



BA-PHALABORWA MUNICIPALITY

CIDB Class Grading 4CE or Higher

TENDER DOCUMENT FOR THE BID:

**CONSTRUCTION OF STORM WATER CULVERTS FOR HUMULANI
ACCESS BRIDGE TO CEMETERIES WARD 16**

TENDER NO: 01/22/23/C

PREPARED BY:



**REG.NO.2011/138878/07,
VAT REG. No 4030265559,
Tel: 015 295 2059/015 065 0585,010 880 0138
Cell: 071 482 4467/074 317 8677 www.phamelaengineers.co.za
E-mail: admin@phamelaeng.co.za; phamelaengineering@gmail.com
SUITE 101, THE OFFICE PARK, 90 SCHOEMAN STREET, POLOKWANE, 0699**

ISSUED BY:

**The Municipal Manager
Ba-Phalaborwa Municipality**

Supply Chain Management Unit

**BA-PHALABORWA MUNICIPALITY
Supply Chain Management Division
Contact : Mahira Masekwameng**

Tel No : 015 780 6300

**BA-PHALABORWA MUNICIPALITY
Technical Division**

Contact : Mr. PM Baloyi

Tel No : 015 780 6300

Closing Date: 16 AUGUST 2022

Closing Time: 10H00

Name of Bidder:

.....

Bid Amount VAT Included



**EXPANDED PUBLIC WORKS PROGRAMME
Creating opportunities towards human fulfillment**



TENDER NO: 01/22/23/C

FOR PROJECT: CONSTRUCTION OF STORM WATER CULVERTS FOR HUMULANI ACCESS BRIDGE TO CEMETRIES WARD 16

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PART T1: TENDERING PROCEDURES

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T1.1: BID NOTICE AND INVITATION TO BID



CONSTRUCTION OF STORM WATER CULVERTS FOR HUMULANI ACCESS BRIDGE TO CEMETERIES WARD 16

BID NUMBER: 01/22/23/C

RESPONSIVENESS AND EVALUATION CRITERIA:

1. RESPONSIVENESS CRITERIA

The Ba-Phalaborwa Municipality will consider no Bid unless it meets the following responsiveness criteria:

- The bid must be properly received in a sealed envelope clearly indicating the description of the service and the bid number for which the bid is submitted.
- The bid must be deposited in the relevant bid box as indicated on the notice of the bid on or before the closing date and time of the bid.
- An original Valid Tax Clearance Certificate must be submitted with the bid on or before the closing time and date of the bid.
- The electronic verification tax clearance must be accompanied by the verification code

- The proof of valid complying CSD registration report must be attached. (Printed between the date of advert and closing date)
- Certified ID copies of the directors/ members/ proprietors and JV directors not older than three months
- Key personnel/ project team experience (attach CV, Certified qualifications and ID Copies).
- Complete the document with a black ink, terms of reference to be fully completed and each page be initialized. Document should not be dismantled or rearranged.
- Certified copy of the company registration certificate must be submitted with the bid on or before the closing time and date of the bid.
- Submission of a Joint Venture Agreement, where applicable, which has been properly signed by all parties.
- Proof of payment of municipal rates and taxes for both company and director(s) not older than three months/ letter from traditional authority not older than 3 months/ lease agreement
- Proof of work experience (attach relevant appointment letters and completion certificates for each project)
- Certified or original SANAS approved B-BBEE verification certificate/consolidated BBBEE Certificate for JV
- Submit written proof of registration with the CIDB, in an appropriate Contractor grading designation of **4CE or higher** (category), as required in the bid documentation. In the case of a joint venture (JV) bidders must submit a consolidated CIDB grading.

- Submit a certified copy of the letter of good standing for Workmen's compensation with the Department of Labour in terms of Compensation for Occupational Injuries and Diseases Amendment Act, No.61 of 1997 (as amended).
- Company Profile
- Program of works.
- Schedule of monthly cash flow
- Letter of intent from a registered financial institution as a guarantor in the amount of 10% for surety.
- Recent original stamped or electronic stamped letter from the bank with rating for evaluation on functional points only.
- Complies with the requirements of the bid and technical specifications.
- Adheres to Pricing Instructions.
- Audited financial statements from an Accredited Accountant. If the company is older than three (3) years, submit past three years financial statement e.g (2019/20 – 2020/21 – 2021/22)
- Comply in full and observe the requirements of the Notice to Bidders.

2. EVALUATION OF BIDS

- a) All bids received shall be evaluated in terms of the Supply Chain Management Regulations, Ba-phalaborwa Municipality Supply Chain Management Policy, the preferential procurement regulation 2011, and other applicable legislations.
- b) The Council reserves the right to accept all, some, or none of the bids submitted – either wholly or in part – and it is not obliged to accept the lowest bid.
- c) Only locally manufactured products/items with specified minimum thresholds will be considered for local content
- d) The stipulated minimum local content is specified in the Bill of Quantity

By submitting this bid, the bidder authorises the Council or its delegate(s) to carry out any investigation deemed necessary to verify the correctness of the statements and documents submitted and that such documents reasonably reflect the ability of the Bidder to provide the goods and services required by the Council.

PLEASE NOTE

1. The Municipal Manager may cancel a contract awarded to a person if:

- a) The person committed a corrupt or fraudulent act during the procurement process or in the execution of the contract, or
- b) An official or other role player committed any corrupt or fraudulent act during the procurement process or in the execution of the contract that benefited that person.

2. The Municipal Manager may reject the bid or quote of any person if that person or any of its directors have:

- a) Failed to pay municipal rates and taxes or municipal service charges and such rates, taxes and charges are in arrears for more than three months;
- b) Failed, during the last five years, to perform satisfactorily on a previous contract with the Ba-Phalaborwa Municipality or any other organ of State after written notice was given to that bidder that performance was unsatisfactory;
- c) Abused the supply chain management system of the Municipality or have committed any improper conduct in relation to this system;
- d) Been convicted of fraud or corruption during the past five years;

- e) Willfully neglected, reneged on or failed to comply with any government, municipal or other public sector contract during the past five years; or
- f) Been listed in the Register for Bid Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No. 12 of 2004) or has been listed on National Treasury's database as a person prohibited from doing business with public sector
- g) The bidder does not have key staff that satisfy EPWP requirements for Labour-intensive Construction methods/ skills.



**CONSTRUCTION OF STORM WATER CULVERTS FOR HUMULANI ACCESS BRIDGE TO
CEMETERIES WARD 16**

BID NUMBER: 01/22/23/C

SUMMARY FOR BID OPENING PURPOSES

NAME OF BIDDING ENTITY:

.....

PHYSICAL STREET ADDRESS:	POSTAL ADDRESS:

TELEPHONE NUMBER

FAX NUMBER :

E-mail ADDRESS

CONTRACT PRICE : R.....
(Amount brought forward from the Form of Offer and Acceptance) *

Signed by authorised representative of the Bidding Entity:

DATE:

- Should any discrepancy occur between this figure and that stated in the Form of Offer and Acceptance, the latter shall take precedence and apply.

T1.1: BID NOTICE AND INVITATION TO BID



CONSTRUCTION OF STORM WATER CULVERTS FOR HUMULANI ACCESS BRIDGE TO CEMETERIES WARD 16

BID NUMBER: 01/22/23/C

Bids are hereby invited to bid for **Humulani Access Bridge to CEMETERIES Ward 16**

Bid Number	Project Name	CIDB Grading	Min Work Opportunities to be created	Compulsory Briefing Session
01/22/23/C	CONSTRUCTION OF STORM WATER CULVERTS FOR HUMULANI ACCESS BRIDGE TO CEMETERIES WARD 16	4CE OR HIGHER	25	Date: 08/08/2022 Time : 10H00 Venue : Municipal Activity Hall

Tenders are hereby invited from prequalified only tenderers who can demonstrate that they will have in their employ staff which satisfy EPWP requirements during the contract validity are eligible to submit tenders

Tender documents will be available at Ba-Phalaborwa Municipality (Civic Centre Building), Municipal website and E-tender Portal with no charge. The Tender documents are obtainable on the 04 July 2022 during the following times 07:00 to 12:00 and 13:00 to 15:30(Monday to Friday)

An official and compulsory briefing session will be held **on 08th August 2022 at Municipal Activity Hall at 10:00.**

The Bidders are requested to liaise with the Technical Director for clarity.

Complete Bid document, fully priced, fully signed, fully initialled on all pages and all documents required attached must be submitted sealed in an envelope marked "Tender no. 01/22/23/C – CONSTRUCTION OF STORMWATER CULVERTS FOR HUMULANI ACCESS BRIDGE TO CEMETERIES WARD 16" and should be deposited in the Tender Box of Ba-Phalaborwa Local Municipality Office situated at CNR Mandela Drive & Sealene Street in Phalaborwa not later than 10H00 on the 08 August 2022 where after Tenders will be opened in public at Ba-Phalaborwa Municipality's Office. Tenders shall remain valid for a period of 90days from closing date and no late, faxed, e-mailed or other form of Tender will be accepted.

All **technical Enquiries** shall be directed to Mr. PM Baloyi (Technical Director) at 015 780 6300

Bids will be evaluated in terms of Ba-Phalaborwa Municipality's Supply Chain Management Policy, the MFMA, SCM Regulations, the Preferential Procurement Policy Framework Act and its Regulations, 2017, the General Condition of Bidders attention is specifically drawn to the provisions of the bid rules which are included in the bid documents.

Please note that no bid document will be given to couriers unless they have a letter of authority to collect bid documents on behalf of the company.

The lowest or any bid will not necessarily be accepted and the council reserves the right to accept the whole or part of any bid. **Facsimiles or e-mails are not accepted.**

The point system of 80/20 will be used in the evaluation and adjudication of the bid.

Only bidders who are registered in the relevant contractor category in the Construction Industry Development Board Register of Contractors will be considered. This requirement will remain in force as long as it is a requirement of the CIDB. The project CIDB **grading is 4CE or higher.**

Administrative enquiries can be directed to **Mr PM Baloyi** of Ba-Phalaborwa Municipality at telephone number 015 780 6300

THE MUNICIPALITY IS NOT BOUND TO ACCEPT THE LOWEST OR ANY BID AND RESERVES THE RIGHT TO ACCEPT THE WHOLE OR PART OF THE TENDER AND RESERVES THE RIGHT NOT TO APPOINT.

NB: NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE (as defined in Regulation 44 of the Local Government: Municipal Supply Chain Management Regulations)

**Civic Centre
Ba-Phalaborwa Municipality
Private Bag X 01020
Phalaborwa, 1390**

**Acting Municipal Manager
Dr.KKL PILUSA**

Tender Number: 01/22/23/C

T1.2:**BID DATA**

The Conditions of bid in the Standard Conditions of bid as contained in Annex F of SANS 294 – *Construction Procurement Processes, Methods and Procedures* contains references to the bid Data for details that apply specifically to this bid.

The BID Data shall be read with the Standard Conditions of bid in order to expand on the Bidder's obligations and the Employer's undertakings in administering the bid process in respect of the project under consideration.

The BID Data hereafter shall have precedence in the interpretation of any ambiguity or inconsistency between it and the Standard Conditions of bid.

Each item of bid Data given below is cross-referenced to the relevant clause in the standard Conditions of BID.

F.1.1 The Employer for this Contract is: **BA-PHALABORWA MUNICIPALITY.**

F.1.2 Bid Documents

The Bid Document consists of the following:

BID

Part T1: Bidding Procedures

Part T2: Returnable Documents

CONTRACT

Part C1: Agreements and Contract Data

Part C2: Pricing Data

Part C3: Scope of Work

Part C4: Site Information

DRAWINGS

The book of bid drawings is issued separately from this document.

The bid Document with the drawings shall be obtained from the Employer or his authorized representative at the physical addresses stated in the bid Notice, upon payment of the deposit stated.

F.1.4 The Employer's agent is:

Name : Phamela Engineering Services (Mr. F. Baloyi Pr. Eng.)
 Address : P. O. Box 2824
 Polokwane
 0699
 Telephone : (010) 880 0138/ (015) 265 2059/ (015) 065 0585
 E-Mail Address : **admin@phamelaeng.co.za; phamelaengineering@gmail.com**

F.1.5 The Employer's right to accept or reject any bid offer

The Employer is not obliged to accept the lowest or any bid offer.

F.2.1 Eligibility

A bidder will not be eligible to submit a bid if:

- (a) The Contractor submitting the bid is under restrictions or has principals who are under restriction to participate in the Employer's procurement due to corrupt or fraudulent practices;
- (b) The bidder does not have the legal capacity to enter into the contract;
- (c) The Contractor submitting the BID is insolvent, in receivership, bankrupt or being wound up, has his affairs administered by a court or a judicial officer, has suspended his business activities, or is subject to legal proceedings in respect of the foregoing;
- (d) The bidder does not comply with the legal requirements stated in the Employer's procurement policy;
- (e) The bidder cannot demonstrate that he possesses the necessary professional and technical qualifications and competent, financial resources, equipment and other physical facilities, managerial capability, personnel, experience and reputation to perform the contract;
- (f) The Bidder cannot provide proof that he is in good standing with respect to duties, taxes, levies and contributions required in terms of legislation applicable to the work in the contract.

Only those bidders who are registered with the Construction Industry Development Board (CIDB) in a contractor-grading equal to or higher than a contractor grading designation **4CE** or higher **4CE** or a combined grading (in the case of a joint venture) equal or higher than **4CE** as defined in the Regulations (09 August 2004 and 22 July 2005), in terms of the CIDB Act No 38 of 2000, are eligible to submit BIDs for this contract.

F.2.1	Only those Bidders who have in their employ management and supervisory staff satisfying the requirements of the scope of work for labour intensive competencies for Supervisory and management staff are eligible to submit bids.
F.2.18	The Bidder 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 labor-intensive portion of the works together with satisfactory evidence that such staff members satisfy the eligibility requirements.

F.2.7 Compulsory Briefing Session meeting:

The arrangements for the compulsory briefing session meeting are as follows:

Location: Municipality Activity Hall at Ba-Phalaborwa Municipality Main Office, CNR Mandela & Sealene Street on 08th August 2022 starting at 10:00 hrs.

Date: 08th August 2022

Starting Time: 10:00

Enquiries and confirmation of attendance at least one full working day in advance regarding the meeting may be directed to:

Phamela engineering Services (Pty)Ltd

Name: F.Baloyi-Pr. Eng.
 Telephone No: (010) 880 0138 / (015) 265 2059/(015) 065 0585
 E-Mail address: admin@phamelaeng.co.za; phamelaengineering@gmail.com

F.2.10 Pricing the bid offer(a) Value Added Tax

- The Valued Added Tax (VAT) rate shall be 15% or as otherwise provided for by legislation.
- The successful bidder shall be required to produce a VAT invoice that shall only be prepared once measurements and valuations for work done in terms of the contract offer have been agreed with the Employers agent and a certificate of payment issued.
- Payment of VAT to non-VAT vendors shall be processed from the month in which the bidder's liability with the South African Revenue Services is effective.

F.2.11 Alterations to document

A BID offer shall not be considered if alterations have been made to the forms of bid data or contract data (unless such alterations have been duly authenticated by the bidder) or if any particulars required therein have not been completed in all respects.

F.2.12 Alternative bid offers

No alternative offers will be considered.

F.2.13 Submitting a bid Offer**F.2.13.3** Bid offers shall be submitted as an original only.

Under no circumstances whatsoever may the bid forms be retyped or redrafted.

The original tender document, issued to the Bidder, shall be submitted in its entirety. No copies are required.

F.2.15 Two envelope system

A two-envelope procedure will not be followed.

F.2.15 Closing Time

The closing time for submission of bid Offers is: **10:00 On 16 August 2022**. Telephonic, telegraphic, telex, facsimile, emailed and late tenders will not be accepted

F.2.16 Bid offer validity

The bid Offer validity period is 90 days from the closing time for submission of bids.

F.2.17 Clarification of tender offer after submission

Delete the last part of the second sentence, commencing with the word "and". Furthermore, delete the last two sentences of Cl. F2.17.

Add the following sentence: "The rates stated by the Bidder shall be binding".

F.2.18 Provide other Material

Upon request by the Employer, the Bidder shall promptly supply any other material that has a bearing on the tender offer, the bidder's commercial position (including, where applicable, notarized joint venture agreements), Preferencing arrangements, or samples of materials, considered necessary by the Employer for the purpose of a full and fair assessment. Should the Bidder not provide the information or material called for, by the time for submission stated in the Employer's request, the Employer will regard the tender offer as being non-responsive.

F.2.19 Access

Access shall be provided for inspections and testing by personnel acting on behalf of the Employer.

F.2.22 Return of bid Documents

Not applicable.

F.2.23 Certificates

The bidder is required to submit with his bid the following Mandatory documents:

- Original Valid Tax Clearance Certificate;
- Compensation Fund registration certificate
- Certificate of Contractor Registration issued by the Construction Industry Development Board or a copy of the application Form for registration in terms of the Construction Industry Development Board Act (Form F006). A minimum grading of **4CE** is required

In the event of a Joint Venture submitting a tender, every member of the joint venture must submit proof of registration with the CIDB within 10 days from the closing date for tenders; and the lead partner must have a minimum contract grading designation

Important Note:

Failure to provide the required particulars as per the above-listed certificates implies a non-responsive tender and warrants rejection of the tender on account of non-compliance with the requirements of the Tender Data.

F.3.4 Opening of bid Submissions

Due to Covid-19 pandemic, bids will not be opened publicly but privately and the register sent to all Bidders via email within five (5) working days from the date of closure.

F.3.5 The two-envelope system will **not** apply to this bid.

F.3.9.1 Arithmetical errors

Delete paragraphs (b) and (c) of Cl. F.3.9.1 and replace with:

- b) If a bill of quantities (or schedule of quantities or schedule of rates) applies and 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.
- c) 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.
- d) The Contract Price for the completed Contract shall be computed from the actual quantities of authorised work done and compliant with the Contract Data, valued at rates contracted against the respective items in the bill of quantities, schedule of Quantities or schedule of rates and shall include such authorised Provisional Sums and items of extra work as have become payable in terms of the Contract Data.

F.3.11 Evaluation of bid Offers**F.3.11 Evaluation of bid Offers**

Bidders will be evaluated on quality, price and preference. It is important that the relevant information is included to enable the Technical Proposal to be evaluated in accordance with the procedure outlined below. All information must be submitted in a separate file. Tampering with the original Bid document will render the Bid non-responsive. Failure to comply with the above requirements will result in the Bid being

disqualified.

The Bid evaluation will be conducted as follows:

1(a) First

Bid documents that have been disassembled and copies of the Bid documents will be disqualified outright.

1(b) Second

Bidders will be checked for compliance with Bid Conditions and administrative responsiveness. Non-compliance with any of the requirements will render the Bid non-responsive and it will not be carried forward to the next stage. (refer to 2(a) below).

1(c) Third

The Bidder's experience, staffing and methodology will be evaluated. Each Bid will be assessed and awarded points for Functionality. **Failure to achieve 70 points out of the 100 for Functionality will render the Bid non-responsive.**

Only Bidders that score the specified minimum number of points for Functionality will be deemed to be acceptable and carried forward to the next stage. The rest will be disqualified. The points for functionality will not be carried forward to the remainder of the evaluation. (refer to 2(b) below)

1(d) Fourth

Points will be calculated for price on the relevant prices in accordance with the preference point system, 80/20 or 90/10. (refer to 2(c) below)

1(e) Fifth

Points for BBBEE will be awarded in accordance with the status level of contribution. refer to 2(d) below)

1(f) Final

The Bid will be awarded to the short-listed Bidder who has scored the highest points for price and BBBEE status, unless there are justifiable, objective reasons to award the Bid to another Bidder. However, the Employer retains the right not to accept any Bid. Refer to (2e) below)

2(a) Compliance with Bid Conditions and other Requirements

The Bid will be checked to ensure that they comply with the Bid Conditions and all other requirements of the project document. In particular, the following documentation must be completed, signed and included in the Bid:

- a) Form A - Certificate of attendance at site inspection, to be signed in the Bid document or Signature On-site inspection attendance register.
- b) Form B - Certificate of Authority for Signature. For JV's a JV Agreement shall be provided (if applicable)
- c) Form F - Record of addenda to Bid documents.
- d) Form I - Certificate of non-collusive Bid
- e) Form J – Compliance with Occupational Health and Safety Act
- f) Form L – Compulsory enterprise questionnaire.
- g) Form Q – Declaration of good standing regarding tax
- h) Form N – Financial details, 3-year audited financial statements and bank references.
- i) Form U– Declaration of bidder's past supply chain management practices.
- j) Form R – Declaration of interest
- k) Form W – Construction industries development board registration.
- l) Form C1.1 – Form of Offer and Acceptance
- m) Contract Data Section 2: Data provided by the contractor

Failure to comply with the Bid Conditions or to supply the necessary information at Bid closure **WILL** result in the Bid being rejected. Non-submission of any of the forms listed above will result in the Bid being rejected as non-responsive.

