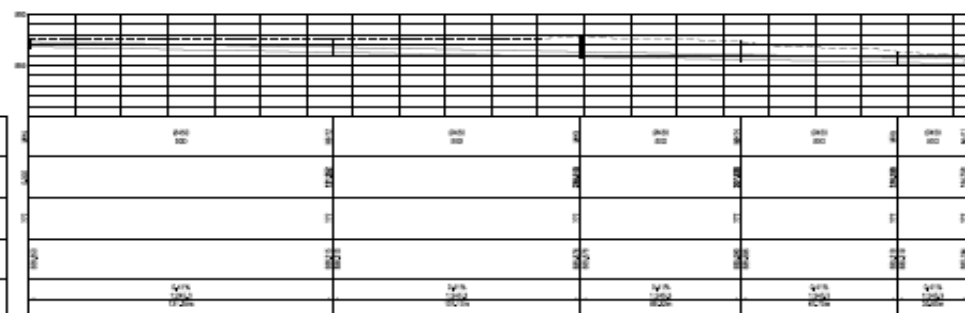


LONGSECTION MH1 - MH11
 FROM 6280 TO 447.258

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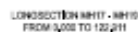
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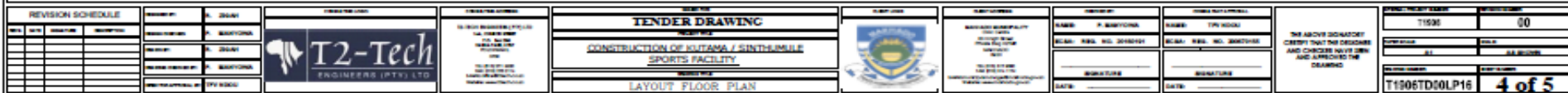
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GROUND LEVEL
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SLOPE / LENGTH



LONGSECTION MH4 - MH11
 FROM 4305 TO 406.127

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T11006TD001.511 DRAWING TITLE STORM WATER LONG SECTIONS	CLIENT NAME SUTANA / SINTHUMBLE SPORTS FACILITY CLIENT ADDRESS 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000	THE ABOVE SIGNATORY CERTIFY THAT THE DESIGNER AND CHECKER HAVE REVIEWED AND APPROVED THE DRAWING	DRAWN BY N. BAYFORD CHECKED BY N. BAYFORD DATE 10/10/2010 SCALE 1:1000 PROJECT NO. T11006 PROJECT NAME CONSTRUCTION OF SUTANA / SINTHUMBLE SPORTS FACILITY DRAWING NO. T11006TD001.511 DRAWING TITLE STORM WATER LONG SECTIONS
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2 of 2