2(b) Second Stage in Evaluation: Quality or Functionality: Points System

A brief description of the scoring system is given below. A tabulated score sheet which will be used in the evaluation is as shown on the next page.

The Bidder must be able to demonstrate that he understands the project and the various tasks required. Innovative solutions will be viewed favorably. For a definition of all terms, refer to Scope of Works. Bidders' submissions will be evaluated based on compliance with the following criteria to determine the responsiveness to the bid requirements:

- I. Organogram and CV's for key personnel
- II. Capability statement of the company with regard to this type of work in general, and the Specifications of this bid in particular. Provide project descriptions of similar completed projects, highlighting similarities between the completed projects and the specifications of this project. Highlight experience with similar projects in South Africa for similar roads authorities in the past 5 years. Provide contact details of employers for these projects. Points will be awarded for each project completed that is at least one grading lower than the CIDB grading called for this project.
- III. Plant and equipment: Indicate own and hired equipment, clearly indicating equipment to be used specifically, for this project.
- IV. Bank rating: Bidder's bank to complete Form W

Functionality Scorecard				
Criteria	Scoring guide			Maximum Weights
<p>Company Experience: NB: The tender must submit four (4) or more successfully completed Storm water drainage structures(culverts/bridges) projects to qualify for maximum points.</p> <p>Note 1: tenderers to submit project names complete with valid contact details, appointment letter and completion certificates. non-submission will result in loss of points.</p>	No	SCORING CRITERIA	WEIGHT	SCORE
	1	1 Project	7	
	2	2 Project	15	
	3	3 Project	25	
	4	4 or more project	40	
		TOTAL	40	
				40
<p>Financial Capacity- Tenderer to submit proof of bank of rating not older than three (3) months. Bank rating and bank statements should be of the Lead Partner in case of Joint Venture. Note: Points will not be allocated if proof not attached</p>	Bank Rating		Weighting	Score
	Bank Rating = A, B, C		10	
	Bank Rating = D		5	
	Bank Rating = E		2	
	Bank Rating = F to G		0	
	TOTAL		10	
				10
<p>Specific Personnel Knowledge — certified copies of Academic qualification certificates need to be attached for functionality points scoring otherwise no points will be allocated</p>	Designation	Designation		
	Contract Manager	<p><u>Contract Manager:</u> <u>Points: 10</u> 5: N. Dip: Civil Engineering with more than 5 years' exp. 10: Pr. Eng.: Civil, Pr. Tech Eng.: Civil: Civil with more than 5yrs exp.</p>		
		Site Agent	<p><u>Site Agent:</u> <u>Points: 15</u> 5: N. Dip: Civil Engineering with less than 5 years' exp. 10: N. Dip: Civil Engineering with more than 5 years'</p>	
				30

		exp. 15: Pr. Eng.: Civil, Pr. Technician: Civil: Civil with more than 5yrs exp.																				
	Construction Supervisor	Site Forman: Points: 3 0: No formal qualification 1: Certificate N6 Civil Engineering 3: National Diploma Civil Engineering with more than 5 yrs. exp.																				
	Safety Officer(OHS)	Safety Officer: Points: 2 0: No formal qualification 2: Registered with SACPCMP as an OHSO or higher with more than 3 yrs. exp.																				
<p>List of plant-</p> <p>1. Tenderer to submit proof of ownership with certification (E-Natis)</p> <p>2. And in case of hiring, a letter of intent must be submitted with proof of ownership with certification not older than three months.</p> <p>Bidders will scores full points where the total minimum plant required has a letter of intent and also proof of ownership by a rental company</p>	<table border="1"> <thead> <tr> <th>Required plant</th> <th>Points</th> </tr> </thead> <tbody> <tr> <td>TLB</td> <td>2</td> </tr> <tr> <td>1 x Excavator</td> <td>4</td> </tr> <tr> <td>1x Grader</td> <td>4</td> </tr> <tr> <td>2x Tipper Truck</td> <td>4</td> </tr> <tr> <td>1x Roller</td> <td>2</td> </tr> <tr> <td>1x Compressor</td> <td>1</td> </tr> <tr> <td>1x LDVs</td> <td>1</td> </tr> <tr> <td>1 x Water Tanker</td> <td>2</td> </tr> <tr> <td>Total points</td> <td>20</td> </tr> </tbody> </table>	Required plant	Points	TLB	2	1 x Excavator	4	1x Grader	4	2x Tipper Truck	4	1x Roller	2	1x Compressor	1	1x LDVs	1	1 x Water Tanker	2	Total points	20	20
Required plant	Points																					
TLB	2																					
1 x Excavator	4																					
1x Grader	4																					
2x Tipper Truck	4																					
1x Roller	2																					
1x Compressor	1																					
1x LDVs	1																					
1 x Water Tanker	2																					
Total points	20																					
Functionality Threshold (Minimum score)			70																			
Total Points for Functionality			100																			

It is important that the Bidder provides information as requested as this information will be used for functionality in which a **minimum of 70 points** must be scored to move to the next stage of evaluation. The scoring will be according to the table below

Bidders must score a minimum of 70 percentage points out of the 100 percentage to qualify for further adjudication.

2(c) Fourth Stage in Evaluation: Price

The following must be completed in full

- * The pricing schedule
- * The form of offer. No alterations, subtractions or additions may be made to the items in the pricing schedule. All items must be priced or calculated.

A total of 80 points will be awarded to the Bid with the lowest balanced price. The other Bidders will be awarded points based on the ratio of the price under consideration to the lowest price.

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

where

- P_s = Points scored for comparative price of bid under consideration
- P_t = Comparative price of bid under consideration
- P_{min} = Comparative price of lowest acceptable bid

2(d) Fifth Stage in Evaluation: BBBEE (Ph)

The Bidders will then be evaluated in terms of the Construction industry scorecard and the PPPFA regulation 34350 issued on 8 June 2011 with the values of Ph indicated as the number of points shown below.
FOR BEE EVALUATION: Kindly complete and sign the MBD.6.1 and attach ORIGINAL or CERTIFIED BBBEE certificates or the sworn affidavit.

B-BBEE Status Level of Contributor	Number of points (80/20system)
1	20
2	18
3	16
4	12
5	8
6	6
7	4
8	2
Non-compliant contributor	0

2(e) Final Stage in Evaluation: Calculation of Final Total Points

The final score or final total points for each Bid will be calculated by adding the scores from the; calculations.

$$P = P_s + P_h$$

F.3.13 Acceptance of bid Offer**F.3.13.1 Accept tender offer only if the bidder complies with the legal requirements stated in the Tender Data.**

F.3.13.2 Notify the successful bidder of the employer's acceptance of his tender offer by completing and returning one copy of the form of offer and acceptance before the expiry of the validity period stated in the tender data, or agreed additional period. Providing the form of offer and acceptance does not contain any qualifying statements, it will constitute the formation of a contract between the employer and the successful bidder as described in the form of offer and acceptance.

F.3.14 Notice to unsuccessful bidders

After the successful bidder has acknowledged the employer's notice of acceptance, notify other bidders that their tender offers have not been accepted.

F.3.15. Prepare contract documents

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

- Addenda issued during the tender period,
- Inclusion of some of the returnable documents,
- Other revisions agreed between the employer and the successful bidder, and
- The schedule of deviations attached to the form of offer and acceptance, if any.

F.3.16 Issue final contract

Prepare and issue the final draft of contract documents to the successful bidder for acceptance as soon as possible after the date of the employer's signing of the form of offer and acceptance (including the schedule of deviations, if any). Only those documents that the conditions of tender require the bidder to submit, after acceptance by the employer, shall be included.

F.3.17 Complete adjudicator's contract

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

F.3.18 Copies of Contract

The number of paper copies of the signed contract to be provided by the Employer is ONE.

T1.3: STANDARD CONDITIONS OF BID

(As contained in Annexure F of the CIDB Standard for Uniformity in Construction Procurement)

F.1 General

F.1.1 Actions

The employer and each bidder submitting a bid offer shall comply with these conditions of bid. In their dealings with each other, they shall discharge their duties and obligations as set out in F.2 and F.3, timeous and with integrity, and behave equitably, honestly and transparently.

F.1.2 Bid Documents

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

F.1.3 Interpretation

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

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

F.1.3.3 For the purposes of these conditions for the calling for expressions of interest, the following definitions apply:

- a) **Comparative offer** means the bidder's financial offer after the factors of non-firm prices, all unconditional discounts and any other bided parameters that will affect the value of the financial offer have been taken into consideration
- b) **corrupt practice** means the offering, giving, receiving or soliciting of anything of value to influence the action of the employer or his staff or agents in the bid process; and
- c) **Fraudulent practice** means the misrepresentation of the facts in order to influence the bid process or the award of a contract arising from a bid offer to the detriment of the employer, including collusive practices intended to establish prices at artificial levels
- d) **Quality (functionality)** means the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs

F.1.4 Communication and employer's agent

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

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

F.1.5.1 The employer may accept or reject any variation, deviation, bid offer, or alternative bid offer, and may cancel the bid process and reject all bid offers at any time before the formation of a contract. The employer shall not accept or incur any liability to a bidder for such cancellation and rejection, but will give written reasons for such action upon written request to do so.

F.1.5.2 The employer may not subsequent to the cancellation or abandonment of a bid process or the rejection of all responsive bid offers re-issue a bid covering substantially the same scope of work within a period of six months unless only one bid was received and such bid was returned unopened to the bidder.

F.2 Bidder's obligations**F.2.1 Eligibility**

Submit a bid offer only if the bidder complies with the criteria stated in the bid data and the bidder, or any of his principals, is not under any restriction to do business with employer.

F.2.2 Cost of bidding

Accept that the employer will not compensate the bidder for any costs incurred in the preparation and submission of a bid offer, including the costs of any testing necessary to demonstrate that aspects of the offer satisfy requirements.

F.2.3 Check documents

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

F.2.4 Confidentiality and copyright of documents

Treat as confidential all matters arising in connection with the bid. Use and copy the documents issued by the employer only for the purpose of preparing and submitting a bid offer in response to the invitation.

F.2.5 Reference documents

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

F.2.6 Acknowledge addenda

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

F.2.7 Clarification meeting

Attend, where required, a clarification meeting at which bidders may familiarize themselves with aspects of the proposed work, services or supply and raise questions. Details of the meeting(s) are stated in the bid data.

F.2.8 Seek clarification

Request clarification of the bid documents, if necessary, by notifying the employer at least five working days before the closing time stated in the bid data.

F.2.9 Insurance

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

F.2.10 Pricing the bid offer

F.2.10.1 Include in the rates, prices, and the bided total of the prices (if any) all duties, taxes (except Value Added Tax (VAT)), and other levies payable by the successful bidder, such duties, taxes and levies being those applicable 14 days before the closing time stated in the bid data.

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

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

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

F.2.11 Alterations to documents

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

F.2.12 Alternative bid offers

F.2.12.1 Submit alternative bid offers only if a main bid offer, strictly in accordance with all the requirements of the bid documents, is also submitted. The alternative bid offer is to be submitted with the main bid offer together with a schedule that compares the requirements of the bid documents with the alternative requirements the bidder proposes.

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

F.2.13 Submitting a bid offer

F.2.13.1 Submit a bid offer to provide the whole of the works, services or supply identified in the contract data and described in the scope of works, unless stated otherwise in the bid data.

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

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

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

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

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

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

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

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

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

F.2.15 Closing time

F.2.15.1 Ensure that the employer receives the bid offer at the address specified in the bid data not later than the closing time stated in the bid data. Proof of posting shall not be accepted as proof of delivery. The employer shall not accept bid offers submitted by telegraph, telex, facsimile or e-mail, unless stated otherwise in the bid data.

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

F.2.16 Bid offer validity

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

F.2.16.2 If requested by the employer, consider extending the validity period stated in the bid data for an agreed additional period.

F.2.17 Clarification of bid offer after submission

Provide clarification of a bid offer in response to a request to do so from the employer during the evaluation of bid offers. This may include providing a breakdown of rates or prices and correction of arithmetical errors by the adjustment of certain rates or item prices (or both). No change in the total of the prices or substance of the bid offer is sought, offered, or permitted. The total of the prices stated by the bidder shall be binding upon the bidder.

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

F.2.18 Provide other material

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

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

F.2.19 Inspections, tests and analysis

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

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

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

F.2.21 Check final draft

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

F.2.22 Return of other bid documents

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

F.2.23 Certificates

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

F.3 The employer's undertakings**F.3.1 Respond to clarification**

Respond to a request for clarification received up to five working days prior to the bid closing time stated in the Bid Data and notify all bidders who drew procurement documents.

F.3.2 Issue Addenda

If necessary, issue addenda that may amend or amplify the bid documents to each bidder during the period from the date of the Bid Notice until seven days before the bid closing time stated in the Bid Data. If, as a result a bidder applies for an extension to the closing time stated in the Bid Data, the Employer may grant such extension and, will then notify it to all bidders who drew documents.

F.3.3 Return late bid offers

Return bid offers received after the closing time stated in the Bid Data, unopened, (unless it is necessary to open a bid submission to obtain a forwarding address), to the bidder concerned.

F.3.4 Opening of bid submissions

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

F.3.4.2 Announce at the opening held immediately after the opening of bid submissions, at a venue indicated in the bid data, the name of each bidder whose bid offer is opened, the total of his prices, preferences claimed and time for completion, if any, for the main bid offer only.

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

F.3.5 Two-envelope system

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

F.3.5.2 Evaluate the quality of the technical proposals offered by bidders, then advise bidders who remain in contention for the award of the contract of the time and place when the financial proposals will be opened. Open only the financial proposals of bidders, who score in the quality evaluation above the minimum number of points for quality stated in the bid data, and announce the score obtained for the technical proposals and the total price and any preferences claimed. Return unopened financial proposals to bidders whose technical proposals failed to achieve the minimum number of points for quality.

F.3.6 Non-disclosure

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

F.3.7 Grounds for rejection and disqualification

Determine whether there has been any effort by a bidder to influence the processing of bid offers and instantly disqualify a bidder (and his bid offer) if it is established that he engaged in corrupt or fraudulent practices.

F.3.8 Test for responsiveness

Determine, on opening and before detailed evaluation, whether each bid offer properly received:

- a) Meets the requirements of these Conditions of Bid,
- b) Has been properly and fully completed and signed, and
- c) is responsive to the other requirements of the bid documents.

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

- Detrimentally affect the scope, quality, or performance of the works, services or supply identified in the Scope of Work,
- change the Employer's or the bidder's risks and responsibilities under the contract, or
- affect the competitive position of other bidders presenting responsive bids, if it were to be rectified.

Reject a non-responsive bid offer, and not allow it to be subsequently made responsive by correction or withdrawal of the non-conforming deviation or reservation.

F.3.9 Arithmetical errors

Check responsive bid offers for arithmetical errors, correcting them in the following manner:

- Where there is a discrepancy between the amounts in figures and in words, the amount in words shall govern.
- If a bill of quantities (or schedule of rates) applies and there is an error in the line-item total resulting from the product of the unit rate and the quantity, the line item total shall govern and the rate shall be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line-item total as quoted shall govern, and the unit rate will be corrected.
- Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the bidder's addition of prices, the total of the prices shall govern and the bidder will be asked to revise selected item prices (and their rates if a bill of quantities applies) to achieve the bided total of the prices.

Consider the rejection of a bid offer if the bidder does not correct or accept the correction of his arithmetical errors in the manner described above.

F.3.10 Clarification of a bid offer

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

F.3.11 Evaluation of bid offers**F3.11.1 General**

Appoint an evaluation panel of not less than three persons. Reduce each responsive bid offer to a comparative offer and evaluate it using the bid evaluation method that is indicated in the Bid Data and described below:

Method 1: Financial offer	<ol style="list-style-type: none"> 1) Rank bid offers from the most favorable to the least favorable comparative offer. 2) Recommend highest ranked bidder for the award of the contract, unless there are compelling and justifiable reasons not to do so.
Method 2: Financial offer and preferences	<ol style="list-style-type: none"> 1) Score bid evaluation points for financial offer. 2) Confirm that bidders are eligible for the preferences claimed and if so, score bid evaluation points for preferencing. 3) Calculate total bid evaluation points. 4) Rank bid offers from the highest number of bid evaluation points to the lowest. 5) Recommend bidder with the highest number of bid evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.
Method 3: Financial offer and quality	<ol style="list-style-type: none"> 1) Score quality, rejecting all bid offers that fail to score the minimum number of points for quality stated in the Bid data. 2) Score bid evaluation points for financial offer. 3) Calculate total bid evaluation points. 4) Rank bid offers from the highest number of bid evaluation points to the lowest. 5) Recommend bidder with the highest number of bid evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.
Method 4: Financial offer, quality and preferences	<ol style="list-style-type: none"> 1) Score quality, rejecting all bid offers that fail to score the minimum number of points for quality stated in the Bid data. 2) Score bid evaluation points for financial offer. 3) Confirm that bidders are eligible for the preferences claimed, and if so, score bid evaluation points for Preferencing. 4) Calculate total bid evaluation points. 5) Rank bid offers from the highest number of bid evaluation points to the lowest. 6) Recommend bidder with the highest number of bid evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.

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

F.3.11.2 Scoring Financial Offers

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

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

N_{FO} = the number of bid evaluation points awarded for the financial offer.

W_1 = the maximum possible number of bid evaluation points awarded for the financial offer as stated in the Bid Data.

A = a number calculated using either formulas 1 or 2 below as stated in the Bid Data.

Formula	Basis for comparison	Option 1	Option 2
1	Highest price or discount	$(1 + \frac{(P - P_m)}{P_m})$	P/P_m
2	Lowest price or percentage commission/fee	$(1 - \frac{(P - P_m)}{P_m})$	P_m/P

where:

P_m = the comparative offer of the most favorable bid offer.

P = the comparative offer of bid offer under consideration.

F.3.11.3 Scoring quality (functionality)

Score quality in each of the categories stated in the Bid Data and calculate total score for quality.

F.3.12 Insurance provided by the employer

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

F.3.13 Acceptance of bid offer

F.3.13.1 Accept bid offer only if the bidder satisfies the legal requirements stated in the Bid Data.

F.3.13.2 Notify the successful bidder of the employer's acceptance of his bid offer by completing and returning one copy of the form of offer and acceptance before the expiry of the validity period stated in the bid data, or agreed additional period. Providing the form of offer and acceptance does not contain any qualifying statements, it will constitute the formation of a contract between the employer and the successful bidder as described in the form of offer and acceptance.

F.3.14 Notice to unsuccessful bidders

After the successful bidder has acknowledged the employer's notice of acceptance, notify other bidders that their bid offers have not been accepted.

F.3.15. Prepare contract documents

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

- a) Addenda issued during the bid period,
- b) Inclusion of some of the returnable documents,
- c) Other revisions agreed between the employer and the successful bidder, and
- d) The schedule of deviations attached to the form of offer and acceptance, if any.

F.3.16 Issue final contract

Prepare and issue the final draft of contract documents to the successful bidder for acceptance as soon as possible after the date of the employer's signing of the form of offer and acceptance (including the schedule of deviations, if any). Only those documents that the conditions of bid require the bidder to submit, after acceptance by the employer, shall be included.

F.3.17 Complete adjudicator's contract

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

F.3.18 Provide copies of the contracts

Provide to the successful bidder the number of copies stated in the Bid Data of the signed copy of the contract as soon as possible after completion and signing of the form of offer and acceptance.