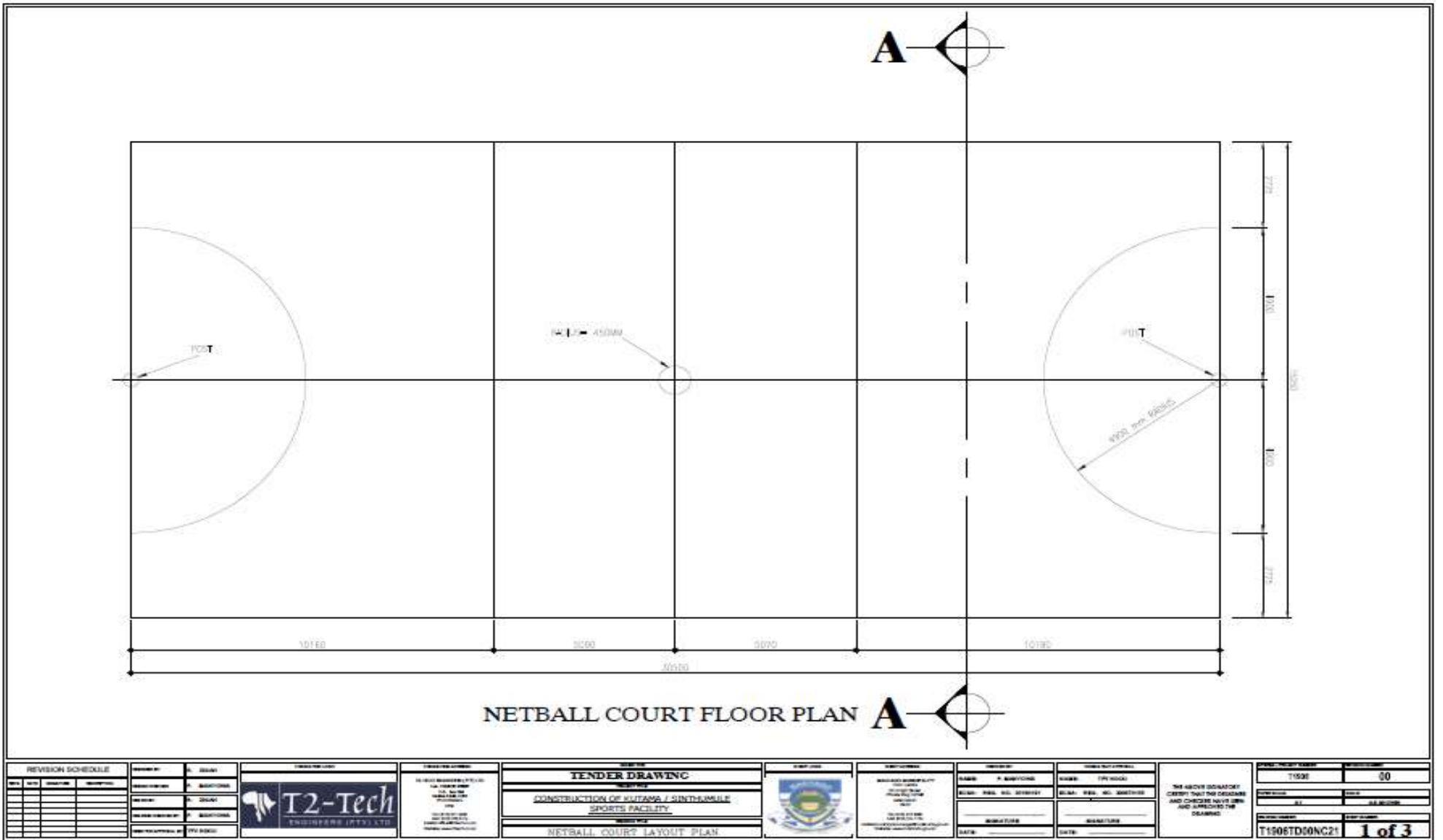




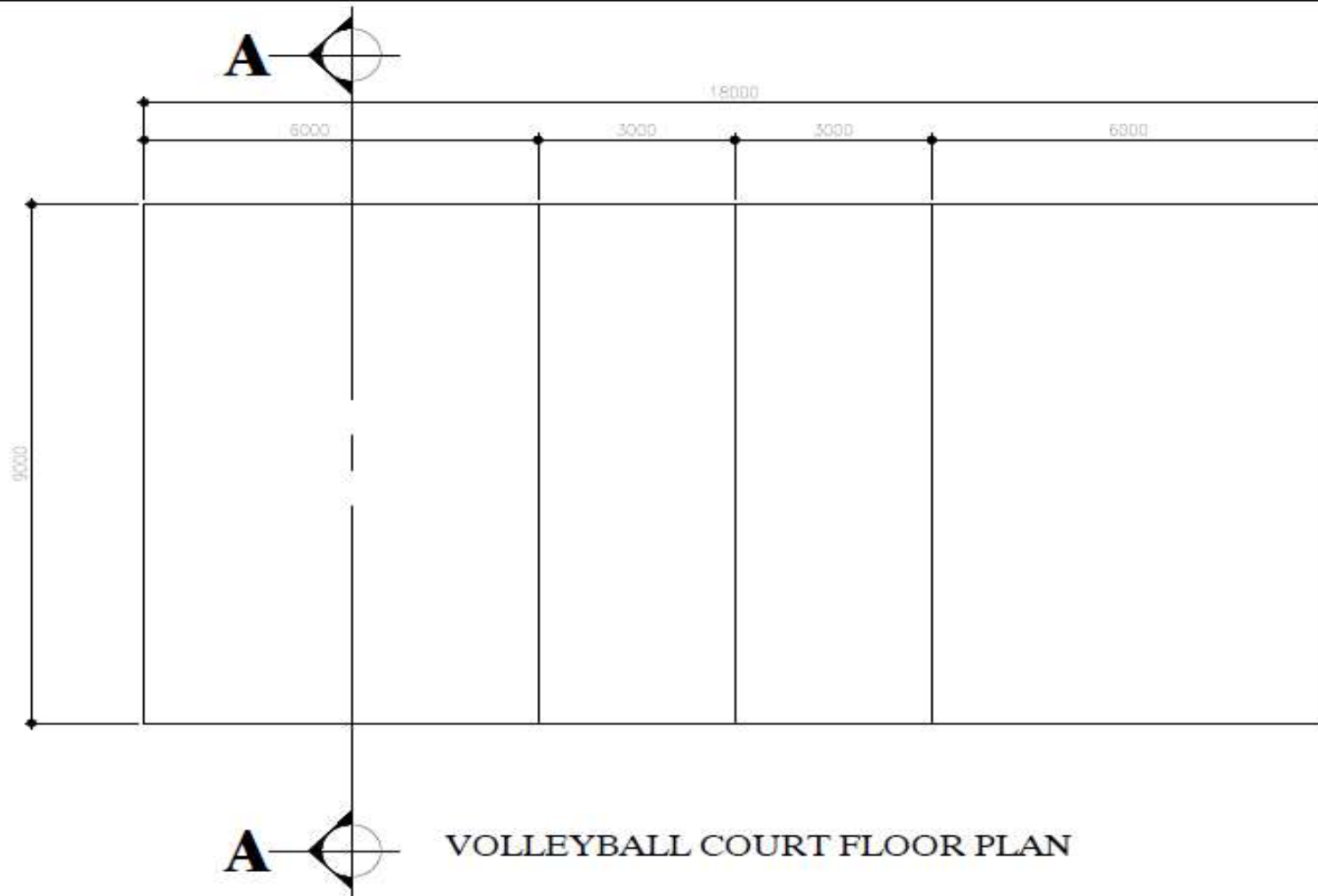
SECTION B - B




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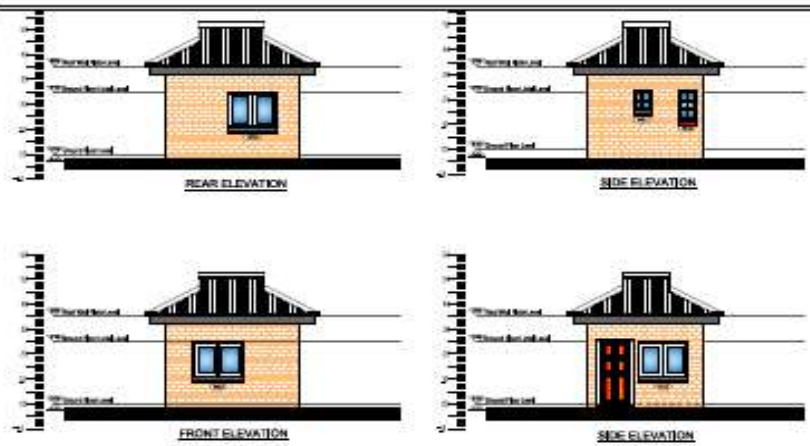




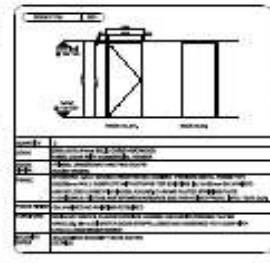
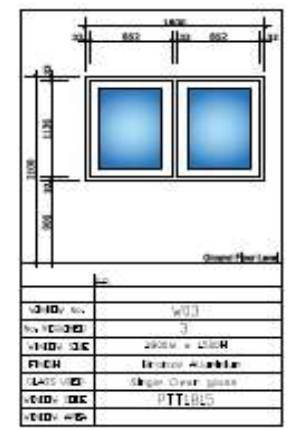