PART T2: RETURNABLE SCHEDULES

TABLE OF CONTENTS		Page	Colour
T2.1:	LIST OF RETURNABLE DOCUMENTS.....	T.21	White
T2.2:	RETURNABLE SCHEDULES TO BE COMPLETED BY TENDERER	T.22	Yellow

T2.1: LIST OF RETURNABLE DOCUMENTS

The tenderer must complete the following returnable documents:

1 Returnable Schedules required only for tender evaluation purposes

- A. Certificate of authority of signatory
 - B. Certificate of registration with the Construction Industry Development Board (CIDB), In the case of a joint venture (JV) bidders must submit a consolidated CIDB grading.
 - C. Letter of Good Standing with COIDA
 - D. Certificate of authority for joint ventures
 - E. Compulsory enterprise questionnaire
 - F. Record of addenda to tender documents
 - G. Amendments, qualifications and alternatives
 - H. Form of intent to provide a demand guarantee
 - I. Schedule of proposed subcontractors
 - J. Schedule of Available Infrastructure, Resources and Experience
 - K. Financial information of bidder
 - L. Proof of payment of municipal rates and taxes for both company and director(s) not older than three months/ letter from traditional authority not older than 3 months'/ lease agreement
 - M. Authorization for Deduction Of Outstanding Amounts Owed To Council
 - N. Tax clearance certificate requirements
 - O. Declaration of interest
 - P. Declaration for procurement above R10 million (all applicable taxes included)
 - Q. Preference points claim form in terms of the preferential procurement regulations 2011
 - R. Declaration of bidder's past supply chain management practices
 - S. Certificate of independent bid determination
 - T. Compliance with occupational health and safety act, 1993 and construction regulations, 2014
 - U. SANAS approved B-BBEE verification certificate/ consolidated BBBEE Certificate for JV
 - V. Preference schedule
 - W. Certificate of company registration
 - X. Curriculum vitae format of key personnel
 - Y. CSD Report
 - Z. Certified ID copies of all directors, in case of JV (all JV director's ID should be certified)
 - AA. Terms of reference should be fully completed and each page must be initialized
- NB: Mandatory documents will also be used for the evaluation

2. Other documents required only for bid evaluation purposes

BB. Day work schedule

3 The offer portion

Part C1 Agreements and Contract Data

Part C2 Pricing Data

T2.2 RETURNABLE SCHEDULES

A. CERTIFICATE OF ATTENDANCE AT SITE CLARIFICATION MEETING

This is to certify that:

..... (Bidder)
of (Address)
.....

was represented by the person(s) named below at the compulsory meeting held for all bidders 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 entire tender submission.

Particulars of person(s) attending the meeting:

Name Signature
Capacity.....

Name Signature
Capacity.....

Note: All particulars above this horizontal divide line to be filled in by the Bidder **prior to** signature by Employer's representative.

Attendance of the above persons at the meeting is confirmed by the representative of..... Consulting Services namely:

Name Signature
Capacity..... Date Time

B. CERTIFICATE OF AUTHORITY OF SIGNATORY

All signatories, **including sole Proprietors**, shall confirm their authority by **attaching to the last page of this bid** a duly signed and dated original or certified copy of the relevant resolution of their members or their board of directors, as the case may be.

An example for: "COMPANIES/PARTENERSHIPS/CLOSE CORPORATIONS" are shown below:

"By resolution of board of directors passed onMr/Mrs/Ms/Dr.....has been duly authorised to sign all documents in connection with the Bid for Contract Number:.....and any contract, which may arise there from on behalf of the bidding entity, namely.....

SIGNED ON BEHALF OF BIDDING ENTITY :.....
IN HIS/HER CAPACITY AS :.....
DATE :.....
AUTHORISED PERSON SIGNATURE :.....

As witnesses:

1. Date

.....
Print Name

2. Date

.....
Print Name

An example for: "JOINT VENTURE" is shown below:

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

, Name of Firm	Address	Authorising	
		Signature	Name and Designation
Lead Partner			
Name of 2 nd Company			
Name of 3 rd Company			

C. CERTIFICATE OF REGISTRATION WITH THE CONSTRUCTION INDUSTRY DEVELOPMENT BOARD

1. General

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

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

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

2. Status

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

2.1 Section A

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

2.2 Section B

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

2.3 Section C

Bidders who have submitted the first application.

2.4 Section D

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

SECTION B

I, acting in capacity of
 was authorised to sign all documents in connection with this tender and any contract resulting from
 it on

behalf of the following entity:

hereby declare that the above mentioned entity has achieved registration with the Construction In-
 dustry Development Board on date, furthermore declare that the
 existing grading designation is:

Contract Value	
----------------	--

Type of Work		
--------------	--	--

and the following update has been applied for:

Amendment of category status	
Change of Particulars	
Annual confirmation of Particulars	
Renewal of Registration	

mark with "✱"

.....
 Signature of Tenderer

.....
 Signature of Witness

.....
 Print Name

.....
 Print Name

SECTION C

I, acting in capacity of
was authorised to sign all documents in connection with this tender an any contract resulting from
it on

behalf of the following entity:
hereby declare that the above mentioned entity has submitted its FIRST APPLICATION FOR
REGISTRATION with the Contraction Industry Development board on date

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

.....
Signature of Tenderer

.....
Signature of Witness

.....
Print Name

.....
Print Name

SECTION D

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

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

Name of Lead Partner:		
Contract Value		
Type of Work		

Name of 2 nd Partner:		
Contract Value		
Type of Work		

Name of 3 rd Partner:		
Contract Value		
Type of Work		

.....
 Signature of Tenderer

.....
 Signature of Witness

.....
 Print Name

.....
 Print Name

D. CERTIFICATE OF AUTHORITY FOR JOINT VENTURES (WHERE APPLICABLE)

Employer:

Contract Number:

NOTE 1 This form need only be completed in the event of a Joint Venture submitting this tender.

NOTE 2 Fill in all the information requested in the spaces provided. Attach additional sheets if required.

NOTE 3 Provide a copy of the Joint Venture agreement. Demonstrate that the partners to the Joint Venture share in the ownership, control, management responsibilities, risks and profits of the Joint Venture. The Joint Venture agreement shall include specific details relating to:

- a) the contributions of capital and equipment;
- b) portions of the Contract to be performed by the partner's own resources; and
- c) portions of the Contract to be performed under the supervision of each partner.

NOTE 4 Provide copies of all written agreements between partners concerning the Joint Venture, including those that relate to ownership options and to restrictions/limits regarding ownership and control.

1. Joint Venture Particulars

Name

Postal Address

Physical Address

TelephoneFax

Name of authorized representative

2. Identity of Partner No. 1

Name

Postal Address

Physical Address

TelephoneFax

Contact Person

3. Identity of Partner No. 2

Name

Postal Address

Physical Address

.....

TelephoneFax

Contact Person

4. Identity of Partner No. 3

Name

Postal Address

Physical Address

.....

TelephoneFax

Contact Person

5. Description of the role of the partners in the joint venture

Partner No. 1:

.....

Partner No. 2:

.....

Partner No. 3:

.....

6. Ownership of the joint venture

(i) Ownership percentage(s) Partner No. 1%

Partner No. 2%

(ii) Partner percentage in respect of:

a) Profit and loss sharing: Partner No. 1%

Partner No. 2%

b) Initial capital contribution Partner No. 1 R.....

Partner No. 2 R.....

(iii) Anticipated ongoing capital contributions:

Partner No. 1 R.....

- Partner No. 2 R.....
- (iv) Contributions of equipment (specify types, quality and quantities of equipment) to be provided by each partner:

Partner No. 1:

Partner No. 2:

Partner No. 3:

7. Recent contracts performed by partners in their own right or as partners in other joint ventures

a) Partner No. 1

(i)

(ii)

(iii)

b) Partner No. 2

(i)

(ii)

(iii)

8. Control and participation in the joint venture

(Identify by name and firm those individuals who are, or will be, responsible for, and have authority to engage in the relevant management functions and policy and decision making, indicating any limitations in their authority, for example, co-signature requirements and monetary limits).

a) Joint Venture cheque signing

.....

b) Authority to enter into contracts on behalf of the Joint Venture

.....

c) Signing, co-signing or collateralizing of loans

.....

d) Acquisition of lines of credit

.....

e) Acquisition of demand bonds

.....

f) Negotiating and signing of labour agreements

.....

9. Management of the performance of the Contract

(Fill in the name and firm of the responsible person)

- a) Supervision of field operations.....
- b) Major purchasing.....
- c) Estimating
- d) Technical management.....

10. Management and control of the joint venture

- a) Identify the managing partner
.....
- b) What authority does each partner have to commit or obligate the other to financial institutions, insurance companies, suppliers, subcontractors or other parties participating in the performance of the contemplated works:

Partner No. 1:

Partner No. 2:

Partner No. 3:

- c) Describe the management structure for the joint venture's work under this Contract

Management Function/Designation	Name	Partner

11. Personnel

- a) State the approximate number of operative personnel (by trade/function/discipline) needed to execute the Joint Venture contract.

Trade/function/discipline	Number

- b) State the number of operative personnel to be employed on the Contract who are currently in the employ of partners:

.....

- c) State the number of operative personnel who are not currently in the employ of the respective partners and shall be engaged on the project by the Joint Venture:

.....

- d) State the name of the individual who shall be responsible for hiring Joint Venture employees:

.....

- e) State the name of the partner who shall be responsible for the preparation of Joint Venture payrolls:

.....

12. Control and structure of the Joint Venture

Briefly describe the manner in which the Joint Venture is structured and controlled.

.....
The undersigned warrants that he/she is duly authorised to sign this Joint Venture disclosure form and affirms that the foregoing statements are correct and include all the material information necessary to identify and explain the terms and operations of the Joint Venture and the intended participation of each partner in the undertaking.

The undersigned further covenants and agrees to provide the Employer with complete and accurate information regarding actual joint venture work and the payment therefore, and any proposed changes in any provisions of the Joint Venture Agreement, and to permit the audit and examination of the books, records and files of the Joint Venture, or those of each partner relevant to the Joint Venture, by duly authorized representatives of the Employer.

Duly authorized to sign on behalf of:

..... **(the Joint Venture)**

Signature: Print Name:

Name:

Address:

.....

Telephone: Date:

Duly authorized to sign on behalf of: **(Partner No. 1)**

Signature: Print Name:

Name:

Address:

.....

Telephone: Date:

Duly authorized to sign on behalf of: **(Partner No. 2)**

Signature: Print Name:

Name:

Address:

.....

Telephone: Date:

E. COMPULSORY ENTERPRISE QUESTIONNAIRE

The following particulars must be furnished. In the case of a joint venture, **separate** enterprise questionnaires in respect of each partner must be completed and submitted.

Section 1: Name of enterprise:

Section 2: VAT registration number, if any:

Section 3: CIDB registration number, if any:

Section 4: Particulars of sole proprietors and partners in partnerships

Name*	Identity number*	Personal income tax number*

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

Section 5: Particulars of companies and close corporations

Company registration number
 .
 Close corporation number
 .
 Tax reference number
 .

Section 6: Record in the service of the state

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

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

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

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

*insert separate page if necessary

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

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

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

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

*insert separate page if necessary

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

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

Signed		Date	
Name		Position	
<i>Enterprise name</i>			

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:

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

Attach additional pages if more space is required.

Signed		Date	
Name		Position	
Bidder			

G. AMENDMENTS, QUALIFICATIONS AND ALTERNATIVES

(This is not an invitation for amendments, deviations or alternatives but should the Bidder desire to make any departures from the provisions of this contract he shall set out his proposals clearly hereunder. The Employer will not consider any amendment, unless form (a), has been completed to the satisfaction of the Employer). The Bidder is referred to Bid Data paragraph F.2.12, where it is clearly stated that no alternative offers will be accepted.

I / We herewith propose the amendments, as set out in the table below:

(a) AMENDMENTS

PAGE, CLAUSE OR ITEM NO	PROPOSED AMENDMENT

* Attach additional pages if more space is required.

- Notes:**
- (1) Amendments to the General and Special Conditions of Contract are not acceptable;
 - (2) The Bidder must give full details of all the financial implications of the amendments and qualifications in a covering letter attached to his Bid.

SIGNATURE:
(Of person authorized to sign on behalf of the Bidder)

DATE:

H. FORM OF INTENT TO PROVIDE A DEMAND GUARANTEE

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

(*) Insurance Company (name)

(of address)

(*) Commercial Bank (Name)

(Branch)

(of address)

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

(*) : delete whichever is not applicable.

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

- (i) withhold all payments which may be due to the Contractor pending compliance with the stipulated requirements to produce an acceptable Demand Guarantee.
- (ii) instruct the Contractor to cease all work pending provision of the Demand Guarantee, and
- (iii) cancel the Contract.

Signed	.....	Date	.....
Print Name	.....	Position	.....
Tenderer	.....	

I. 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 names 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.

We confirm that all Subcontractors who are contracted to construct a house are registered as home builders with the National Home Builders Registration Council.

	Name and address of proposed Subcontractor	Nature and extent of work	Previous experience with Subcontractor.
1.			
2.			
3.			
4.			
5.			
Signed		Date	
Name		Position	
Tenderer			

J. SCHEDULE OF AVAILABLE INFRASTRUCTURE, RESOURCES AND EXPERIENCE

1. Bidder’s List of Third-Party Design Engineers

In the event that the Bidder desires to design all or part of the Works or submit any alternative, he/she shall list here-following, the Design Engineers, accomplished in the specific field of practice, which he/she proposes to employ for the purpose of third-party certification of all works designed by the Bidder for the Works.

- Notes: (i) All costs of third-party designs shall be borne solely by the Bidder.
 (ii) This Schedule must be accurately completed. Phrases such as “to be advised” will not be accepted.

Section of Works	Name and Address of Registered Engineer				ECSA Registration No.

2. Bidder’s Personnel Profile

Key Staff Permanently employed, of foreman level and above	Number of staff
Sub-Total	
Other Permanent Staff	Number of staff
Sub-Total	
Temporary Staff	Number of staff
Sub-Total	

3. **Identify any amounts of money loaned to your enterprise, indicating the loan source, date and amount**

Loan Source	Address	Date of Loan	Loan Amount

4. **List a maximum of five contract which your enterprise is engaged in and has not yet completed**

Contract Description	Location	Client	Contract Amount	Expected Completion (month & year)

5. **List the four largest assignments completed by your enterprise in the last three years**

Nature of Work Performed	Client	Consultant Contact Person	Telephone No.	Contract Amount

6. Address of Branch Offices in the RSA

.....

6. Address of Nearest Representative to Ba-Phalaborwa

.....

8. Has work previously been performed for the Employer? YES/NO* - Specify

.....

9. Tenderer's Financial Ability to execute and complete the Works

Provide the estimated cash flow on the project in terms of submissions of payment certificates or payment schedules of the Employer

NOTES APPLICABLE:

- (i) Value added tax to be included in all amounts
- (ii) Assume for the purpose of this estimate, payment of certificates within 30 days after receipt by the Employer.
- (iii) In calculation of the last column,

$j = d$	$m = l + g$
$k = j + e$	$n = m + h$
$l = k + f$	etc.
- (iv) Failure to detail the required information, shall automatically signify that the Bidder lacks the infrastructure and resources necessary to execute and complete the Works

Month No. in Contract Period	Estimated amount in Rands (VAT included)			
	a Received	b Payments made	a-b Net cash flow	Cumulative cash flow
1	-		d	j
2			e	k
3			f	l
4			g	m
5			h	n
6			etc.	etc.
7				
8				
9				
10				
Maximum negative cash flow. Take the largest negative number in the last column and write in here → → → → →				

Signed	.....	Date	.....
Print Name	.....	Position	.....
Tenderer	.....	

K. FINANCIAL INFORMATION OF BIDDER (also attach a letter from Bank)

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

Bidder Details

Tender Description :

Contract Period :

Name of Bidder :

Bank Account Number :

Tendered Amount :

Demand Guarantee will be provided by this Bank: YES NO

If yes, state amount of Demand Guarantee: R

Financial Institution

Name of Commercial Bank :

Branch :

Name of Bank Manager :

Telephone Number :

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

has operated an account with us for the last years.

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

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

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

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

(In words only)

The Bank Rating is code:

.....
Signature: Manager Financial Institution

.....
Print Name

.....
Date

RUBBER STAMP OF INSTITUTION



ANNEXURE: B

L. CERTIFICATE FOR MUNICIPAL SERVICES AND PAYMENTS

TO: MUNICIPAL MANAGER, BA-PHALABORWA MUNICIPALITY

FROM: _____ (Name of Bidder)

FURTHER DETAILS OF BIDDER(S); DIRECTORS/SHAREHOLDERS/PARTNERS, ETC.

Directors/share holders/Partner	Physical address of the Business	Municipal Account No.	Physical residential address of the Director/ Shareholder/ Partner	Municipal Account No.

NB: Please attach certified copy of ID document(s)

Signatory

Date

Witnesses

1. _____
Full Names

Signature

Date

2. _____
Full Names

Signature

Date

N. TAX CLEARANCE CERTIFICATE REQUIREMENTS

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

1. In order to meet this requirement bidders are required to complete in full the attached form TCC 001 "Application for a Tax Clearance Certificate" and submit it to any SARS branch office nationally. The Tax Clearance Certificate Requirements are also applicable to foreign bidders / individuals who wish to submit bids.
2. SARS will then furnish the bidder with a Tax Clearance Certificate that will be valid for a period of 1 (one) year from the date of approval.
3. The original Tax Clearance Certificate must be submitted together with the bid. Failure to submit the original and valid Tax Clearance Certificate will result in the invalidation of the bid. Certified copies of the Tax Clearance Certificate will not be acceptable.
4. In bids where Consortia / Joint Ventures / Sub-contractors are involved; each party must submit a separate Tax Clearance Certificate.
5. Copies of the TCC 001 "Application for a Tax Clearance Certificate" form are available from any SARS branch office nationally or on the website www.sars.gov.za.
6. Applications for the Tax Clearance Certificates may also be made via eFiling. In order to use this provision, Taxpayers will need to register with SARS as eFilers through the website www.sars.gov.za.



TAX CLEARANCE

TCC 001

Application for a Tax Clearance Certificate

Purpose

Select the applicable optionTenders Good standing

If "Good standing", please state the purpose of this application

Particulars of applicant

Name/Legal name (Initials & Surname or registered name)											
Trading name (if applicable)											
ID/Passport no						Company/Close Corp. registered no					
Income Tax ref no						PAYE ref no	7				
VAT registration no	4					SDL ref no	L				
Customs code						UIF ref no	U				
Telephone no	CODE		NUMBER			Fax no	CODE		NUMBER		
E-mail address											
Physical address											
Postal address											

Particulars of representative (Public Officer/Trustee/Partner)

Surname											
First names											
ID/Passport no						Income Tax ref no					
Telephone no	CODE		NUMBER			Fax no	CODE		NUMBER		
E-mail address											
Physical address											

MBD 4

O. DECLARATION OF INTEREST

1. Any legal person, including persons employed by the state¹, or persons having a kinship with persons employed by the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid (includes a price quotation, advertised competitive bid, limited bid or proposal). In view of possible allegations of favoritism, should the resulting bid, or part thereof, be awarded to persons employed by the state, or to persons connected with or related to them, it is required that the bidder or his/her authorised representative declare his/her position in relation to the evaluating/adjudicating authority where-
- the bidder is employed by the state; and/or
 - the legal person on whose behalf the bidding document is signed, has a relationship with persons/a person who are/is involved in the evaluation and or adjudication of the bid(s), or where it is known that such a relationship exists between the person or persons for or on whose behalf the declarant acts and persons who are involved with the evaluation and or adjudication of the bid.

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

2.1 Full Name of bidder or his or her representative:

2.2 Identity Number:

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

2.4 Company Registration Number:

2.5 Tax Reference Number:

2.6 VAT Registration Number:

2.6.1 The names of all directors / trustees / shareholders / members, their individual identity numbers, tax reference numbers and, if applicable, employee / Persal numbers must be indicated in paragraph 3 below.

¹“State” means –

- (a) 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);
- (b) any municipality or municipal entity;
- (c) provincial legislature;
- (d) national Assembly or the national Council of provinces; or
- (e) Parliament.

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

2.7 Are you or any person connected with the bidder presently employed by the state?

YES / NO

2.7.1 If so, furnish the following particulars:

Name of person / director / trustee / shareholder/ member:.....

Name of state institution at which you or the person connected to the bidder is employed :

.....

Position occupied in the state institution:

Any other particulars:

.....

.....