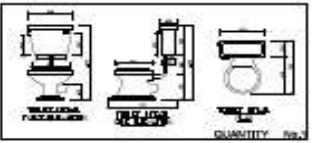
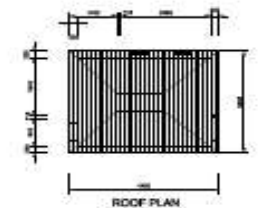
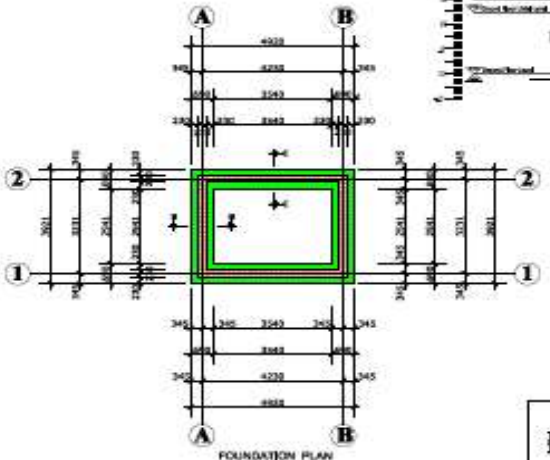
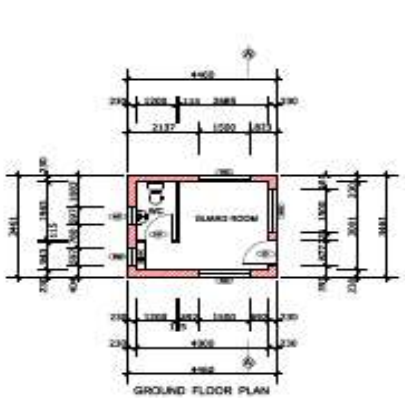
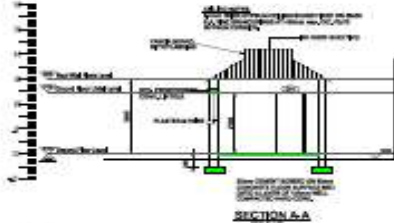
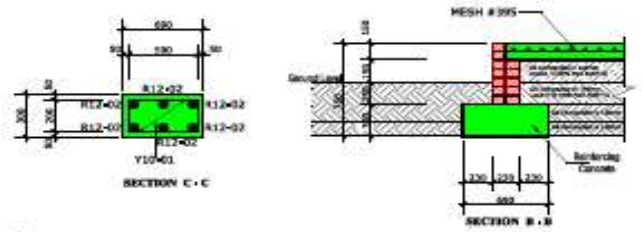