2.7.2 If you are presently employed by the state, did you obtain the appropriate authority to undertake remunerative work outside employment in the public sector?

YES / NO

2.7.2.1 If yes, did you attached proof of such authority to the bid

YES / NO document?

(Note: Failure to submit proof of such authority, where applicable, may result in the disqualification of the bid.

2.7.2.2 If no, furnish reasons for non-submission of such proof:

.....

.....

2.8 Did you or your spouse, or any of the company's directors / trustees / shareholders / members or their spouses conduct business with the state in the previous twelve months?

YES / NO

2.8.1 If so, furnish particulars:

.....

.....

2.9 Do you, or any person connected with the bidder, have any relationship (family, friend, other) with a person employed by the state and who may be involved with the evaluation and or adjudication of this bid?

YES / NO

2.9.1 If so, furnish particulars.

.....

.....

2.10 Are you, or any person connected with the bidder, aware of any relationship (family, friend, other) between any other bidder and any person employed by the state who may be involved with the evaluation and or adjudication of this bid?

YES / NO

2.10.1 If so, furnish particulars.

.....

2.11 Do you or any of the directors / trustees / shareholders / members of the company have any interest in any other related companies whether or not they are bidding for this contract? YES / NO

2.11.1 If so, furnish particulars:

.....

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

Full Name	Identity Number	Personal Reference Number	Tax Number	State Number	Employee Peral Number

4. DECLARATION

I, THE UNDERSIGNED (NAME)

CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 2 and 3 ABOVE IS CORRECT. I ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME IN TERMS OF PARAGRAPH 23 OF THE GENERAL CONDITIONS OF CONTRACT SHOULD THIS DECLARATION PROVE TO BE FALSE. .

.....
 Signature

.....
 Date

.....
 Position

.....
 Name of Bidder

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

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

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

1.1 If yes, submit audited annual financial statements for the past three years or since the date of establishment if established during the past three years.

*YES / NO

.....

2 Do you have any outstanding undisputed commitments for municipal services towards any municipality for more than three months or any other service provider in respect of which payment is overdue for more than 30 days?

2.1 If no, this serves to certify that the bidder has no undisputed commitments for municipal services towards any municipality for more than three months or other service provider in respect of which payment is overdue for more than 30 days.

2.2 If yes, provide particulars.

.....

3 Has any contract been awarded to you by an organ of state during the past five years, including particulars of any material non-compliance or dispute concerning the execution of such contract?

*YES / NO

3.1 If yes, provide 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

.....

* Delete if not applicable

CERTIFICATION

I, THE UNDERSIGNED (NAME)

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

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

.....
Signature

.....
Date

.....
Position

.....
Name of Bidder

MBD 6.1**Q. PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2011**

This preference form must form part of all Bidders 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 The **80/20** preference point system shall be applicable for this bid; 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 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;

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		NO	
-----	--	----	--

7.1.1 If yes, indicate:

- i) What percentage of the contract will be subcontracted.....%
- 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		

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 MUNICIPAL INFORMATION

Municipality where business is situated.....

Registered Account Number

Stand Number

8.8 TOTAL NUMBER OF YEARS THE COMPANY/FIRM HAS BEEN IN BUSINESS?

8.9 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 –
 - (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)
DATE:
ADDRESS

R. DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

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

Item	Question	Yes	No
4.1	<p>Is the bidder or any of its directors listed on the National Treasury's Database of Restricted Suppliers as companies or persons prohibited from doing business with the public sector?</p> <p>(Companies or persons who are listed on this Database were informed in writing of this restriction by the Accounting Officer/Authority of the institution that imposed the restriction after the <i>audi alteram partem</i> rule was applied).</p> <p>The Database of Restricted Suppliers now resides on the National Treasury's website (www.treasury.gov.za) and can be accessed by clicking on its link at the bottom of the home page.</p>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.1.1	If so, furnish particulars:		
4.2	<p>Is the bidder or any of its directors listed on the Register for Bid Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)?</p> <p>The Register for Bid Defaulters can be accessed on the National Treasury's website (www.treasury.gov.za) by clicking on its link at the bottom of the home page.</p>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.2.1	If so, furnish particulars:		

4.3	Was the bidder or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.3.1	If so, furnish particulars:		
4.4	Does the bidder or any of its directors owe any municipal rates and taxes or municipal charges to the municipality / municipal entity, or to any other municipality / municipal entity, that is in arrears for more than three months?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.4.1	If so, furnish particulars:		
4.5	Was any contract between the bidder and the municipality / municipal entity or any other organ of state terminated during the past five years on account of failure to perform on or comply with the contract?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.7.1	If so, furnish particulars:		

CERTIFICATION

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

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

.....
Signature

.....
Date

.....
Position

.....
Name of Bidder

S. CERTIFICATE OF INDEPENDENT BID DETERMINATION

- 1 This Municipal Biding Procedure Document (MBD) must form part of all Bidders¹ 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 Biding Procedure (or Bid rigging).² Collusive Biding Procedure is a *per se* prohibition meaning that it cannot be justified under any grounds.
- 3 Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:
 - a. take all reasonable steps to prevent such abuse;
 - b. reject the Bid of any Bidder if that Bidder or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system; and
 - c. cancel a contract awarded to a person if the person committed any corrupt or fraudulent act during the Biding Procedure 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 Bidders are considered, reasonable steps are taken to prevent any form of Bid-rigging.
- 5 In order to give effect to the above, the attached Certificate of Bid Determination (MBD 9) must be completed and submitted with the Bid:

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

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

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.

CERTIFICATE OF INDEPENDENT BID DETERMINATION (CONTINUE)

I, the undersigned, in submitting the accompanying Bid:

(Bid Number and Description)

in response to the invitation for the Bid made by:

(Name of Municipality / Municipal Entity)

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

I certify, on behalf of: _____ that:

(Name of Bidder)

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

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

.....
Signature	Date
.....
Position	Name of Bidder

T. COMPLIANCE WITH OHSA (ACT 85 OF 1993)

Bidders are required to satisfy the Employer and the Engineer as to their ability and available resources to comply with the above by answering the following questions and providing the relevant information required below.

1. Is the Contractor familiar with the OHSA (ACT 85 of 1993) and its Regulations?		YES	/	NO
2. Who will prepare the Contractor's Health and Safety Plan? (Provide a copy of the person/s curriculum vitae/s or company profile).				
3. Does the Contractor have a health and safety policy? (If yes, provide a copy). How is this policy communicated to all employees?		YES	/	NO
4. Does the Contractor keep records of safety aspects of each construction site? If yes, what records are kept?		YES	/	NO
5. Does the Contractor conduct monthly safety meetings? If yes, who is the chairperson of the meeting, and who attend these meetings?		YES	/	NO
6. Does the Contractor have a safety officer in his employment, responsible for the overall safety of his company? If yes, please explain his duties and provide a copy of his CV.		YES	/	NO
7. Does the Contractor have trained first aid employees? If yes, indicate, who.		YES	/	NO
8. Does the Contractor have a safety induction-training programme in place? (If yes, provide a copy)		YES	/	NO

Signature of Bidder:

Date:

U. B-BBEE VERIFICATION CERTIFICATE

Attach the company's B-BBEE certificate in this page.

V. PREFERENCE SCHEDULE

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

The acceptable Bidder obtaining the highest number of points will be awarded the contract. For Bids with a Bid amount equal to or below R 50 000 000 a maximum of 80 points is allocated for price and a maximum of 20 points for B-BBEE. For Bids with a Bid amount above R 50 000 000 a maximum of 90 points is allocated for price and a maximum of 10 points for B-BBEE.

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

DEFINITIONS

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

“**Council**” refers to the Ba-Phalaborwa local Municipality.

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

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

Bids are adjudicated in terms of Ba-Phalaborwa Local Municipality Supply Chain Management Policy, and the following framework is provided as a guideline in this regard.

1. Technical adjudication and General Criteria

- Bids will be adjudicated in terms of inter alia:
- Compliance with Bid conditions
- Technical specifications

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

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

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

2. Size of enterprise and current workload

Evaluation of the Bidder's position in terms of:

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

3. Staffing profile

Evaluation of the Bidder's position in terms of:

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

4. Previous experience

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

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

5. Financial ability to execute the contract:

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

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

6. Good standing with SA Revenue Services

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

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

7. Penalties

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

- Cancel the contract and recover all losses or damages incurred or sustained from the Bidder.
- Impose a financial penalty of twice the theoretical financial preference associated with the claim, which was made in the Bid.
- Restrict the contractor, its shareholders and directors on obtaining any business from the Ba-Phalaborwa Local Municipality for a period of 5 years.

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

Name	ID Number	Date obtained South African citizenship	HDI status				Youth Yes/No	Percentage equity ownership, or in the case of a joint venture, the percentage of the contract to be managed or executed by targeted persons (%)
			No franchise in national elections (black persons)		Women Yes/No	Disabled person Yes/No		
			PPG (African)	Coloured, Indian				

8.1.1 How long has the entity been in existence?

8.1.2 Describe principal business activities:

.....

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

Signature :

Name :

Duly authorised to sign on behalf of :

Telephone :

Fax :

Date :

W. CERTIFICATE OF COMPANY REGISTRATION

Important note to Tenderer

Insert here the applicable Registration certificate for:

- **Companies (attach company registration and copies of share certificate)or;**
- **Close corporations (attach CK2 Registration form from CIPIC)or;**
- **Partnership or;**
- **ID documents for Sole Proprietors or;**
- **In the case of Joint Venture, a copy of a duly signed Joint venture agreement must be included (attach registration certificate for each partner as applicable)**

Y. DAY WORK SCHEDULE

This Day work Schedule shall be used for the valuation of any additional or substituted work which cannot conveniently be valued at the rates and prices submitted in the schedule of quantities.

In respect of labour and materials used in the additional or substituted work not covered in the Day work Schedule the Contractor shall be paid the actual cost plus the percentage allowance stated in the schedule of quantities.

The Tenderer shall quote hereunder rates which shall apply for payment purposes if the Engineer orders additional or substituted work to be carried out on a day work basis and shall therefore be in accordance with the requirements of clause 6.5.1 of the General Conditions of Contract.

1. LABOUR AND MATERIALS

Rates and prices entered in the schedule shall be held to allow for net cost of labour and materials delivered to site respectively with the percentage allowances stated in the schedule of quantities.

2. PLANT AND EQUIPMENT

The Tenderers shall list all major items of plant and equipment to be used on the works and which may be required for use on day works. The proposed hire rates of these items shall be entered against each type of machine, such rates to include for all relevant costs of plant hire inclusive of fuels and lubricants but exclusive of labour charges for the operators, which will be paid for under sub-clause (1) above.

The rates for plant items not listed in the schedule will be the ruling plant hire rates, inclusive of fuels and lubricants but exclusive of labour charges for the operators, inclusive of a 7,5% handling charge. It is therefore in the Tenderers interest to ensure that the list is complete.

Should there be insufficient space on the pages provided; the Bidder shall add further pages as required.

THE RATES FOR THE PLANT AND EQUIPMENT MENTIONED IN THE SCHEDULE SHALL BE FILLED IN FOR THE ITEMS REQUESTED. SHOULD AN ITEM BE OMITTED IT SHALL BE DEEMED TO HAVE BEEN INCLUDED IN THE OTHER DAYWORKS RATES.

A. LABOUR

DESIGNATION		RATE	
		R	C
Foreman	per hour		
Plant Operators	per hour		
Truck Drivers	per hour		
Labour - unskilled	per hour		
- semi-skilled	per hour		
- skilled	per hour		

B. MATERIALS

DESIGNATION		RATE	
		R	C
Cement	per 50 kg pocket delivered		
Concrete Sand	per m ³ delivered		
Concrete Aggregate	per m ³ delivered		

C. TRANSPORT

DESIGNATION	RATE	
	R	C
Per cubic meter kilometer		

D. PLANT AND EQUIPMENT

ITEM	DESCRIPTION	NON WORKING RATE*		OPERATING RATE		PER UNIT
		R	c	R	C	
	TLB					
	Water cart					
	LDV					
	Compactor					
	Vibrating Roller					
	Concrete mixer (litres specified)					
	Tractor & Trailer					
	Excavator					
	Front-end loaders					
	Trucks (m ³ specified)					
	Water truck (litres specified)					
	Grader					

*Only applicable on authority of the Engineer

THE CONTRACT

PART C1: AGREEMENTS AND CONTRACT DATA

PART C2: PRICING DATA

PART C3: SCOPE OF WORK

PART C4: SITE INFORMATION

BA-PHALABORWA MUNICIPALITY

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BA-PHALABORWA MUNICIPALITY

CONSTRUCTION OF STORM WATER CULVERTS FOR HUMULANI ACCESS BRIDGE TO CEMETERIES WARD 16

C1.1 Form of Offer and Acceptance

Offer

The employer, identified in the acceptance signature block, has solicited offers to enter into a contract for the procurement of:

CONTRACT No 01/22/23/C.: CONSTRUCTION OF STORM WATER CULVERTS FOR HUMULANI ACCESS BRIDGE TO CEMETERIES WARD 16

The bidder, identified in the offer signature block, has examined the documents listed in the bid data and addenda thereto as listed in the returnable schedules, and by submitting this offer has accepted the conditions of bid.

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

THE OFFERED TOTAL OF THE PRICES INCLUSIVE OF VALUE ADDED TAX IS:

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

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

Signature Block: Bidder	
Signature	Date
Name	
Capacity	
Name of organization	
Address of organization	
.....	
Signature of witness	Date
Name of witness	

Acceptance

By signing this part of this form of offer and acceptance, the employer identified below accepts the bidder'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 bidder's offer shall form an agreement between the employer and the bidder upon the terms and conditions contained in this agreement and in the contract that is the subject of this agreement.

The terms of the contract, are contained in:

- Part C1: Agreements and contract data, (which includes this agreement)
 - Part C2: Pricing data
 - Part C3: Scope of work.
 - Part C4: Site information
- and drawings and documents or parts thereof, which may be incorporated by reference into Parts C1 to C4 above.

Deviations from and amendments to the documents listed in the bid data and any addenda thereto as listed in the bid schedules as well as any changes to the terms of the offer agreed by the bidder 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.

The bidder 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) for 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. Failure to fulfill any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

Notwithstanding anything contained herein, this agreement comes into effect on the date when the bidder receives one fully completed original copy of this document, including the schedule of deviations (if any). Unless the bidder (now contractor) within five working days of the date of such receipt notifies the employer in writing of any reason why he cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the parties.

Signature Block: Employer	
Signature	Date
Name	
Capacity	
For the Employer: Municipal Manager Ba-Phalaborwa Municipality	
Signature of witness	Date
Name of witness	

BA-PHALABORWA MUNICIPALITY

**CONSTRUCTION OF STORM WATER CULVERTS FOR HUMULANI ACCESS BRIDGE TO
CEMETERIES WARD 16**

C1.2 Contract Data

The General Conditions of Contract for Construction Works (3rd edition 2015) published by the South African Institution of Civil Engineers, is applicable to this contract. Copies of these conditions of contract may be obtained from the South African Institution of Civil Engineers (Tel: 011-805 5947).

The General Conditions of Contract for Construction Works make several references to the Contract Data for specific data, which together with these conditions collectively describe the risks, liabilities and obligations of the contracting parties and the procedures for the administration of the Contract. The Contract Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the general conditions of contract.

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

If for some reason that “The General Conditions of Contract for Construction Works (2015)” does not address, “The COLTO General Conditions of Contract 1998 for Road and Bridge Works” will be referred to.

**CONSTRUCTION OF STORM WATER CULVERTS FOR HUMULANI ACCESS BRIDGE TO
CEMETERIES WARD 16 IN
BA-PHALABORWA MUNICIPALITY**

C1.2.1: CONDITIONS OF CONTRACT

GENERAL CONDITIONS OF CONTRACT

SPECIAL CONDITIONS OF CONTRACT

- 1. GENERAL**
- 2. AMENDMENTS TO THE GENERAL CONDITIONS OF CONTRACT**
- 3. TRANSFER OF RIGHTS**

C1.2.1 CONDITIONS OF CONTRACT

GENERAL CONDITIONS OF CONTRACT

This Contract will be based on the "General Conditions of Contract for Construction Works - (3rd edition 2015)", issued by the South African Institution of Civil Engineers (Short title: "**General Conditions of Contract 2015**") and can be obtained from:

SAICE

Waterfall Park
Howick Gardens
Vorna Valley Half way House
Becker Street
MIDRAND
1685
Gauteng Province
Tel: (011) 805-5947/8
Fax: (011) 805-5971.

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

SPECIAL CONDITIONS OF CONTRACT

1. GENERAL

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

The clauses of the Special Conditions hereafter are numbered "SCC" followed in each case by the number of the applicable clause or sub clause in the General Conditions of Conditions 2015, and the applicable heading, or (where a new special condition that has no relation to the existing clauses is introduced) by a number that follows after the last clause number in the General Conditions, and an appropriate heading.

2. ADDITIONAL SPECIAL CONDITIONS OR AMENDMENTS TO THE GENERAL CONDITIONS OF CONTRACT

2.1 General

The following clauses add to, vary or otherwise amend the General Conditions of Contract:

2.1.1 Cession (CL 2.5.1)

Delete the words "without the written consent of the other".

2.1.2 Contractor's Superintendence (CL 4.12)

Add the following sub-clause 4.12.4 to Clause 4.12:

"Where a form is included in the Appendix to the Contract Data for this purpose, the Bidder shall fill in the name of the person he proposes to entrust with the post of Contractor's Site Agent on this Contract in the space provided therefor. Previous experience of this person on work of a similar nature during the past five (5) years is to be entered in the list.

The Contractor's Site Agent shall be on Site at all times when work is being performed.

The person as approved of by the Employers Agent in writing shall not be replaced or removed from Site without the written approval of the Employers Agent."

2.1.3 Programme (CL 5.6)

Add the following sub-clause 5.6.6 to Clause 5.6:

“Failure on the part of the Contractor to deliver to the Employers Agent, the

- programme of the Works in terms of Clause 5.6.1 and
- supporting documents in terms of Clause 5.6.2

Within the period stated in the Contract Data, shall be sufficient cause for the Employers Agent to retain 25 per centum of the value of the Fixed Charge and Value-related items in assessment of amounts due to the Contractor, until the Contractor has submitted aforementioned first Programme of the Works and Supporting Documents”.

2.1.4 Contractor’s Designs and Drawings (CL 5.9.7)

“All designs, calculations, drawings and operation and maintenance manuals shall be fully endorsed by a third party registered Employers Agent, accomplished in such specific field of practice and the cost thereof shall be borne solely by the Contractor.

Once the alternative design has been approved, the Contractor shall indemnify and hold harmless the Employers Agent, the Employer, their agents and assigns, against all claims howsoever arising out of the said design, whether in contract or delict”

2.1.5 Suspension of the Works (CL 5.11)

Add the following sub-clause 5.11.6 to Clause 5.11:

“If the Contractor does not receive from the Employer the amount due under an Interim Payment Certificate within 28 days after expiry of the time stated in sub-clause 6.10.4 within which payment is to be made (except for deductions in accordance with sub-clauses 6.10.1.6 and 6.10.1.7), the Contractor may, after giving 14 days’ notice to the Employer, suspend the progress of the Works.

The Contractor’s action shall not prejudice his entitlements to a claim in terms of Clause 10.1 and to cancellation of the Contract in terms of Clause 9.3.

If the Contractor subsequently receives full payment of the amount due under such Interim Payment Certificate before giving a notice of cancellation of the Contract, the Contractor shall resume normal working as soon as is reasonably practicable.”