VOLLEYBALL COURT FLOOR PLAN

REVISION SCHEDULE <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>REVISION</th> <th>REVISION BY</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>				NO.	DATE	REVISION	REVISION BY																																	DESIGNED BY: A. S. S. S. S. CHECKED BY: A. S. S. S. S. DATE: 01/01/2024 PROJECT NO.: T1506TD00BC25		TENDER DRAWING CONSTRUCTION OF KUTAMA / SINTHERMULE SPORTS FACILITY VOLLEYBALL COURT LAYOUT PLAN				CLASS: A. S. S. S. S. SCALE: 1/5000 DATE: 01/01/2024		THE ABOVE DRAWING IS THE PROPERTY OF T2-TECH ENGINEERS (MYS) LTD. AND IS NOT TO BE REPRODUCED OR USED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF T2-TECH ENGINEERS (MYS) LTD.		PROJECT NO.: T1506 DATE: 01/01/2024 2 of 3	
NO.	DATE	REVISION	REVISION BY																																																

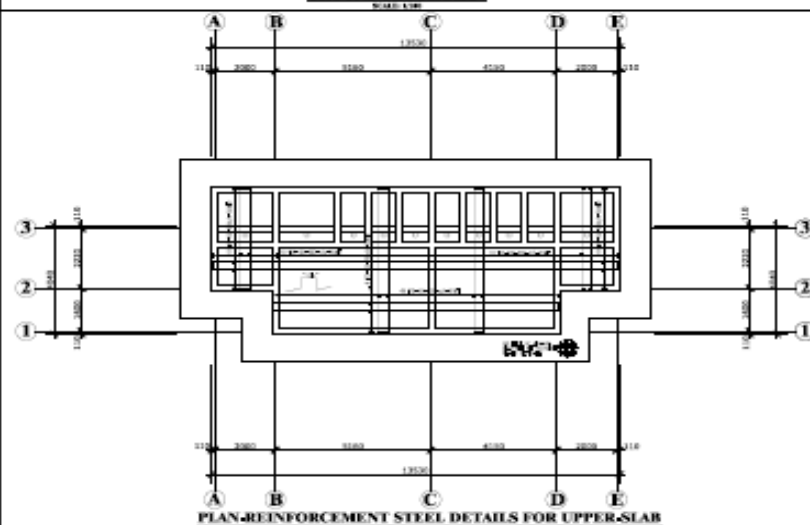
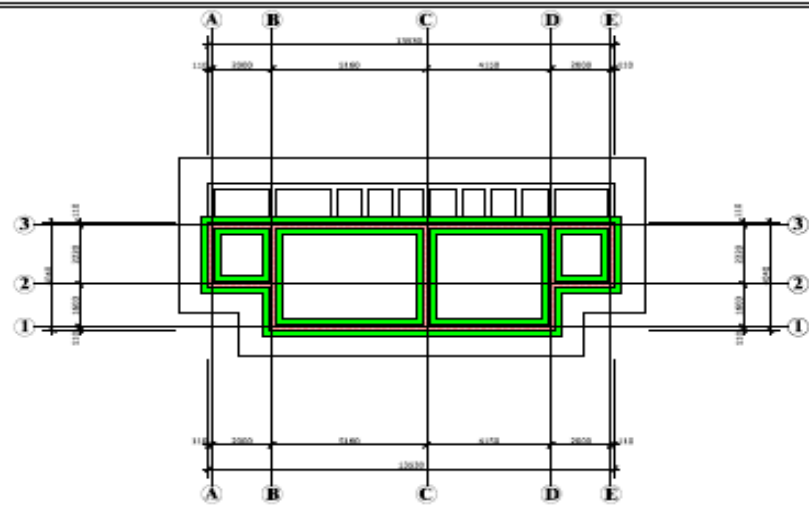
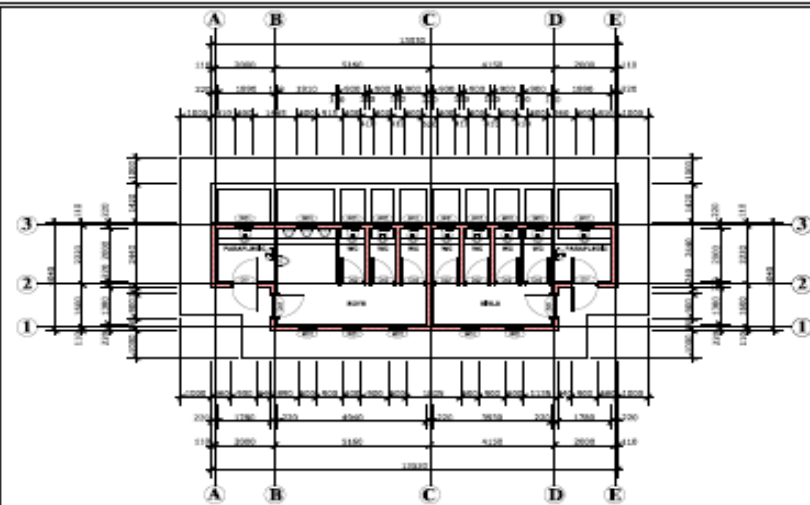