2.1.6 Extension of Time Arising from Abnormal Rainfall (CL 5.12)

Add the following to sub-clause 5.12.2.2:

“The extension of time to be allowed due to abnormal rainfall shall be calculated separately for each calendar month or part thereof in accordance with the following formula:

$$V = (Nw - Nn) + \frac{Rw - Rn}{x}$$

- V = Extension of time in calendar days for the calendar month under consideration
- Nw = Actual number of days during the calendar month on which a rainfall of 10 mm or more has been recorded
- Nn = Average number of days for the calendar month on which a rainfall of 10 mm or more has been recorded, as derived from existing rainfall records
- Rw = Actual recorded rainfall for the calendar month
- Rn = Average rainfall for the calendar month, as derived from existing rainfall records
- x = 20

The rainfall records which shall provisionally be accepted for calculation purposes are:

Based on records taken at: **Rainfall Station: Phalaborwa Latitude 23° 59' 49.54" S
Longitude 30° 59' 53.13" E**

Average No of Days with Rainfall exceeding 10mm: 43 days/year

Average Rainfall: 463 mm/year

Years of record: 2019 – 2022

Month	Average rainfall for calendar month Rn	Average number of days for calendar month on which a rainfall of 10 mm or more were recorded Nn
	(mm)	(days)
January	98	7
February	68	6
March	48	5
April	23	3
May	10	1
June	4	1
July	6	1
August	5	1
September	12	2
October	27	3
November	66	6
December	96	7

The factor $(N_w - N_n)$ shall be considered to represent a fair allowance for days during which rainfall exceeds 10 mm and the factor $(R_w - R_n)/x$ shall be considered to represent a fair allowance for those days when rainfall does not exceed 10 mm but wet conditions prevent or disrupt work.

The total extension of time shall be the algebraic sum of all monthly totals for the contract period, but if the algebraic sum is negative the time for completion shall not be reduced due to subnormal rainfall. Extensions of time for a part of a month shall be calculated using pro rata values of N_n and R_n ."

2.1.7 Guarantee (Security) (CL 6.2)

Delete the contents of the first paragraph of Clause 6.2.1 and insert:

"The Contractor shall deliver to the Employer within such time as may be stated in the Contract Data a Demand Guarantee, of Insurance Company registered in terms of the Short-term Insurance Act (Act 53 of 1998) or registered Commercial Bank, in a sum equal to the amount stated in the Contract Data. The Demand Guarantee shall be issued by an entity approved by the Employer, and shall conform in all respects to the format contained in the Appendix to the Contract Data.

Wherever a joint venture constitutes the contracting party, the Demand Guarantee shall be issued on behalf of the joint venture.

Failure to produce an acceptable Demand Guarantee within the period stated in Clause 2.2.8 of the Contract Data is a fundamental breach of Contract, entitling the Employer to cancel the Contract by due notice in

terms of Clause 9.2 with specific reference to sub-clause 9.2.2.5 as amended in the Special Conditions of Contract.”

2.1.8 Variations (CL 6.3)

Omit the words “Provided that” under Clause 6.3.2 and omit Clause 6.3.2.1.

2.1.9 Interim Payments (CL 6.10.1)

Add to the end of Clause 6.10.1 the following paragraph:

“The Contractor shall complete the ‘Contractor’s Monthly Report Schedule’, which pro forma documentation is obtainable from the Employers Agent. Pursuant to Sub-Clause (1), these, duly signed by all concerned, together with the Contractor’s statement and a VAT invoice in original format are to be submitted to the Employers Agent. Issue by the Employers Agent to the Employer and Contractor of any signed payment certificate is conditional to this information being fully endorsed, accurately and timeously submitted to the Employers Agent”.

Add to the end of Clause 6.10.1.5 the following paragraph:

“All documentary evidence of such materials shall be unambiguous with respect to ownership having fully passed to the Contractor on or before the date of submittal of the Contractor’s monthly statement.

Should the Contractor fail to supply unambiguous documentary evidence, he shall, prior to submittal of his monthly statement, deliver to the Employer a Guarantor Guarantee in the form contained in the Appendices to the Contract Data.”

2.1.10 Variations Exceeding 15 Per Cent (CL 6.11)

In sub-clause 6.11.1.3 omit the words “15 per cent” and replace with “20 per cent”.

2.1.11 Insurances (CL 8.6)

2.1.11.1 Contractor to produce proof of payment

Delete sub-clause 8.6.6 and substitute with:

“The Contractor shall before commencement of the Works produce to the Employers Agent:

8.6.6.1 The policies by which the insurances are affected,

8.6.6.2 Proof that due payment of all premiums there under, covering the full required period has been made, and

8.6.6.3 Proof of continuity of the policies for the required period.

Should, during the currency of the Contract, the required period of insurance be extended for any reason, the Contractor shall timeously extend (so as to maintain) the said insurances for the full extended duration.

The Employers Agent shall be empowered to withhold all payment certificates until the Contractor has complied with his obligations in terms of this Clause 8.6.”

2.1.11.2 Remedy of Contractor's failure to insure

Delete sub-clause 8.6.7 and substitute with:

"Failure on the part of the Contractor to effect and keep in force any of the insurances referred to in Clause 8.6.1 and its sub-clauses, is a fundamental breach of Contract, entitling the Employer to cancel the Contract by due notice in terms of Clause 9.2 and with specific reference to sub-clause 9.2.2.5, as amended, in the Special Conditions of Contract."

2.1.12 Termination of the Contract (CL 9.1)

Alter the numbering of:

Clause 9.1.5 to 9.1.6,
Clause 9.1.6 to 9.1.7 and

insert the following new clause 9.1.5:

"The Employer shall be entitled to cancel the Contract, at any time for the Employer's convenience, by giving written notice of such cancellation to the Contractor. The termination shall take effect 28 days after the later of the dates which the Contractor receives this written notice or the Employer returns the Demand Guarantee. The Employer shall not cancel the Contract under this sub-clause in order to execute the Works himself or to arrange for the Works to be executed by another contractor.

This restriction on the Employer shall lapse 18 months after the date of receipt by the Contractor of cancellation in terms of this sub-clause".

2.1.13 Termination by Employer (CL 9.2)

Delete the contents of Clause 9.2 and substitute with:

"9.2.1 The Employer may terminate the Contract by written notice to the Contractor if:

9.2.1.1 Sequestration of the Contractor's estate is ordered by a Court with due jurisdiction, or

9.2.1.2 The Contractor publishes a notice of surrender or presents a petition for the surrender of his estate as insolvent, or makes a compromise with his creditors, or assigns in favour of his creditors, or agrees to carry out the Contract under the supervision of a committee representing his creditors, or (being a company) goes into liquidation, whether provisionally or finally (other than a voluntary liquidation for the purpose of amalgamation or reconstruction), or if the Contractor assigns the Contract without having first obtained the Employer's consent in writing, or if execution is levied on his goods, or

9.2.1.3 The Contractor, or anyone on his behalf, or in his employ, offers to any person in the employ of the Employer or the Employers Agent, a gratuity or reward or commission, or

9.2.1.4 The Contractor furnished materially inaccurate information in his Bid, which had a bearing on the award of the Contract, or

9.2.1.5 The Contractor has abandoned the Contract

9.2.2 If the Contractor:

- 9.2.2.1 Has failed to commence the Works in terms of Clause 5.3 hereof, or has suspended the progress of the Works for fourteen (14) days after receiving from the Employers Agent written notice to proceed, or
- 9.2.2.2 Has failed to provide the Guarantee in terms of Clause 6.2 within the time stipulated in the Contract Data, or
- 9.2.2.3 Has failed to proceed with the Works with due diligence, or
- 9.2.2.4 Has failed to remove materials from the Site or to pull down and replace work within fourteen (14) days after receiving from the Employers Agent written notice that the said materials or work have been condemned and rejected by the Employers Agent in terms of these conditions, or
- 9.2.2.5 Is not executing the Works in accordance with the Contract, or is neglecting to carry out his obligations under the Contract, or
- 9.2.2.6 Has, to the detriment of good workmanship or in defiance of the Employers Agent's instructions to the contrary, sublet any part of the Contract, or
- 9.2.2.7 Has assigned the Contract or any part thereof without the Employer's consent in writing, then the Employer may give the Contractor 14 days' notice to rectify the default, and if the Contractor fails to rectify the default in said 14 days, then, without further notice, notify the Contractor in writing of the termination of the Contract and expel the Contractor and order the Contractor to vacate the site within 24 hours of issue of the Notice of Termination and to hand the Site over to the Employer, and the Employer may then enter upon the Site and the Works without affecting the rights and powers conferred on the Employer or the Employers Agent by the Contract and the Employer may himself complete the Works or may employ another contractor to complete the Works, and the Employer or such other contractor may use for such completion so much of the Construction Equipment, Temporary Works and materials brought onto the Site by the Contractor as the Employer may think proper, and the Employer may at any time sell any of the said Construction Equipment, Temporary Works and unused materials and apply the proceeds of sale towards payment of any sums that may be due or become due to the Employer by the Contractor under the Contract. In such circumstances the Contractor shall forthwith vacate the Site and shall not be entitled to remain on the Site on the grounds that he is entitled to do so on a right of retention until amounts due to him have been paid, neither will the Contractor be entitled to any further payments in terms of this Contract.
- 9.2.3 If the Contractor, having been given notice to rectify a default in terms of 55.2 above, rectifies said default, but later repeats the same or substantially the same default, then the Employer may notify the Contractor of the immediate termination of the Contract, and proceed as stated in the paragraph following the word "writing" in Clause 55.2.7 above.
- 9.2.4 Should the amounts the Employer must pay to complete the Works exceed the sum that would have been payable to the Contractor on due completion by him, then the Contractor shall upon demand pay to the Employer the difference, and it shall be deemed a debt due by the Contractor to the Employer and shall be recoverable accordingly. Provided that should the Contractor on demand not pay the amount of such excess to the Employer, such sum may be determined and deducted by the Employer from any sum due to or that may become due to the Contractor under this or any previous or subsequent contract between the Contractor and the Employer."

2.1.14 Termination by the Contractor (CL 9.3)

Add the following paragraph as Clause 9.3.5:

“In addition to, or as an alternative to the rights to termination contained in this Clause 9.3, the Contractor may notify the default to the Employer, with a copy to the Employers Agent, and if the default is not rectified within 10 days the Contractor may suspend progress of the works until a date 7 days after the default is rectified. The Contractor shall be entitled to extension of time to the extent of delay caused by or resulting from such suspension, and to payment of additional costs caused by or resulting from the suspension. Such extension of time and additional costs shall be promptly ascertained by the Employers Agent, who shall then grant the extension of time and include the additional costs in all future payment certificates. Such suspension, extension of time and/or payment of additional costs, shall not prejudice the Contractor’s rights to cancel the contract.”

3. **PRIORITY OF DOCUMENTS**

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

- a) the Form of Offer and Acceptance.
- b) amplifications of the General Conditions of Contract within the Contract Data.
- c) additional special conditions or amendments to the General Conditions of Contract within the Contract Data.
- d) the General Conditions of Contract.
- e) the Specifications, Drawings, Schedules and other documents forming part of the Contract (in that order) contained in the Scope of Work and the Site Information.

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

4. TRANSFER OF RIGHTS

TRANSFER OF RIGHTS AND INDEMNITY (To be completed during construction by successful Bidder only)

Claim for materials on site, Payment Certificate No. **Date:**

Contract No: for (contract title)

I, the undersigned (name of signatory) in my capacity, as
 of (name of Contractor)

duly authorized hereto on behalf of the Contractor hereby transfer, cede and assign all the Contractor's rights, title and interest in and to the materials and goods, for which evidence of bona fide ownership is attached hereto, unto and in favor of (name of Employer) insofar as the Contractor retains actual control of the materials and goods, the right of ownership thereof passes to the Employer by *constitutum possessorium*.

I herewith indemnify the Employer against any claim to and in respect of said materials by reason of the Contractor's sequestration or liquidation or of any defect in the Contractor's title to the materials and agree that no payment for materials on site will be made by the Employer until such time as I have submitted documentary proof of bona fide ownership of the said materials and goods.

This transfer shall become effective upon conclusion of the Contractor receiving payment from the Employer or from any other person on behalf of the Employer for the materials and goods as Materials on Site, payment of retention money thereon excluded.

I further confirm that I am fully responsible for all materials and goods listed under this Transfer of Rights and that they have been insured adequately against all risks and will remain insured until they are built into or used in the permanent works and taken over by the Employer.

This certificate of Transfer of Rights applies only to the materials and goods as listed in the following table:

Description of Item	Unit	Quantity	Rate	Amount	Supplier
Total Value of Materials and goods					

Signed by: **Date:**
 for and on behalf of the Contractor.

Witnessed by: **Date:**

NOTE: This form, together with the documentary proof of ownership or proof of payment by the Contractor to the supplier, shall accompany the Contractor's claim for payment for materials on site in terms of **Clause 6.10.1.5 of the General Conditions of Contract 2015.**

C1.2.2 PART A: CONTRACT DATA PROVIDED BY THE EMPLOYER

The following contract specific data are applicable to this contract.

REFERENCE CONTRACT SPECIFIC DATA BY THE EMPLOYER

Clause 1.1.13: The defects liability period is 12 months measured from the date of the completion certificate.

Clause 1.1.15: **Name of Employer: BA-PHALABORWA MUNICIPALITY represented by Head of Department: Department of Technical Services**

Clause 1.2.1: **Address of Employer:**

Physical:

Postal:

The Employer's address for receipt of communications is

Ba-Phalaborwa Municipality
Private Bag X 01020
Phalaborwa, 1390
Tel: 015 780 6387
Fax: 015 780 6393

Clause 1.1.16: **Name of Employer's Agent**

'Employers Agent' means any Director, Associate or Professional Employers Agent appointed by a Director of Dolmen Employers Agents cc to fulfil the functions of the Employers Agent in terms of the Contract Data.

Clause 1.2.1: **Address of Employers Agent:**

Physical:

Postal:

The Employers Agent's address for receipt of communications is:

Unit 101, The Office Park	P.O. Box 2824
90 Schoeman Street	Polokwane
Polokwane	0699
0699	

E-Mail: phamelaengineering@gmail.com; admin@phamelaeng.co.za

Telephone No: (010) 880 01138/ (015) 265 2059/ (015) 065 0585

- Clause 3.2: The Employers Agent is required to obtain the specific approval of the Employer for the following:
- a) Nominating the Employers Agent's Representative in terms of CI 3.3.1.
 - b) Delegation of Employers Agent's authority in terms of CI 3.2.4.
 - c) The issuing of instructions for dealing with fossils and the like in terms of CI 4.7.1
 - d) The issuing of an instruction to accelerate progress in terms of CI 5.7.3.
 - e) Granting permission to work during non-working times in terms of CI 5.8.1.
 - f) The issuing of further drawings or instructions in terms of CI 5.9.1.
 - g) Suspend the progress of the works in terms of CI 5.11.1.
 - h) The reduction of a penalty for delay in terms of CI 5.13.2.
 - i) The issuing of a variation order in terms of CI 6.3.2.
 - j) Issuing of instructions to carry out work on a day work basis in terms of CI 6.4.1.4.
 - k) The determination of additional or reduced costs arising from changes in legislation in terms of CI 6.8.4.
 - l) The agreeing of the adjustment of the sums for general items in terms of CI 6.11.
 - m) Authorizing the Contractor to repair and make good excepted risks in terms of CI 8.2.2.
 - n) The giving of a ruling on a contractor's claim in terms of CI 10.1.5.
 - o) The agreeing of an extension to the 28 period in terms of CI 10.1.5.1.
 - p) The inclusion of credits in the next payment certificate in terms of CI 10.1.5.2.
- Clause 6.2: The Guarantee shall be delivered within 14 days after receipt of the acceptance document from the Employer.
- Clause 6.2: The Liability of the Guarantee shall be for 10% of the Accepted Bid Sum.
- Clause 5.3: The contractor shall commence executing the work within 14 days of the commencement date.
- Clause 5.6.1 & 5.6.2: The Contractor shall deliver to the Employers Agent, within 14 days calculated from the Commencement Date, a realistic programme in terms of Clause 5.6.1 and supporting documents in terms of Clause 5.6.2.
- Clause 8.6.1.1.3: The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is **NIL**
- Clause 8.6.1.2: Special risk insurance issued by SASRIA is required.
- Clause 8.6.1.3: The limit of indemnity for liability insurance required should not be less than the contract amount.
- Clause 5.13.1: The penalty for failing to complete the works is R5000.00 per calendar day
- Clause 6.8.2: The value of the certificates issued shall be adjusted in accordance with the Contract Price Adjustment Schedule with the following values:
- Contract Price Adjustment Factor = $(1 - x) \left[\frac{aLt}{Lo} + \frac{bPt}{Po} + \frac{cMt}{Mo} + \frac{dFt}{Fo} - 1 \right]$ rounded off to the fourth decimal place.
 Coefficients for calculating Contract Price Adjustment Factor shall be:
 Value of x is 0.10
- a = 0.15 b = 0.20 c = 0.55 d = 0.10
- L is the "Labour Index" and shall be the "Consumer Price Index – for Ba-Phalaborwa Area" In Release P 0141.1 Table 21
- The base month is: "the month prior to the closing of the Bid"
 No Contract Price Adjustment will be done if contract period is less than 7 months.

Clause 6.8.3:	Price adjustments for variations in the costs of special materials are not allowed.
Clause 6.10.1.5:	The percentage advance on materials not yet built into the Permanent Works is: 80%
Clause 6.10.3:	The percentage retention on the amounts due to the Contractor is 10 %, excluding contract price adjustment, contingencies and VAT, and limited to 10% of the contract amount, excluding contract price adjustment, contingencies and VAT.
Clause 6.10.5:	A Retention money guarantee will be not permitted.
Clause 7.8.1:	The Defects Liability Period is 12 months measured from the date of the Certificate of Completion.
Clause 10.7.1	Dispute resolution shall be by Adjudication.
Clause 10.7.1:	Dispute Resolution shall be by Adjudication.

Payment for labour-intensive component of the works

Payment for works identified in the Scope of Works as being labour-intensive shall only be made in accordance with the provisions of the Contract if the works are constructed strictly in accordance with the provisions of the Scope of Work. Any payment for such works shall not relieve the Contractor in any way from his obligations either in contract or in delict

Linkage of payment for labour-intensive component of works to submission of project data

The Contractor's payment invoices shall be accompanied by labour information for the corresponding period in a format specified by the employer. If the contractor chooses to delay submitting payment invoices, labour returns shall still be submitted as per frequency and timeframe stipulated by the Employer. The contractor's invoices shall not be paid until all pending labour information has been submitted.

Applicable Labour Laws

The current Ministerial Determination (also downloadable at www.epwp.gov.za), Expanded Public Works Programmes, issued in terms of the Basic Condition of Employment Act of 1997 by the Minister of Labour in Government Notice, shall apply to works described in the scope of work as being labour-intensive and which are undertaken by unskilled workers.

C1.2.2: PART B: CONTRACT DATA PROVIDED BY THE CONTRACTOR

The following contract specific data are applicable to this contract:

REFERENCE CONTRACT SPECIFIC DATA BY THE CONTRACTOR

Clause 1.1.9: **Name of Contractor:**

Clause 1.2.1: **Address of the Contractor:**

The Contractor's address for receipt of communication is:

Physical:

Postal:

.....

E-Mail:

Telephone No: Fax No:

Clause 5.5 The works shall be completed withinmonths (including special non-working days and the year end break).

Clause 6.8.3: The variation in cost of all special materials is to be provided in the table SM 1 for special materials.
 The rates and prices for the special materials shall be furnished by the Bidder, which rates and prices shall not include VAT but shall include all other obligatory taxes and levies. The quoted price is the ruling price on the Month prior to close of bid.

TABLE: SM1

Special Materials*	Unit	Rate or Price for the base month
Bitumen (specify type)		
.....
.....
.....
.....
.....

*Contractor to indicate the type, unit and rate of special material to be listed. The Contractor shall substantiate the above rates or prices with acceptable documentary evidence. Contractor to provide any other Special Materials if deemed necessary.

N.B. Diesel, reinforcing steel, and cement will not be accepted as special material.

C1.3 Form of Guarantee - Pro Forma

Contract No

WHEREAS **The Ba-Phalaborwa Municipality** (hereinafter referred to as the Employer”) entered into, a Contract with:

.....
(Hereinafter called “the Contactor”) on the day of 20.....

for **CONSTRUCTION OF STORM WATER CULVERTS FOR HUMULANI ACCESS BRIDGE TO CEMETERIES WARD 16** in the **Ba-Phalaborwa Municipality** of the Limpopo Province.

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

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

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

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

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

.....

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

Signature

Duly authorized to sign on behalf of

Address
.....
.....

As witnesses:

1

2

C1.4: Agreement with Adjudicator

This agreement is made on the.....day of 20.....between: the Employer
(name of company / organisation).....
of *(address)*.....
.....and the Contractor
(name of company / organisation)
of *(address)*.....
..... (hereinafter called **the Parties**)

and
(name).....
of *(address)*
..... (hereinafter called **the Adjudicator**)

Disputes or differences may arise/have arisen* between the Parties under a Contract dated.....
and known as Contract No.....
(Contract title).....

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

(Delete as necessary)*

IT IS NOW AGREED as follows:

1. The rights and obligations of the Adjudicator and the Parties shall be as set out in the Procedure.
2. The Adjudicator hereby accepts the appointment and agrees to conduct the adjudication in accordance with the Procedure.
3. The Parties bind themselves jointly and severally to pay the Adjudicator's fees and expenses in accordance with the Procedure as set out in the Contract Data.
4. The Parties and the Adjudicator shall at all times maintain the confidentiality of the adjudication and shall endeavour to ensure that anyone acting on their behalf or through them will do likewise, save with the consent of the other Parties which consent shall not be unreasonably refused.
5. The Adjudicator shall inform the Parties if he intends to destroy the documents which have been sent to him in relation to the adjudication and he shall retain documents for a further period at the request of either Party.

SIGNED by:

(Signature): (Signature): (Signature):

Name: **Name:** **Name:**

who warrants that he/ she is
duly authorised to sign for and
on behalf of the **First Party** in
the presence of

who warrants that he/ she is
duly authorised to sign for
and on behalf of the **Second
Party** in the presence of

the **Adjudicator** in the
presence of

Witness: (Signature)..... **Witness:** (Signature)..... **Witness:** (Signature).....

Name: **Name:** **Name:**

Address: Address: Address:

.....

.....

Date: Date: Date:

C1.5: AGREEMENT IN TERMS OF THE MINE HEALTH AND SAFETY ACT, (ACT No. 29 OF 1996) AS AMENDED BY THE MINE HEALTH AND SAFETY AMENDMENT ACT (ACT No. 72 OF 1997)

THIS AGREEMENT is made aton this theday of.....in the year.....between The **BA-PHALABORWA MUNICIPALITY** (hereinafter called the "EMPLOYER" of the one part, herein represented by:

.....
in his capacity as:.....and delegate of the Employer in terms of the Employer's standard powers of delegation pursuant to the provisions of Act No. 7 of 1998;

AND:

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

.....

in his capacity as: and duly authorised to sign on behalf of the Contractor.

WHEREAS the Employer is desirous that certain works be constructed, (insert contract title) and has accepted a tender by the Contractor for the construction, completion and maintenance of such works and whereas the Employer and the contract have agreed to certain arrangements and procedures to be followed in order to ensure compliance by the Contractor with the provisions of the Mine Health and Safety Act (Act 29 of 1996); as amended by the Mine Health and Safety Amendment Act (Act No. 27 of 1997).

NOW THEREFORE the parties agree as follows:

1. The contractor shall obtain the Mining Authorisation for the particular site where mining activities, as defined in the Mine Health and Safety Act, No. 29 of 1996 as amended, are to be conducted.
2. The contractor shall assume responsibility for the Environmental Management Programme (EMPR) in respect of the site and shall ensure that the site is rehabilitated at the conclusion of the contract.
3. The contractor declares himself to be conversant with:
 - a) all the requirements, regulations and standards of the Act, together with its amendments.
 - b) the procedures and safety rules of the Employer as pertaining to the Contractor and to all his sub-contractors.
4. The contractor is responsible for the compliance with the Act and its amendments by all his subcontractors, whether or not selected and/or approved by the Employer.

SIGNED ON BEHALF OF THE EMPLOYER

AS WITNESS:

1.....

2.....

.....

.....

NAME(Print):

NAME(Print):

******For official use only**

SIGNED ON BEHALF OF THE CONTRACTOR

AS WITNESS:

1.....

2.....

.....

.....

NAME(Print):

NAME(Print):

CONSTRUCTION OF STORM WATER CULVERTS FOR HUMULANI ACCESS BRIDGE TO CEMETERIES WARD 16

IN

BA-PHALABORWA MUNICIPALITY

C2.1: PRICING INSTRUCTIONS

1. GENERAL

The pricing instructions describe the criteria and assumptions which will be assumed in the Contract that the Bidder 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 Bidder's obligations in pricing the Bid offer and the Employer's undertakings in the checking and correction of arithmetical errors are dealt with in the Standard Conditions of Bid contained in Annexure F of SANS 294, as amended in and read in conjunction with the Bid 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 Bid 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 COLTO Standard Specification for Road and Bridge Works for State Authorities (1998 edition).
Quantity	:	The number of units of work for each item
Rate	:	The payment per unit of measurement at which the Bidder Bids to do the work.
Amount	:	The product of the quantity and the rate Bided for an item
Sum	:	An amount Bided for an item, the extent of which is described in the Schedule of Quantities, the specifications or elsewhere but the quantity of work of which is not measured in any units.
Prime Cost (or PC item)	:	A sum fixed by the Engineer and entered in the Schedule of Quantities as the net sum provided to cover the cost of specific goods or materials to be supplied under the contract, or the net sum to be paid by the Contractor to merchants or others for such articles or materials. ¹
Provisional Sum	:	A sum of money fixed by the Engineer and entered in the Schedule of Quantities to provide for work not defined at the Bid stage and includes any allowance specifically made for unforeseen contingencies. ¹
Extra Over (or EO)	:	Qualifies an operation (or combination of operations) which is common in a varying degree to a number of other operations and which is scheduled once as "extra over" those other operations in order to avoid a multiplicity of items each reflecting the degree to which the common operations apply. The term "extra over" invariably denoted double measurement, no deduction being made from one on account of the other. ¹

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 general conditions of contract, the special conditions of contract (if any), the specifications (including the project specification) and the drawings are to be read in conjunction with the schedule of quantities.

Descriptions in the schedule of quantities are abbreviated and the schedule has been drawn up generally in accordance with the COLTO Standard Specification for Road and Bridge Works for State Authorities (1998 edition) as amended in the Scope of Works. Should any requirement of the measurement and payment clause of the applicable standardised specification², or the project specification², or the particular specification(s)² conflict with the terms of the schedule or, when relevant, COLTO¹, the requirement of the standardised, project or particular specification, as applicable, shall prevail.

Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance has been made for waste.

The prices and rates to be inserted in the schedule of quantities are to be the full inclusive prices to the Employer for the work described under the several items, value added tax excluded. Such prices shall cover all costs and expenses that may be required in and for the construction of the work described, and shall cover the cost of all general risks, liabilities and obligations set forth or implied in the documents on which the quotation is based.

A price or rate is to be entered against each item in the schedule 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 schedule

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:

%	=	per cent
h	=	hour
ha	=	hectare
kg	=	kilogram
kl	=	kilolitre
km	=	kilometre
km-pass	=	kilometre-pass
kW	=	kilowatt
l	=	litre
m	=	metre
mm	=	millimetre
MN	=	mega newton
MN-m	=	mega newton-metre

MPa	=	mega Pascal
kPa	=	kilopascal
m ²	=	square metre
m ³	=	cubic metre
m ³ -km	=	cubic metre-kilometre
m ² -pass	=	square metre-pass
no	=	number
PC sum	=	Prime Cost sum
Prov Sum	=	Provisional Sum
sum	=	lump sum
t	=	ton (1 000 kg)
R/only	=	Rate only
W/day	=	Work day

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 Bills 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.

The item numbers appearing in the Bills of Quantities refer to the corresponding item numbers in the COLTO Standard Specification for Road and Bridge Works for State Road Authorities (1998 edition).

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 Bills 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 Bid 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 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 Bid 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.

- 13 Those parts of the contract to be constructed using labour-intensive methods have been marked in the bill of quantities with the letters LI in a separate column or as a prefix or suffix against every item so designated. The works, or parts of the works so designated are to be constructed using labour-intensive methods only. The use of plant to provide such works, other than plant specifically provided for in the scope of works, is a deviation from the contract. The items marked with the letters 'LI' are not necessarily an exhaustive list of all the activities, which must be done by hand, and this clause does not over-ride any of the requirements in the generic labour-intensive specification in the Scope of Works.
- 14 Where minimum labour intensity is specified by the design the contractor is expected to use their initiative to identify additional activities that can be done labour-intensively in order to comply with the set minimum labour intensity target.
- 15 Payment for items which are designated to be constructed labour-intensively (either in this schedule or in the scope of works) will not be made unless they are constructed using labour-intensive methods. Any unauthorised use of plant to carry out work, which was to be done labour-intensively will not be condoned, and any works so constructed will not be certified for payment.



**CONSTRUCTION OF STORM WATER CULVERTS FOR HUMULANI ACCESS
BRIDGE TO CEMETERIES WARD 16**

In the

BA-PHALABORWA MUNICIPALITY

Of the Limpopo Province

BID No. 01/22/23/C

C2.2 Bill of Quantities

Item	Method	Description	Unit	General Requirement and Provisions		
				Quantity	Rate	Amount
12.00		GENERAL REQUIREMENTS AND PROVISIONS				
B12.01	LIC	Locating existing services	Prov Sum	1.00	15 000.00	15 000.00
B12.02	LIC	Hand excavation to determine the positions of existing services	m ³	150		-
B12.03	LIC	Relocation of existing pipe including excavation, removal of pipe,	Prov Sum	1.00	15 000.00	15 000.00
B12.06		Provisional sum for protection and/ or relocation of existing services including Electrical Cables and Poles as ordered by Engineer	Prov Sum	1.00	15 000.00	15 000.00
12.07		<u>Notices, Signs and Advertisements</u>				-
		Contract boards	No	2		
B12.08	LIC	Provision for training for student	Prov.Sum	1.00	20 000.00	20 000.00
B12.10		Demolition of of Existing Culvert Structure	Prov Sum	1	30 000.00	30 000.00
B12.11		Royalties	Prov Sum	1.00	30 000.00	30 000.00
12.18		<u>Remedial Work</u>				
(a)		Rehabilitation of borrow pits	Prov. Sum	1	128 000.00	128 000.00
12.19		<u>Training Items</u>				
(a)		Training allowance paid to targeted labour in terms of targeted Labour Training(Prov.)	Prov.Sum	1.00	20 000.00	20 000.00
(b)		Extra over for the administration payment of training allowances to targeted labour(Prov.)	Prov.Sum	1.00	18 000.00	18 000.00
(c)		Transport and accomodation of workers for training where it is not possible to undertake the training in close proximity to the site(Prov.)	Prov.Sum	1.00	20 000.00	20 000.00
12.20		Percentage for charges and profit on the provisional sums for contractor's cost and profit (B12.10 to B12.19)	%	311 000.00		
		Re-Establishment of Site	Sum	1		
TOTAL CARRIED TO SUMMARY						R

Item	Method	Description	Unit	Quantity	Contractor's Establishment	
					Rate	Amount
13.00		CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS				
13.01		<u>The contractor's general obligations</u>				
(a)		Fixed obligations	Lump Sum	1		
(b)		Valued-related obligations	Lump Sum	1		
(c)		Time-related obligation	Month	4		
13/B12.01		<u>Community Liason Officer</u>				
(a)	LIC	Community Liason Officer cost	Month	4		
(b)		Handling costs and charges for contractors on item 13/B12.03	%			
13/B12.04		<u>Cost of survey/engineering technician for setting out</u>	Months	4		
(b)		Handling costs and charges for the contractor on item 13/B12.03	%	-		
TOTAL CARRIED TO SUMMARY						R

Item	Method	Description	Unit	Quantity	Accommodation of Traffic	
					Rate	Amount
14		HOUSING, OFFICES AND LABORATORY FOR ENGINEER'S SITE PERSONNEL				
14.01		<u>Offices and Laboratory Accommodation</u>				
		The provision of accomodation as specified, including roof, external and internal walls, windows complete with glazing, doors with locks and fittings, burglar proofing, painting, floors, fencing, the provision of a 220/250 volt electrical installation wit				
		(a) Offices (interior floor space only)	m2	20		
		(b) Laboratories (interior floor space only)	m2	15		
		(c) Ablution units	m2	10		
B14.02		Office and laboratory furniture:				
		(a) Chairs	No	20		
		(b) Desks, complete with drawers and	No	1		
		(c) Conference tables	No	1		
B14.03		Office and laboratory fittings, installations and equipment:				
		(a)(xv) Steel filing cabinets with drawers	No	1		-
14.03		<u>Prime Cost items and items measured and paid for in lump sum</u>				
		a) Provision of telephone including cost of calls for contract administration and telephone rental	PC Sum	1	10 000.00	10 000.00
		b) Handling costs and profit in respect of 14.03(a)	%	10 000.00		
14.08		Services				
		a) Services at offices and laboratory				
		(i) Fixed costs	Lump Sum	1		
		(ii) Running costs	Month	4		
TOTAL CARRIED TO SUMMARY					R	

Item	Method	Description	Unit	Quantity	Accomodation of Traffic	
					Rate	Amount
15.00		ACCOMODATION OF TRAFFIC				
15.01		<u>Accommodating traffic and maintaining temporary deviations</u>	km	1.00		
15.02		Earthworks for temporary deviations				
		a) Shaping of temporary deviations	km	1		
		b) Cut and borrow to fill	m ³	400		
		c) Cut to spoil	m ³	300		
15.03		<u>Temporary traffic-control facilities</u>				
		a) Flagmen	man-days	120		
		b) Portable STOP and GO-RY signs	No	2		
		c) Road signs R- and TR- series (600mm)	No	2		
		d) Road signs and TW- series (600mm)	No	2		
		e) Amber flicker lights for use by the Engineer and his staff	No	0		
		f) Delineators (DTG50J) (600mm high) x 200mm wide:	No	5		
		g) Mounted back-to-back	No	-		
		h) Moveable barricade/road sign combination (6m wide)	No	2		
		i) Traffic cones (750mm high)	No	15		
15.05		Gravelling and repair of temporary deviations and existing gravel shoulders used as temporary deviations				
		a) Temporary deviations	m ³	300		
		b) Existing gravel shoulders	m ³	300		
15.06		Watering of temporary deviations	kl	1 200		
15.07		Blading by grader of:				
		a) Temporary deviations	km-pass	50		
		b) Existing roads used as temporary deviations	km-pass	50		
15.10		Accommodation of traffic where road is constructed in half-widths	km	0.0		
TOTAL CARRIED TO SUMMARY					R	-

						Drains
Item	Method	Description	Unit	Quantity	Rate	Amount
21.00		DRAINS				
21.01		<u>Excavation for open drains:</u>				
(a)	LIC	Excavating soft material situated within the following depth ranges below the surface level:				
(i)	LIC	0 m up to 1.5 m	m ³	129.38		
(ii)		Exceeding 1.5m and up to 3.0m	m ³	38.81		
21.02	LIC	Clearing and shaping of existing open drains	m ³	390		
TOTAL CARRIED TO SUMMARY						R

					Prefabricated Culverts	
Item	Method	Description	Unit	Quantity	Rate	Amount
22.00		PREFABRICATED CULVERTS				
22.01		<u>Excavation</u>				
(a)		Excavating soft material situated within the following depth ranges below the surface level:				
(i)	LIC	0 m up to 1.5 m	m ³	395		
(ii)	LIC	exceeding 1.5 m and up to 3.0 m	m ³	119		
(b)		Extra over subitem 22.01(a) for excavation in hard material, irrespective of depth	m ³	129		
22.02		<u>Backfilling</u>				
a)	LIC	using the excavated material	m ³	437		
b)	LIC	using imported material	m ³	101		
22.03	LIC	<u>Concrete pipe culverts</u>				
(a)		On Class C bedding:				
i)	LIC	450 mm diameter Class 100D	m	0		Rate Only
ii)	LIC	600mm diameter Class 100D	m	0		Rate Only
iii)	LIC	900mm diameter Class 100D	m	0		Rate Only
iv)	LIC	1200mm diameter Class 100D	m	-		Rate Only
22.05	LIC	<u>Portal and rectangular culverts:</u>				
(a)		Complete with prefabricated floor slabs				
(i)		1500 mm x 1500 mm Class 100S	m	0		Rate Only
(i)	LIC	1800 mm x 1800 mm Class 100S	m	45		
(b)		Without prefabricated floor slabs				
(i)	LIC	1500 mm x 1500 mm Class 100S	m	-		Rate Only
22.06		Extra-over items 22.03 and 22.04 for the construction of inclined culverts				
(a)		Concrete pipe culverts	m	-		Rate Only
(b)	LIC	Portal and rectangular culverts	m	-		Rate Only
22.07		Cast insitu concrete and formwork				
(b)	LIC	In floor slabs for portal or rectangular culverts, including formwork and Class U2 surface finish				
(i)		Class 30/19	m ³	148		
22.10		<u>Steel reinforcement</u>				
(a)	LIC	Mild steel bars R12	ton	0		Rate Only
(b)	LIC	High tensile steel bars Y16	ton	0		Rate Only
TOTAL CARRIED TO FORWARD					R	

					Prefabricated Culverts	
Item		Description	Unit	Quantity	Rate	Amount
TOTAL BROUGHT FORWARD:						R
(c)		Welded steel fabrics				
(i)	LIC	Welded steel fabric (Ref 395)	kg	1600		
(ii)	LIC	Welded steel fabric (Ref 617)	kg	0		Rate only
22.11		Dowels for old and new concrete	kg	4		
22.17	LIC	<u>Manholes, catchpits, inlet and outlet structures complete</u>				
b)		Catchpits, construction complete				
i)	LIC	Type B as per drawing	No	0		Rate only
ii)	LIC	1,0 m to 1,5 m deep	No	0		Rate only
iii)	LIC	1,5 m to 2,0 m deep	No	0		Rate only
c)	LIC	Wingwalls as per details	No	4		
TOTAL CARRIED TO SUMMARY						R

Item	Method	Description	Unit	Quantity	Concrete Works	
					Rate	Amount
23.00		CONCRETE KERBING, CONCRETE CHANNELING, CHUTES AND DOWNPIPES, AND CONCRETE LININGS FOR OPEN DRAINS				
23.01	LIC	Concrete kerbing				
		a) Precast kerbing to SABS 927				
		i) 300 mm x 300 mm edge beams	m	30		
23.03		Concrete chutes				
		Cast insitu using concrete class 25/19, incl. formwork	m	30		
23.07	LIC	Treaming of excavations for concrete lined drains				
		a) in soft material	m ²	150		
		b) in hard material	m ²	30		
23.10		Sealed joints in concrete lining of drains				
		a) Silicon based sealant	m	10.00		
23.16	LIC	(a) Cast in situ concrete lining (30MPa V-drain 1.5m wide x 0.2m deep)				
a)		30MPa	m ³	200.00		
	LIC	(b) To sides with formwork on both internal and external faces (each face measured)	m ²	500.00		
TOTAL CARRIED TO SUMMARY						R

						Earthworks
Item	Method	Description	Unit	Quantity	Rate	Amount
33.00		MASS EARTHWORKS				
33.01		<u>Cut and borrow to fill, including free-haul up to 1 km</u>				
a)		Material in compacted layers of 200 mm thickness and less:				
i)		Compacted to 90% of modified AASHTO density	m ³	621		
33.03		<u>Extra-over item 33.01 for excavating and breaking down materials in:</u>				
(a)		intermediate excavation	m ³	248		
(b)		hard rock excavation	m ³	373		
33.04		<u>Cut to spoil, including free-haul up to 0,5 km. Material obtained from:</u>				
a)		soft excavation	m ³	248		
b)		intermediate excavation	m ³	62		
c)		hard excavation	m ³	93		
d)		Boulder excavation Class B	m ³	155		
33.07		<u>Removal of unsuitable material (including free-haul of 0.5km):</u>				
b)		In layer thickness exceeding 150 mm:				
i)		Stable material	m ³	124		
ii)		Unstable materials	m ³	93		
33.10		<u>Roadbed preparation and compaction of material</u>				
(b)		Compaction to 93% of modified AASHTO density	m ³	621		
33.11		Three-roller pass compaction				
		a) Vibratory roller	m ²	400		
33.12		<u>In situ treatment of roadbed:</u>				
a)		In situ treatment by ripping	m ³	100		
33.13		Finishing off of cut and fill slopes				
		a) Cut slopes	m ²	175		
		b) Fill slopes	m ²	125		
TOTAL CARRIED TO SUMMARY						
					R	