BENDING SCHEDULE											
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2. RC-10	10	10	10	10	10	10	10	10	10	10	10
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REVISION	NO.	DESCRIPTION	DATE
1	01	ISSUED FOR TENDER	15/05/2024
2	02	REVISION	15/05/2024
3	03	REVISION	15/05/2024
4	04	REVISION	15/05/2024
5	05	REVISION	15/05/2024
6	06	REVISION	15/05/2024
7	07	REVISION	15/05/2024
8	08	REVISION	15/05/2024
9	09	REVISION	15/05/2024
10	10	REVISION	15/05/2024

- GENERAL NOTES:**
1. General notes to be read in conjunction with the drawings.
 2. All work to be done in accordance with the specifications.
 3. All materials to be of standard quality.
 4. All work to be done in accordance with the specifications.
 5. All materials to be of standard quality.
 6. All work to be done in accordance with the specifications.
 7. All materials to be of standard quality.
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- REVISIONS:**
- | NO. | DESCRIPTION | DATE |
|-----|-------------------|------------|
| 1 | ISSUED FOR TENDER | 15/05/2024 |
| 2 | REVISION | 15/05/2024 |
| 3 | REVISION | 15/05/2024 |
| 4 | REVISION | 15/05/2024 |
| 5 | REVISION | 15/05/2024 |
| 6 | REVISION | 15/05/2024 |
| 7 | REVISION | 15/05/2024 |
| 8 | REVISION | 15/05/2024 |
| 9 | REVISION | 15/05/2024 |
| 10 | REVISION | 15/05/2024 |
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- | NO. | DESCRIPTION | DATE |
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| 1 | ISSUED FOR TENDER | 15/05/2024 |
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| 3 | REVISION | 15/05/2024 |
| 4 | REVISION | 15/05/2024 |
| 5 | REVISION | 15/05/2024 |
| 6 | REVISION | 15/05/2024 |
| 7 | REVISION | 15/05/2024 |
| 8 | REVISION | 15/05/2024 |
| 9 | REVISION | 15/05/2024 |
| 10 | REVISION | 15/05/2024 |

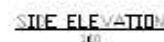
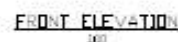
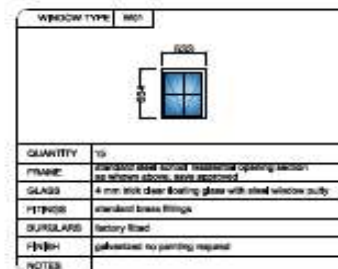


2010-08-STOOLS AT CENTRES BOTH DIRECTION	100
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[illegible][illegible]

CONCRETE BOX RATIO			
FLY	PORTLAND CEMENT	WATER	GRAVEL
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[illegible]



HAND BASIN DETAILS


[illegible]