Item	Method	Description	Unit	Pavement Layers of Gravel		
				Quantity	Rate	Amount
34.00		PAVEMENT LAYERS OF GRAVEL MATERIAL				
34.01		Pavement layers constructed from gravel obtained from borrow, including free haul up to 1km				
		c) Gravel subbase layer (unstabilised gravel) compacted to:				
		i) 95% Mod AASHTO density in 150 mm thicknesses	m ³	466		
		e) Gravel base (unstabilised gravel) compacted to:				
		ii) 98% of Mod AASHTO density in 125 mm thicknesses	m ³	0		Rate only
		b) Gravel shoulder compacted to 95% Mod AASHTO density in 150 mm thicknesses	m ³	0		Rate only
34.14		Pavement layers constructed from gravel obtained from commercial sources				
		a) Gravel subbase layer (unstabilised gravel) compacted to:				
		i) 95% Mod AASHTO density in 125 mm thicknesses	m ³	0		Rate only
		b) Gravel base (unstabilised gravel) compacted to:				
		ii) 98% of Mod AASHTO density in 125 mm thicknesses	m ³	0		Rate only
TOTAL CARRIED TO SUMMARY					R	

Item	Method	Description	Unit	Quantity	Asphalt Surfacing	
					Rate	Amount
41.00		PRIME COAT				
41.01		Prime Coat:				
		c) MC-30 cut-back bitumen	litre	0		
41.03		Extra over item 41.01 for applying the prime coat in areas accessible only to hand held equipment	litre	0		
TOTAL CARRIED TO SUMMARY						R

						Guard rails
Item	Method	Description	Unit	Quantity	Rate	Amount
54.00		GUARD RAILS				
54.01	LIC	Guard rails on timber posts				
		a) Galvanised	m	20		
54.02	LIC	Guard rails on steel posts				
		a) Galvanised	m	10		
54.04		End treatment				
		c) Bridge adaptors	No	20		
		d) End treatment where single guard rail sections are used	No	4		
54.06		Reflective plates	No	10		
54.12		Extra-over 54.01 to 54.06 for drilling and blasting holes for guard rail posts				
		a) Drilling or blasting of holes	No	8		
TOTAL CARRIED TO SUMMARY						R

Item	Method	Description	Unit	Quantity	Road Signs	
					Rate	Amount
56.00		<u>ROAD SIGNS</u>				
56.01		Road sign boards with painted or coloured semi-matt background. Symbols, lettering and borders in semi-matt black or in Class 1 retro-reflective material, where the sign board is constructed from:				
56.01(d)		Pre-painted galvanized steel profiles (200 mm high chromadek or approved equivalent):				
56.01 (d)(1)		Area not exceeding 2 m ²	m ²	2		
56.01(d)(2)		Area exceeding 2 m ² but not 10 m ²	m ²	0		Rate only
56.02		Extra over item 56.01 for using:				
56.02(a)		Background of retro-reflective material of:				
56.02(a)(3)		Class III	m ²			
56.02(b)		Lettering, symbols, numbers, arrows, emblems and borders of retro-reflective material:				
56.02(b)(2)		Class III	m ²			Rate only
56.03		<u>Road sign supports (overhead road sign structures excluded):</u>				
56.03(b)		Timber (Creosote treated poles and 150 mm diameter)	m	6		
56.05	LIC	Excavation and backfilling for road sign supports	m ³	5.00		
56.06		Extra over item 56.05 for cement-treated soil backfill	m ³			Rate only
56.07		Extra over item 56.05 for rock excavation	m ³			Rate only
TOTAL CARRIED TO SUMMARY						R

Item	Method	Description	Unit	Quantity	Road Markings		
					Rate	Amount	
57.00		ROAD MARKINGS					
57.01		Road marking - paint					
57.01(g)		Kerb markings (any colour)	m ²				
57.02		Retro-reflective road marking paint					
57.02(a)		White lines (broken or unbroken)					
57.02(a)(1)	LIC	100 mm wide broken	km			Rate only	
57.02(a)(2)	LIC	150 mm wide unbroken	km			Rate only	
57.02(a)(3)	LIC	200 mm wide	km				
57.02(a)(4)	LIC	300 mm wide	km			Rate only	
57.02(b)		Yellow lines (unbroken)					
57.02b(1)	LIC	100 mm wide	km				
57.02(b)(2)	LIC	150 mm wide	km			Rate only	
57.02(d)	LIC	White lettering and symbols	m ²			Rate only	
57.02(e)	LIC	Yellow lettering and symbols	m ²				
57.02(f)	LIC	Transverse lines, painted island and arrestor bed markings (any colour)	m ²			Rate only	
57.05		Roadstuds					
57.05(b)(1)		Stimsonite or similar	No			Rate only	
57.06	LIC	Setting out and premarking the lines (except traffic island markings, lettering and symbols)	km			Rate only	
57.07		Re-establishing the painting unit at the end of the maintenance period	L/sum			Rate only	
TOTAL CARRIED TO SUMMARY						R	-

Item	Method	Description	Landscaping and planting plants			
			Unit	Quantity	Rate	Amount
58.00		LANDSCAPING AND PLANTING PLANTS				
58.01		Trimming				
		a) Machine trimming	m ²			-
	LIC	b) Hand trimming	m ²			-
58.03	LIC	Preparing the areas for grassing:				
		(c) Top soiling within the road reserve, where the following materials are used:				
		(1) Topsoil obtained from within the road reserve or borrow areas (free haul 1,0 km)	m ³			-
		(2) Topsoil obtained from other sources by the contractor (including all haul)	m ³			
58.12		(a) Provision for landscaping	P/Sum			-
		(b) Contractor's handling costs, profit and all other charges in respect of subitem B58.12(a)	%			-
TOTAL CARRIED TO SUMMARY						
					R	

Item	Method	Description	Unit	Quantity	Rate	Amount
81.00		TESTING MATERIALS AND WORKMANSHIP				
81.02		a) Other special tests requested by the engineer	Prov Sum	1	30 000.00	30 000.00
		b) Contractor's handling charges, profit and others in respect of item 81.02 (a)	%	30 000.00		
81.03		Proving testing equipment				
		a) Rolling straight edge	No	0		Rate only
TOTAL CARRIED TO SUMMARY					R	

BA PHALABORWA MUNICIPALITY						
HUMULANI ACCESS CULVERT						
SCHEDULE B: OSHA AND ENVIRONMENTAL PLAN						
ITEM	METHOD	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
B1		Occupational health and safety				
B1.1		Contractors initial obligations in respect of the Occupational Health and Safety Act and Construction Regulations	Sum	1		
B1.2		Contractors time related obligations in respect of the Occupational Health and Safety Act and Construction Regulations	Month	4		
B1.3		Submission of the Health and Safety File	Sum	1		
B1.4		Compliance with Covid-19 OHS Specifications (Including Covid-19 Safety Induction, Employees' Screening, Workplance Readiness Plan and Risk Assessment Safety Procedure file, Re-usable Masks, Hand Sanitiser with Spray and Non-contact forehead body infra-red thermometer.	Sum	1		
TOTAL CARRIED FORWARD						R

CONSTRUCTION OF STORM WATER CULVERTS FOR HUMULANI ACCESS BRIDGE TO CEMETERIES WARD 16

BA PHALABORWA MUNICIPALITY
HUMULANI ACCESS CULVERT

SCHEDULE B: OSHA AND ENVIRONMENTAL PLAN

ITEM	METHOD	DESCRIPTION	UNIT	QTY	Rate	AMOUNT R
B1000		ENVIRONMENTAL MANGEMENT PLAN				
B100.01		Penalty for unnecessary removal or damage to trees for the following diameter sizes:				
		(a) 2 600mm girth or less	No	0	-500	Rate Only
		(b) Greater than 2 600mm, but less than 6 180mm girth	No	0	-500	Rate Only
		(c) Greater than 6 180mm girth	No	0	-500	Rate Only
B100.02		Penalty for serious violations:				
		(a) Hazardous chemical/oil spill and/or dumping in non-approved sites	No	0	-1000	Rate Only
		(b) General damage to sensitive environments	No	0	-1000	Rate Only
		(c) Damage to cultural and historical sites	No	0	-1000	Rate Only
		(d) Pollution of water sources	No	0	-1000	Rate Only
		(e) Unauthorised blasting activities	No	0	-1000	Rate Only
		(f) Uncontrolled/unmanaged erosion per incident, depending on environment impacts, plus rehabilitation at contractor's cost	No	0	-1000	Rate Only
		(g) Damage to sensitive vegetation within "no-go" areas of vegetation damaged, plus rehabilitation thereof at contractors cost	No	0	-1000	Rate Only
B100.03		Penalty for less serious violations:				
		(a) Littering on site	No	0	-500	Rate Only
		(b) Lighting of illegal fires on site	No	0	-500	Rate Only
		(c) Persistent or un-repaired fuel and oil leaks	No	0	-500	Rate Only
		(d) Any person related to the contractor's operations found within the designated "no-go" areas	No	0	-1000	Rate Only
		(e) Any vehicles or equipment related to the Contractor's operations found within the designated "no-go" areas	No	0	-1000	Rate Only
		(f) Excess dust or excess noise emanating from site	No	0	-1000	Rate Only
		(g) Dumping of milled material in side drains or on grassed areas]	No	0	-1000	Rate Only
		(h) Possession or use of intoxicating substances on site	No	0	-1000	Rate Only
		(i) Any vehicles being driven in excess of designated speed limits	No	0	-1000	Rate Only
		(j) Removal and/or damage to flora or cultural or heritage objects on site, and/or killing of wildlife	No	0	-1000	Rate Only
		(k) Illegal hunting	No	0	-1000	Rate Only
		(l) Urination and defecation anywhere except in designated areas	No	0	-1000	Rate Only
TOTAL CARRIED FORWARD TO SUMMARY						0

SCHEDULE C: PROVISION OF STRUCTURED TRAINING

ITEM	METHOD	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
C1200		Provision of Structured training				
C12.05		Provision for accredited training				
		(a) Generic Skills	Prov Sum	1	50000	50000
		(b) Entrepreneurial skills	Prov Sum	1	50000	50000
		(c) Training venue (only if required)	Prov.Sum	1	15000	15000
		(d) Handling cost and profit in respect of sub-item C12.05 (a); (b) and (c) above	%	115000		
TOTAL CARRIED FORWARD TO SUMMARY						R

5Barrel x1800x1800 Portal Culvert			
SUMMARY OF SCHEDULES			
SECTION	METHOD	DESCRIPTION	AMOUNT
1200	LIC	GENERAL REQUIREMENTS AND PROVISIONS	R
1300		CONTRACTOR'S ESTABLISHMENT ON SITE	R
1400		HOUSING, OFFICES AND LABORATORY FOR THE ENGINEER'S SITE PERSONNEL	R
1500		ACCOMMODATION OF TRAFFIC	R
1600		OVERHAUL	R
1700		CLEARING & GRUBBING	R
2100	LIC	DRAINS	R
2200	LIC	PREFABRICATED CULVERTS	R
2300	LIC	CONCRETE KERBING & CHANNELLING	R
3100		BORROW MATERIALS	R
3200		SELECTION, STOCKPILING	R
3300		MASS EARTHWORKS	R
3400		PAVEMENT LAYERS OF GRAVEL	R
4100		PRIME COAT	R
4200		ASPHALT BASE & SURFACING	R
5100	LIC	STONE PITCHING	R
5200	LIC	GABIONS	R
5400	LIC	GUARD RAILS	R
5600	LIC	ROAD SIGNS	R
5700	LIC	ROAD MARKINGS	R
5800	LIC	LANDSCAPING	R
5900		FINISHING	R
8100		TESTING	R
A		SCHEDULE B & C	R
		SUB-TOTAL A	R
		CONTIGENCIES @ 10%	R
		SUB-TOTAL B:CONSTRUCTION COST	R
		VAT @15%	R
		TOTAL PROJECT CONSTRUCTION COST	R

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C3: SCOPE OF WORK

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C3.1 STANDARD SPECIFICATIONS

The standard specifications on which this contract is based are the **COLTO Standard Specifications for Road and Bridge Works for State Road Authorities 1998 edition.**

The following SANS specifications are also referred to in this document and the Contractor is advised to obtain them from Standards South Africa (a division of SABS) in Pretoria.

SANS 10396: 2003:	Implementing Preferential Construction Procurement Policies using Targeted Procurement Procedures
SANS 1914-1 to 6 (2002):	Targeted Construction Procurement
SANS 1921 – 1 (2004):	Construction and Management Requirements for Works Contracts Part 1: General Engineering and Construction Works
SANS 1921-5 (2004):	Generic Labour-Intensive Specification Part 5: Earthworks.

and where accommodation of traffic is involved:

SANS 1921-2 (2004):	Construction and Management Requirements for Works Contracts Part 2: Accommodation of Traffic on Public Roads Occupied by the Contractor.
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C3.2: PROJECT SPECIFICATIONS

STATUS

The Project Specification, consisting of two parts, forms an integral part of the contract and supplements the Standard Specifications.

Part A contains a general description of the works, the site and the requirements to be met.

Part B contains variations, amendments and additions to the Standardized Specifications and, if applicable, the Particular Specifications.

In the event of any discrepancy between a part or parts of the Standardized or Particular Specifications and the Project Specification, the Project Specification shall take precedence. In the event of a discrepancy between the Specifications, (including the Project Specifications) and the drawings and / or the Bill of Quantities, the discrepancy shall be resolved by the Engineer before the execution of the work under the relevant item.

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

PART A: GENERAL

PS-1 PROJECT DESCRIPTION

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

Labour-intensive works

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

Labour-intensive competencies of supervisory and management staff

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

The Ba-Phalaborwa Municipality envisaged the completion of the Construction of Storm Water culverts for Humulani access bridge to Cemeteries Ward 16. The drainage structure to be installed is 5barrelx1800mmx1800mm portal culvert.. The access storm water bridge to be located at the stream crossing linking Humulani village and the cemeteries to the existing gravel road

The contract shall cover inter alia the following:

- Clearing and grubbing of the Culvert site including 100m on either side of the approach gravel
- Construction of bypasses
- Roadbed preparation.
- Construction of layer works.
- Construction and installation of culvert structures
- Installation of 30m gabions along the right side and upstream to the culvert bridge
- Provision of erosion of protection works

- Installation of guardrails
- Installations of road signs
- Installation of 100m V-drains
- Construction of Side walk
- Finishing of the access bridges approaches

PS-2 DESCRIPTION OF THE SITE AND ACCESS

2.1 Location of site

The limits of the project are as shown on the locality plan bound into the book of drawings to be received together with this document.

The site of works is located in Humulani Village of Latitude 23° 53' 19"S
Longitude 31° 03' 18.18"E

2.2 Access to site

Access to the site can be obtained from the existing gravel road

The contractor shall be responsible for the maintenance and reinstatement of damage caused by him or his agents/deliveries to vehicular access tracks and rights of way. No damage to fauna and flora located outside the limits of the road reserve will be permitted on the contract.

The contractor shall take cognizance of the aforementioned items concerning roads and tracks and allow for any costs in his bid under the relevant section in the bill of quantities.

PS-3 DETAILS OF THE WORKS

- Clearing and grubbing of the Culvert site including 100m on either side of the approach gravel
- Construction of bypasses
- Roadbed preparation.
- Construction of layer works.
- Construction and installation of culvert structures
- Installation of 30m gabions along the right side and upstream to the culvert bridge
- Provision of erosion of protection works
- Installation of guardrails
- Installations of road signs
- Installation of 100m V-drains
- Construction of Side walk
- Finishing of the access bridges approaches

NB: This description of the Works is not necessarily complete and shall not limit the work to be carried out by the Contractor under this Contract. Approximate quantities of each type of work are given in the Schedule of Quantities.

3.1 Structures

The majority of work to be done under drainage structures have been identified for labour intensive construction works and shall consist inter alia of the following:

- Clear and grubbing
- Mass Earthworks
- Approach Bridge Roadworks
- Access Bridge

3.2 Nature of ground conditions and subsoil conditions

A summary of the report containing the findings of the geotechnical investigation is attached in Section C4.2.

3.3 Climatic conditions

The climatic conditions in Ba-Phalaborwa are considered to be a local steppe climate. There is not much rainfall in Phalaborwa all year long. The warmest month of the year is December with the highest temperature being around 25.7°C and the coldest month of the year is July with the average temperature of 17.5°C. June is the driest month with 4mm of rain. In January, the precipitation reaches its peak, with an average of 104mm. The average annual rainfall is 463mm.

3.7 Labour recruitment conditions

A Project Steering Committee (PSC) will be established and is a vital means of communication between all parties involved with the project. The composition of the PSC comprises representation by the Employer, the Engineer and formal structures within the community.

The contractor shall make use of these communication channels, and shall appoint from amongst his site personnel a responsible person to participate in the affairs of the PSC, and this representative may be also required to attend the monthly PSC meetings.

It is mandatory that the Contractor shall interact with the community via proactive project liaison and project participation by its leaders and constituted organizations and forums, as well as through the employment of its people, and these activities shall constitute essential facets of the project.

Local labor is to be used and the employment of such labor is to be done in conjunction with the PSC. The PSC shall appoint a Community liaison officer (C.L.O.) (which shall be remunerated under the contract) who shall be in full time employ of the contract. The duties of the C.L.O. shall consist inter alia of the following:

- To be available on site daily between the hour of 07:00 and 17:00 and at other times as the need arises. His normal working day will extend from 07:00 in the morning until 17:00 in the afternoon.
- To communicate daily with regard to number and skills, to facilitate in labour disputes and to assist in their resolution.
- To attend all meetings in which the community and/or labour are present or are required to be represented.
- To attend all PSC meetings to report on labour.
- To assist in the identification and screening of laborers from the community in accordance with the contractor's requirements.
- To advise and inform temporary laborers of their conditions of employment and to inform temporary laborers as early as possible when their period of employment will be terminated.
- To attend disciplinary proceedings to ensure that hearings are fair and reasonable.
- To keep a daily written record of his interviews and community liaison, labour force etc.
- To attend monthly site meetings and report in writing on labour and contract matters.
- Keeping a data base of available labour.
- All such other duties as agreed upon between all parties concerned.
- Compile a list of available skills in the area (skills audit).

4.11 Construction in confined Areas

It may be necessary for the Contractor to work within confined areas. Except where provided for in the specifications, no additional payment shall be made for work done in restricted areas. In certain places the width of the fill material and pavement layers may decrease to zero and the working space may be confined. The method of construction in these confined areas largely depends on the Contractor's constructional plant.

However, the Contractor shall note that, unless provided for in terms of the scheduled payment items in the COLTO Standard Specifications or these project specifications, measurement and payment shall be in accordance with the specified cross sections and dimensions only, irrespective of the method used for achieving these cross sections and dimensions, and that the Bided rates and amounts shall include full compensation for all special equipment and construction methods and for all difficulties encountered when working in confined areas and narrow widths, and at or around obstructions, and that no extra payment

shall be made nor shall any claim for additional payment be considered in such cases.

PS-4 CONSTRUCTION AND MANAGEMENT REQUIREMENTS

4.1 General

The Contractor is referred to **SANS 1921: 2004 parts 1, 2 and 3: Construction and Management Requirements for Works Contracts**. These specifications shall be applicable to the contract under consideration and the Contractor shall comply with all requirements relevant to the project.

Certain aspects however require further attention as described hereafter.

4.2 Drawings (Read with SANS 1921 – 1: 2004 clauses 4.1.7; 4.1.11 and 4.1.12)

The reduced drawings which form part of the Bid documents shall be used for Bidding purposes only and is attached at the back of this document under section C4.3.

The contractor shall be supplied with three complete paper copies of the construction drawings free of charge. The Contractor shall at his own expense re-produce further paper prints required for the construction of the work.

At the completion of the Contract, the Contractor shall return to the Engineer all drawings, provided or made, during the contract period.

Any information which the Contractor has control over and which is required by the Resident Engineer to complete the as-built drawings shall be made available to the Resident Engineer before the Certificate of Completion is issued.

Only written dimensions may be used. Dimensions are not to be scaled from drawings unless ordered by the Engineer. The Engineer will supply all figures / dimensions which are not shown on the drawings. The levels or dimensions given on the drawings are subject to confirmation on site. The Contractor shall submit all levels and dimensions to the Engineer for confirmation before he commences with any structural construction work. The Contractor shall also check all clearances which are given on the drawings and inform the Engineer of any conflicting dimensions.

Any destination names on road signs which may be indicated on the drawings are subject to confirmation by the Engineer before these signs are manufactured.