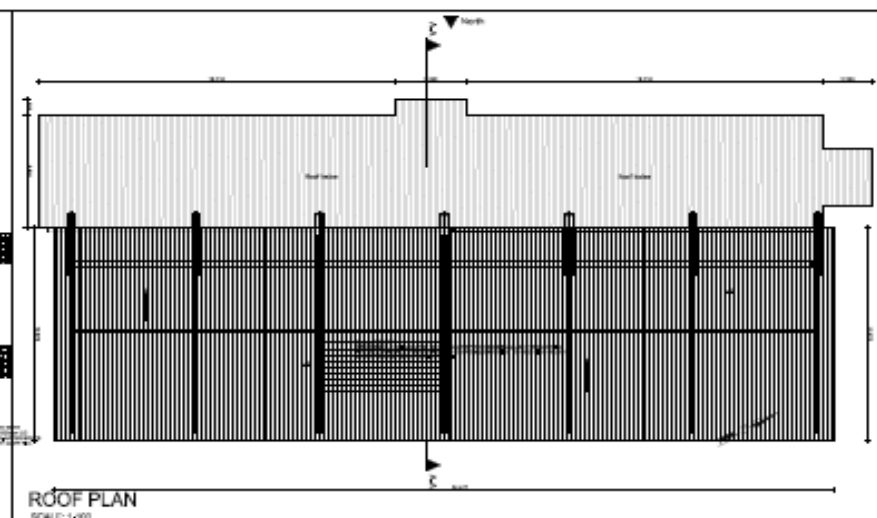
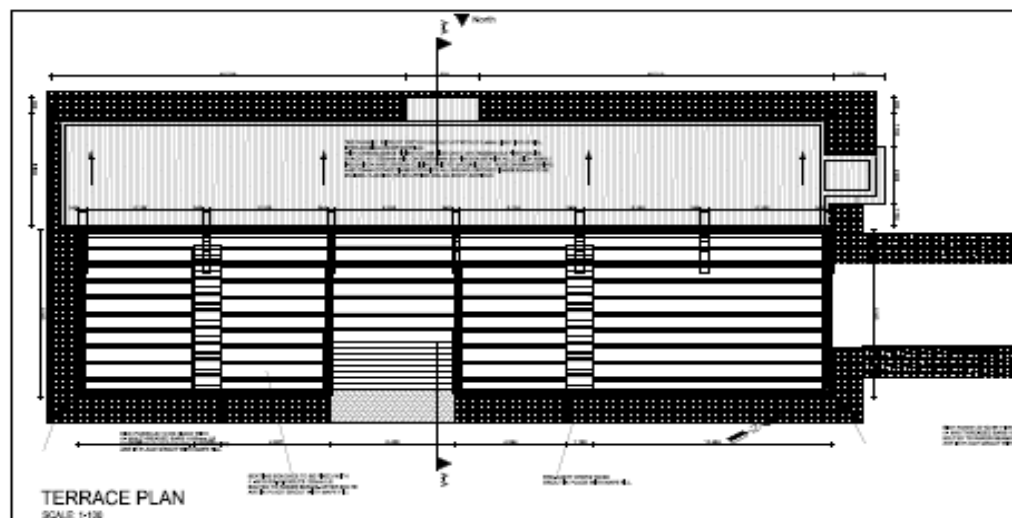
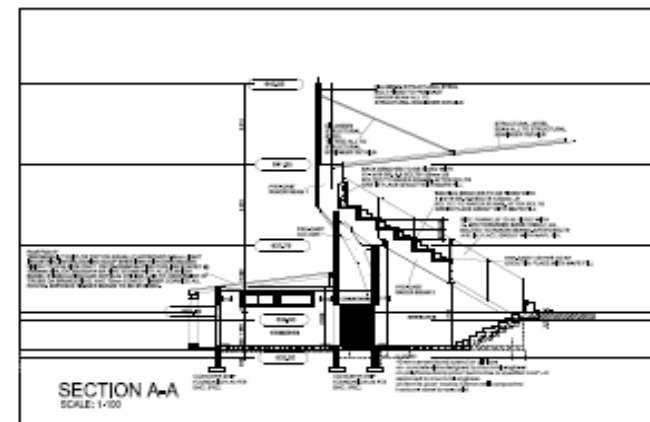
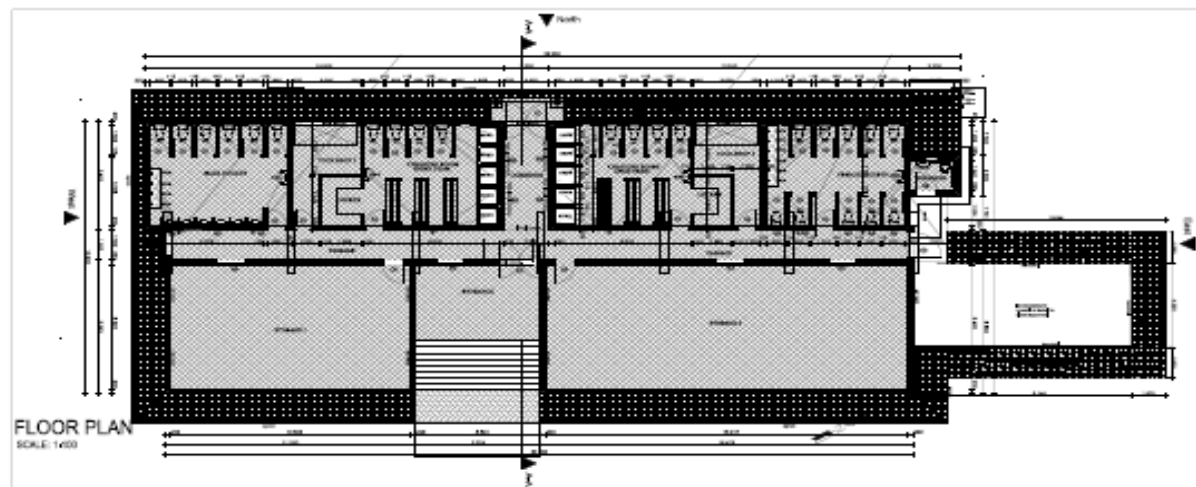


ELEVATION B



ELEVATION D
SCALE: 1/100

REVISION SCHEDULE				CONTRACT NO.  T2-Tech ENGINEERS (PTY) LTD		CONTRACT ADDRESS 15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31-32-33-34-35-36-37-38-39-40-41-42-43-44-45-46-47-48-49-50-51-52-53-54-55-56-57-58-59-60-61-62-63-64-65-66-67-68-69-70-71-72-73-74-75-76-77-78-79-80-81-82-83-84-85-86-87-88-89-90-91-92-93-94-95-96-97-98-99-100-101-102-103-104-105-106-107-108-109-110-111-112-113-114-115-116-117-118-119-120-121-122-123-124-125-126-127-128-129-130-131-132-133-134-135-136-137-138-139-140-141-142-143-144-145-146-147-148-149-150-151-152-153-154-155-156-157-158-159-160-161-162-163-164-165-166-167-168-169-170-171-172-173-174-175-176-177-178-179-180-181-182-183-184-185-186-187-188-189-190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-857-858-859-860-861-862-863-864-865-866-867-868-869-870-871-872-873-874-875-876-877-878-879-880-881-882-883-884-885-886-887-888-889-890-891-892-893-894-895-896-897-898-899-900-901-902-903-904-905-906-907-908-909-910-911-912-913-914-915-916-917-918-919-920-921-922-923-924-925-926-927-928-929-930-931-932-933-934-935-936-937-938-939-940-941-942-943-944-945-946-947-948-949-950-951-952-953-954-955-956-957-958-959-960-961-962-963-964-965-966-967-968-969-970-971-972-973-974-975-976-977-978-979-980-981-982-983-984-985-986-987-988-989-990-991-992-993-994-995-996-997-998-999-1000-1001-1002-1003-1004-1005-1006-1007-1008-1009-1010-1011-1012-1013-1014-1015-1016-1017-1018-1019-1020-1021-1022-1023	
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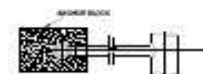
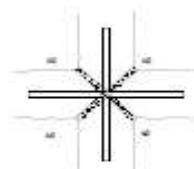
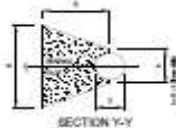
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- NOTES**
1. RAILS TO BE IN LENGTH OF MULTIPLES OF 2m (MIN. 4m).
 2. JOINTS BETWEEN RAILS TO BE IN CENTRE OF POSTS. JOINTS IN TOP RAIL AND BOTTOM RAIL NOT TO COINCIDE IN SAME POST.
 3. RAIL TO BE BONDED TO POSTS USING EPIDERMIX 380 OR SIMILAR APPROVED ADHESIVE.

REVISION SCHEDULE				DRAWN BY: A. ZULHAI		CHECKED BY: A. ZULHAI		DESIGNED BY: A. ZULHAI		APPROVED BY: A. ZULHAI		DATE: 10/01/2018		PROJECT NAME: T200		DRAWING NO: 00	
NO.	DATE	REVISION	REVISION	NO.	DATE	REVISION	REVISION	NO.	DATE	REVISION	REVISION	NO.	DATE	REVISION	REVISION	NO.	DATE
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Case	Block	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442	2443	2444	2445	2446	2447	2448	2449	2450	2451	2452	2453	2454	2455	2456	2457	2458	2459	2460	2461	2462	2463	2464	2465	2466	2467	2468	2469	2470	2471	2472	2473	2474	2475	2476	2477	2478	2479	2480	2481	2482	2483	2484	2485	2486	2487	2488	2489	2490	2491	2492	2493	2494	2495	2496	2497	2498	2499	2500	2501	2502	2503	2504	2505	2506	2507	2508	2509	2510	2511	2512	2513	2514	2515	2516	2517	2518	2519	2520	2521	2522	2523	2524	2525	2526	2527	2528	2529	2530	2531	2532	2533	2534	2535	2536	2537	2538	2539	2540	2541	2542	2543	2544	2545	2546	2547	2548	2549	2550	2551	2552	2553	2554	2555	2556	2557	2558	2559	2560	2561	2562	2563	2564	2565	2566	2567	2568	2569	2570	2571	2572	2573	2574	2575	2576	2577	2578	2579	2580	2581	2582	2583	2584	2585	2586	2587	2588	2589	2590	2591	2592	2593	2594	2595	2596	2597	2598	2599	2600	2601	2602	2603	2604	2605	2606	2607	2608	2609	2610	2611	2612	2613	2614	2615	2616	2617	2618	2619	2620	2621	2622	2623	2624	2625	2626	2627	2628	2629	2630	2631	2632	2633	2634	2635	2636	2637	2638	2639	2640	2641	2642	2643	2644	2645	2646	2647	2648	2649	2650	2651	2652	2653	2654	2655	2656	2657	2658	2659	2660	2661	2662	2663	2664	2665	2666	2667	2668	2669	2670	2671	2672	2673	2674	2675	2676	2677	2678	2679	2680	2681	2682	2683	2684	2685	2686	2687	2688	2689	2690	2691	2692	2693	2694	2695	2696	2697	2698	2699	2700	2701	2702	2703	2704	2705	2706	2707	2708	2709	2710	2711	2712	2713	2714	2715	2716	2717	2718	2719	2720	2721	2722	2723	2724	2725	2726	2727	2728	2729	2730	2731	2732	2733	2734	2735	2736	2737	2738	2739	2740	2741	2742	2743	2744	2745	2746	2747	2748	2749	2750	2751	2752	2753	2754	2755	2756	2757	2758	2759	2760	2761	2762	2763	2764	2765	2766	2767	2768	2769	2770	2771	2772	2773	2774	2775	2776	2777	2778	2779	2780	2781	2782	2783	2784	2785	2786	2787	2788	2789	2790	2791	2792	2793	2794	2795	2796	2797	2798	2799	2800	2801	2802	2803	2804	2805	2806	2807	2808	2809	2810	2811	2812	2813	2814	2815	2816	2817	2818	2819	2820	2821	2822	2823	2824	2825	2826	2827	2828	2829	2830	2831	2832	2833	2834	2835	2836	2837	2838	2839	2840	2841	2842	2843	2844	2845	2846	2847	2848	2849	2850	2851	2852	2853	2854	2855	2856	2857	2858	2859	2860	2861	2862	2863	2864	2865	2866	2867	2868	2869	2870	2871	2872	2873	2874	2875	2876	2877	2878	2879	2880	2881	2882	2883	2884	2885	2886	2887	2888	2889	2890	2891	2892	2893	2894	2895	2896	2897	2898	2899	2900	2901	2902	2903	2904	2905	2906	2907	2908	2909	2910	2911	2912	2913	2914	2915	2916	2917	2918	2919	2920	2921	2922	2923	2924	2925	2926	2927	2928	2929	2930	2931	2932	2933	2934	2935	2936	2937	2938	2939	2940	2941	2942	2943	2944	2945	2946	2947	2948	2949	2950	2951	2952	2953	2954	2955	2956	2957	2958	2959	2960	2961	2962	2963	2964	2965	2966	2967	2968	2969	2970	2971	2972	2973	2974	2975	2976	2977	2978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TYPICAL TRUSS BLOCK DETAIL

A 9. THEORETICAL AREA

FREE INFORMATION

- [illegible]

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IF IN DOUBT AS

NOTES AND SPECIFICATION

1000

1. The *Journal of the American Medical Association* (JAMA) is a peer-reviewed medical journal that publishes research, clinical studies, and reviews in the field of medicine. It is one of the most influential and widely read medical journals in the world.
2. The *New England Journal of Medicine* (NEJM) is a peer-reviewed medical journal that publishes research, clinical studies, and reviews in the field of medicine. It is one of the most influential and widely read medical journals in the world.
3. The *Lancet* is a peer-reviewed medical journal that publishes research, clinical studies, and reviews in the field of medicine. It is one of the most influential and widely read medical journals in the world.
4. The *British Medical Journal* (BMJ) is a peer-reviewed medical journal that publishes research, clinical studies, and reviews in the field of medicine. It is one of the most influential and widely read medical journals in the world.
5. The *Annals of Internal Medicine* is a peer-reviewed medical journal that publishes research, clinical studies, and reviews in the field of medicine. It is one of the most influential and widely read medical journals in the world.
6. The *Journal of the American Academy of Pediatrics* (JAAP) is a peer-reviewed medical journal that publishes research, clinical studies, and reviews in the field of pediatrics. It is one of the most influential and widely read medical journals in the world.
7. The *Journal of the American Geriatrics Society* (JAGS) is a peer-reviewed medical journal that publishes research, clinical studies, and reviews in the field of geriatrics. It is one of the most influential and widely read medical journals in the world.
8. The *Journal of the American Psychiatric Association* (JAPA) is a peer-reviewed medical journal that publishes research, clinical studies, and reviews in the field of psychiatry. It is one of the most influential and widely read medical journals in the world.
9. The *Journal of the American Society of Nephrology* (JASN) is a peer-reviewed medical journal that publishes research, clinical studies, and reviews in the field of nephrology. It is one of the most influential and widely read medical journals in the world.
10. The *Journal of the American Society of Hematology* (JASH) is a peer-reviewed medical journal that publishes research, clinical studies, and reviews in the field of hematology. It is one of the most influential and widely read medical journals in the world.

WATER-INDUCED CORROSION

- [illegible]

[illegible]

- [illegible]

[illegible]



TABLE 1
PLASMA CAPTION
PLASMA TREATMENT DATE VALUE
AND UP-PRICE

NOTES

(1) VECTRIC HURF AND
AN ALTERNATIVE TO THE

(2) SPOTLIGHTING IN
ORDERED FOR THE 1987

- All bacteria cells should be gram positive
- The source should be of 300 members size
- A little red staining that comes to the body and the inner wall of a natural white coat on the back
- The host should be of high density population
- The host size should be 20mm

9. **What is a water quality index?**
10. **What is the purpose of a water quality index?**
11. **What are the components of a water quality index?**
12. **What are the advantages of a water quality index?**
13. **What are the disadvantages of a water quality index?**
14. **What are the different types of water quality indices?**
15. **What are the different types of water quality indices?**
16. **What are the different types of water quality indices?**
17. **What are the different types of water quality indices?**
18. **What are the different types of water quality indices?**
19. **What are the different types of water quality indices?**
20. **What are the different types of water quality indices?**

IF IN DOUBT ASK
NOTES AND SPECIFICATIONS

0000-0000-0000-0000

1. **What is the difference between a variable and a constant?** A variable is a value that can change, while a constant is a value that remains the same.
2. **What is the difference between a scalar and a vector?** A scalar is a single value, while a vector is a quantity that has both magnitude and direction.
3. **What is the difference between a scalar and a vector?** A scalar is a single value, while a vector is a quantity that has both magnitude and direction.
4. **What is the difference between a scalar and a vector?** A scalar is a single value, while a vector is a quantity that has both magnitude and direction.
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QUALITY

- [illegible]

- [illegible]

[illegible]