4.3 Responsibilities for design and construction (Read with SANS 1921 – 1:2004 Clause 4.2)

4.3.1 The responsibility strategy followed in this contract shall be A.

4.3.2 The structural engineer responsible for the design in accordance with the specification is: Dolmen Engineers.

4.4 Planning, Programme and Method Statements (Read with SANS1921-1:2004 clause 4.3)

4.4.1 Preliminary programme

The Contractor shall include with his Bid a preliminary programme on the prescribed form to be completed by all Bidders. The programme shall be in the form of a simplified bar chart with sufficient details to show clearly how the works will be performed within the time for completion as stated in the Contract Data.

Bidders may submit Bids for an alternative Time for Completion in addition to a Bid based on the specified Time for Completion. Each such alternative Bid shall include a preliminary programme similar to the programme above for the execution of the works, and shall motivate his proposal clearly by stating all the financial implications of the alternative completion time.

The Contractor shall be deemed to have allowed fully in his Bided rates and prices as well as in his programme for all possible delays due to normal adverse weather conditions and special non-working days as specified in the Special Conditions of Contract, in the Project Specifications and in the Contract Data.

The following constraints shall be taken into account in preparing the preliminary construction programme which must be submitted with the Bid. These same constraints shall apply to the final construction programme.

- a) The Contract will be as Bided by the contractor. Plant and personnel requirements to complete the project must be incorporated in the Bid and shown on the programme.
- b) A high standard of traffic accommodation
- c) The relocation of services
- d) Ancillary works by Emerging Contractors

4.4.2 Programme in terms of Clause 5.6 of the General Conditions of Contract

It is essential that the construction programme, which shall conform in all respects to Clause 5.6 of the General Conditions of Contract, be furnished within the time stated in the Contract Data. The preliminary programme to be submitted with the bid shall be used as basis for this programme.

The following must be stated on the programme:

- (a) 2 weeks must be allocated at the start of the project for the setting out and confirmation of survey benchmarks. No work will be allowed prior to the survey confirmation process being completed.
- (b) The quantity of work applicable to each bar item as well as the rate at which the work will be completed.
- (c) A budget of the value of completed work, month by month, for the full contract period.
- (d) The critical path.
- (e) Work to be undertaken by Local Contractor (if applicable)
- (f) Training Courses
- (g) Schedule of plant and recourses to be utilized

The Contractor's attention is also drawn to Clause 5.7 of the General Conditions of Contract 2015.

4.4.3 Time for Completion

The Time for Completion shall be **04 months** as indicated under section C1.2. Contract Data.

4.4.4 Delay in Completion

The Contractor shall organise the Works in such a manner that no delays occur. Delays due to faulty organisation or lack or shortage of materials or labour or co-operation with other parties or to any other cause within the control of the Contractor will not be counted and full power is reserved by the Engineer to order the Contractor to expedite the work should the work, in the opinion of the Engineer, not progress in a satisfactory way.

4.5 Quality Assurance (QA) *(Read with SANS 1921 – 1: 2004 clause 4.4)*

The Contractor will be solely responsible for the production of work that complies with the Specifications to the satisfaction of the Engineer. To this end it will be the full responsibility of the Contractor to institute an appropriate Quality Assurance (QA) system on site. The Engineer will audit the Contractor's quality assurance (QA) system on a regular basis to verify that adequate independent checks and tests

are being carried out and to ensure that the Contractor's own control is sufficient to identify any possible quality problems which could cause a delay or failure.

The Contractor shall ensure that efficient supervisory staff, the required transport, instruments, equipment and tools are available to control the quality of his own workmanship in accordance with his QA-system. His attention is drawn to the fact that it is not the duty of the Engineer or the Engineer's representative to act as foreman or surveyor.

4.6 Management and disposal of water *(Read with SANS 1921 – 1 : 2004 clause 4.6)*

The Contractor shall pay special attention to the management and disposal of water and storm water on the site. It is essential that all completed works or parts thereof are kept dry and properly drained.

Claims for delay and for repair of damage caused to the works as a result of the Contractor's failure to properly manage rain and surface water, will not be considered.

4.7 Earthworks *(Read with SANS 1921 – 1 : 2004 clause 4.10)*

4.7.1 Borrow pits and spoil areas

The borrow pits to be used for this contract shall be pointed out at the Site Inspection. The Contractor shall be permitted to use only those borrow pits approved by the Engineer.

The spoil sites shall be determined on site in conjunction with the Engineer, the PSC, and the local communities. The Contractor shall be permitted to use only those spoil areas approved by the Engineer.

Should the Contractor wish to use any other spoil area for the disposal of soil, rubble, vegetation, etc, its use shall be subject to the approval of the Engineer and the landowner.

4.8 Testing *(Read with SANS 1921 – 1 : 2004 clause 4.11)*

4.8.1 Process control

The Contractor shall arrange for his own process control tests. The Contractor may establish his own laboratory on site for this purpose, or he may employ the services of an independent commercial laboratory. Whatever method is used, the Contractor must submit the results of tests carried out on materials and workmanship when submitting work for acceptance by the Engineer. The costs for these tests shall be deemed to be included in the relevant rates and no additional payment will be made for testing as required.

4.8.2 Acceptance control

The process control test results submitted by the Contractor for approval of materials and workmanship may be used by the Engineer for acceptance control. However, before accepting any work, the Engineer shall have his own acceptance control tests carried out by the dedicated site laboratory as approved by the client. The cost of acceptance testing shall be to the account of the client.

4.9 Site Establishment *(Read with SANS 1921 – 1 : 2004 clause 4.14)*

4.9.1 Contractor's camp site and depot

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

The chosen site shall be subject to the approval of the Engineer and the Project Steering Committee

(PSC). Possible locations for a campsite shall be pointed out at the Site inspection. The Contractor shall conform to all local authority, environmental and industrial regulations.

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

The Contractor shall provide security watchmen for the contract as he deems fit at no extra cost for the Employer. The Contractor must ensure that all his employees as well as the employees of his subcontractors are able to identify themselves as members of the construction team.

4.9.2 Accommodation of Employees

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

No housing is available for the Contractor’s employees and the Contractor shall make his own arrangements to house his employees and to transport them to site. No informal housing or squatting will be allowed.

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

4.10 Survey beacons (Read with SANS 1921 – 1 : 2004 clause 4.15)

The Contractor shall take special precautions to protect all permanent survey beacons or pegs such as bench-marks, stand boundary pegs and trigonometrical beacons, regardless whether such beacons or pegs were placed before or during the execution of the Contract. If any such beacons or pegs have been disturbed by the Contractor or his employees, the Contractor shall have them replaced by a registered land surveyor at his own cost.

4.11 Existing Services (Read with SANS 1921 – 1: 2004 clause 4.17)

The Contractor shall make himself acquainted with the position of all existing services before any excavation or other work likely to affect the existing services is commenced. It is the contractor’s responsibility to identified services that will interact with the construction work. The contractor will be responsible to do the application and negotiation on the relocation of the sifting of services.

The Contractor will be held responsible for any damage to known existing services caused by or arising out of his operations and any damage shall be made good at his own expense. Damage to unknown services shall be repaired as soon as possible and liability shall be determined on site when such damage should occur. Services belonging to the following service owners will be encountered.

SERVICE OWNER	TYPE OF SERVICE
Eskom	Electrical/Power lines
Telkom	Telephone lines
Ba-Phalaborwa Municipality	Water and sewer lines and reticulation within the rural area
Department of Water and Sanitation	Bulk water and sewer lines
Tribal Authority	Land owner, graves

Private owners	Fence line
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A provisional amount is included in the bill of quantities for the protection and/or shifting of services.

Two weeks prior to commencing construction activities in a particular area, the Contractor shall also diligently enquire of local landowners as to whether there are any other known services which have not been shown on the drawings but which may be affected by the construction activities in that area, and any such services shall be brought to the attention of the Engineer immediately. The contractor shall make provision in his programme for the location and/or shifting of services.

The Contractor shall take note of the requirements of clause 1202 of the standard specifications with regard to services.

4.12 Health and Safety *(Read with SANS 1921 - 1: 2004 clause 4.18)*

4.12.1 General statement

It is a requirement of this contract that the Contractor shall provide a safe and healthy working environment and to direct all his activities in such a manner that his employees and any other persons, who may be directly affected by his activities, are not exposed to hazards to their health and safety. To this end the Contractor shall assume full responsibility to conform to all the provisions of the Occupational Health and Safety Act (OHSA) No 85 and Amendment Act No 181 of 1993, and the OHSA 1993 Construction Regulations 2014 issued on 7 February 2014 by the Department of Labour.

For the purpose of this contract the Contractor is required to confirm his status as mandatory and employer in his own right for the execution of the contract by entering into an agreement with the Employer in terms of the Occupational Health and Safety Act in the form as included in section C1.5.

4.12.2 Health and Safety Specifications and Plans

(a) Employer's Health and Safety Specification

The Employer's Health and Safety Specification is included in Section C3.3, of the Bid documents as part of the Particular Specifications.

(b) Bidder's Health and Safety Plan

The Bidder shall submit with the bid his own documented Health and Safety Plan he proposes to be implement for the execution of the work under the contract. The Health and Safety Plan must at least cover the following:

- (i) a proper risk assessment of the works, risk items, work methods and procedures in terms of Regulations 9 to 30;
- (ii) pro-active identification of potential hazards and unsafe working conditions;
- (iii) provision of a safe working environment and equipment;
- (iv) statements of methods to ensure the health and safety of subcontractors, employees and visitors to the site, including safety training in hazards and risk areas (*Regulation 7*);
- (v) monitoring health and safety on the site of works on a regular basis, and keeping of records and registers as provided for in the Construction Regulations;
- (vi) details of the Construction Supervisor, the Construction Safety Officers and other competent persons he intends to appoint for the construction works in terms of Regulation 8 and other applicable regulations; and
- (vii) details of methods to ensure that his Health and Safety Plan is carried out effectively in accordance with the Construction Regulations 2014.

The Contractor's Health and Safety Plan will be subject to approval by the Employer, or amendment if necessary, before commencement of construction work. The Contractor will not be allowed to commence work, or his work will be suspended if he had already commenced work, before he has obtained the Employer's written approval of his Health and Safety Plan.

Time lost due to delayed commencement or suspension of the work as a result of the Contractor's failure to obtain approval for his safety plan, shall not be used as a reason to claim for extension of time or standing time and related costs

4.12.3 Cost of compliance with the OHS Act Construction Regulations

The rates and prices Bided by the Contractor shall be deemed to include all costs for conforming to the requirements of the Act, the Construction Regulations and the Employer's Health and Safety Specification as applicable to this contract.

Should the Contractor fail to comply with the provisions of the Construction Regulations, he will be liable for penalties as provided in the Construction Regulations and in the Employer's Health and Safety Specification.

4.13 Requirements for Accommodation of Traffic (Read with SANS 1921 - 2 : 2004)

4.13.1 General

The Contractor will be responsible for the safe and easy passage of public traffic past and on sections of roads of which he has occupation or where work has to be done near traffic.

The travelling public shall have the right of way on public roads, and the Contractor shall make use of approved methods to control the movement of his equipment and vehicles so as not to constitute a hazard on the road.

Accommodation of traffic, where applicable shall comply with SANS 1921-2: 2004: Construction and Management Requirements for Works Contracts, Part 2: Accommodation of Traffic on Public Roads occupied by the Contractor. The Contractor shall obtain this specification from Standards South Africa if accommodation of traffic will be involved on any part of the construction works.

4.13.2 Basic Requirements

The travelling public shall have the right of way on public roads, and the Contractor shall make use of approved methods to control the movement of his equipment and vehicles so as not to constitute a hazard on the road.

The Contractor shall ensure that all road signs, barricades, delineators, flagmen and speed controls are effective and that courtesy is extended to the public at all times.

Failure to maintain road signs, warning signs or flicker lights, etc, in a good condition shall constitute ample reason for the Engineer to suspend the work until the road signs, etc, have been repaired to his satisfaction.

The Contractor may not commence constructional activities affecting existing roads before adequate provision has been made to accommodate traffic in accordance with the requirements of this document and the South African Road Traffic Signs Manual.

The Contractor shall construct and maintain all temporary drainage works necessary for temporary deviations.

The Contractor shall provide and grant access to persons whose properties fall within or adjoin the area in which he is working.

4.13.3 Payment

The Contractor's Bided rates for the relevant items in the Bill of Quantities shall include full compensation for all possible additional costs which may arise from this, and no claims for extra payment due to

inconvenience as a result of the *modus operandi* will be considered.

4.14 Management of the environment *(Read with SANS 1921 - 1 : 2004 clause 4.19)*

Respect for the environment is an important aspect of this contract and the Contractor shall pay special attention to the following:

4.14.1 Natural Vegetation

The Contractor shall confine his operation to the limits of the road reserve for the purpose of constructing the works and where applicable detours, shall be sited in consultation with the Engineer and the local communities.

Only those trees and shrubs directly affected by the works and such others as the Engineer may direct in writing shall be cut down and stumped. The natural vegetation, grassing and other plants shall not be disturbed other than in areas where it is essential for the execution of the work or where directed by the Engineer.

4.14.2 Fires

The Contractor shall comply with the statutory and local fire regulations. He shall also take all necessary precautions to prevent any fires. In the event of fire the Contractor shall take active steps to limit and extinguish the fire and shall accept full responsibility for damages and claims resulting from such fires which may have been caused by him or his employees.

4.14.3 Environmental Management Plan

In addition to the above all requirements according to the Environmental Management Plan as detailed in C3.3, Particular Specifications, will be adhered to.

PS-5 Expanded Public Works Programme (EPWP) labour intensive specification

5.1. Labour Regulations

5.1.1 Payment for the labor-intensive component of the works

Payment for works identified in the Project Specifications as being labor-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.

5.1.2 Applicable labour laws

The Ministerial Determination for Special Public Works Programme, issued in terms of the Basic Conditions of Employment Act of 1997 by the Minister of Labour in Government Notice N° R949 in Government Gazette 33665 of 22 October 2010, as reproduced below, shall apply to works described in the scope of work as being labour.

5.1.3 Introduction

This document contains the standard terms and conditions for workers employed in elementary occupations on a Special Public Works Programme (EPWP). These terms and conditions do NOT apply to persons employed in the supervision and management of a EPWP.

In this document –

- (a) “department” means any department of the State, implementing agent or contractor;
- (b) “employer” means any department, implementing agency or contractor that hires workers to work in elementary occupations on a EPWP;
- (c) “worker” means any person working in an elementary occupation on a EPWP;
- (d) “elementary occupation” means any occupation involving unskilled or semi-skilled work;
- (e) “management” means any person employed by a department or implementing agency to administer or execute an EPWP;
- (f) “task” means a fixed quantity of work;
- (g) “task-based work” means work in which a worker is paid a fixed rate for performing a task;
- (h) “task-rated worker” means a worker paid on the basis of the number of tasks completed;
- (i) “time-rated worker” means a worker paid on the basis of the length of time worked.

5.1.4 Terms of Work

5.1.4.1 Workers on a EPWP are employed on a temporary basis or Contract Basis.

5.1.5 Normal Hours of Work

5.1.5.1 An employer may not set tasks or hours of work that require a worker to work—

- (a) more than forty hours in any week
- (b) on more than five days in any week; and
- (c) for more than eight hours on any day.

5.1.5.2 An employer and worker may agree that a worker will work four days per week. The worker may then work up to ten hours per day.

5.1.5.3 A task-rated worker may not work more than a total of 55 hours in any week to complete the tasks allocated (based on a 40-hour week) to that worker.

5.1.6 Meal Breaks

5.1.6.1 A worker may not work for more than five hours without taking a meal break of at least thirty minutes duration.

5.1.6.2 An employer and worker may agree on longer meal breaks.

5.1.6.3 A worker may not work during a meal break. However, an employer may require a worker to perform duties during a meal break if those duties cannot be left unattended and cannot be performed by another worker. An employer must take reasonable steps to ensure that a worker is relieved of his or her duties during the meal break.

5.1.6.4 A worker is not entitled to payment for the period of a meal break. However, a worker who is paid on the basis of time worked must be paid if the worker is required to work or to be available for work during the meal break.

5.1.7 Special Conditions for Security Guards

5.1.7.1 A security guard may work up to 55 hours per week and up to eleven hours per day.

5.1.7.2 A security guard who works more than ten hours per day must have a meal break of at least one hour or two breaks of at least 30 minutes each.

5.1.8 Daily Rest Period

Every worker is entitled to a daily rest period of at least eight consecutive hours. The daily rest period is measured from the time the worker ends work on one day until the time the worker starts work on the next day.

5.1.9 Weekly Rest Period

Every worker must have two days off every week. A worker may only work on their day off to perform work which must be done without delay and cannot be performed by workers during their ordinary hours of work (“emergency work”).

5.1.10 Sick Leave

- 5.1.10.1 Only workers who work four or more days per week have the right to claim sick-pay in terms of this clause.
- 5.1.10.2 A worker who is unable to work on account of illness or injury is entitled to claim one day’s paid sick leave for every full month that the worker has worked in terms of a contract.
- 5.1.10.3 A worker may accumulate a maximum of twelve days’ sick leave in a year.
- 5.1.10.4 Accumulated sick-leave may not be transferred from one contract to another contract.
- 5.1.10.5 An employer must pay a task-rated worker the worker’s daily task rate for a day’s sick leave.
- 5.1.10.6 An employer must pay a time-rated worker the worker’s daily rate of pay for a day’s sick leave.
- 5.1.10.7 An employer must pay a worker sick pay on the worker’s usual payday.
- 5.1.10.8 Before paying sick-pay, an employer may require a worker to produce a certificate stating that the worker was unable to work on account of sickness or injury if the worker is –
 - (a) absent from work for more than two consecutive days; or
 - (b) absent from work on more than two occasions in any eight-week period.
- 5.1.10.9 A medical certificate must be issued and signed by a medical practitioner, a qualified nurse or a clinic staff member authorised to issue medical certificates indicating the duration and reason for incapacity.
- 5.1.10.10 A worker is not entitled to paid sick-leave for a work-related injury or occupational disease for which the worker can claim compensation under the Compensation for Occupational Injuries and Diseases Act.

5.1.11 Maternity Leave

- 5.1.11.1 A worker may take up to four consecutive months’ unpaid maternity leave.
- 5.1.11.2 A worker is not entitled to any payment or employment-related benefits during maternity leave.
- 5.1.11.3 A worker must give her employer reasonable notice of when she will start maternity leave and when she will return to work.
- 5.1.11.4 A worker is not required to take the full period of maternity leave. However, a worker may not work for four weeks before the expected date of birth of her child or for six weeks after the birth of her child, unless a medical practitioner, midwife or qualified nurse certifies that she is fit to do so.
- 5.1.11.5 A worker may begin maternity leave –
 - (a) four weeks before the expected date of birth; or
 - (b) on an earlier date –
 - (i) if a medical practitioner, midwife or certified nurse certifies that it is necessary for the health of the worker or that of her unborn child; or
 - (ii) if agreed to between employer and worker; or
 - (c) on a later date, if a medical practitioner, midwife or certified nurse has certified that the worker is able to continue to work without endangering her health.
- 5.1.11.6 A worker who has a miscarriage during the third trimester of pregnancy or bears a stillborn child may take maternity leave for up to six weeks after the miscarriage or stillbirth.

5.1.12 Family responsibility leave

- 5.1.12.1 Workers, who work for at least four days per week, are entitled to three days paid family responsibility leave each year in the following circumstances -
- (a) when the employee's child is born;
 - (b) when the employee's child is sick;
 - (c) in the event of a death of –
 - (i) the employee's spouse or life partner;
 - (ii) the employee's parent, adoptive parent, grandparent, child, adopted child, grandchild or sibling.

5.1.13 Statement of Conditions

- 5.1.13.1 An employer must give a worker a statement containing the following details at the start of employment
- (a) the employer's name and address and the name of the EPWP;
 - (b) the tasks or job that the worker is to perform; and
 - (c) the period for which the worker is hired or, if this is not certain, the expected duration of the contract;
 - (d) the worker's rate of pay and how this is to be calculated;
 - (e) the training that the worker will receive during the EPWP.
- 5.1.13.2 An employer must ensure that these terms are explained in a suitable language to any employee who is unable to read the statement.
- 5.1.13.3 An employer must supply each worker with a copy of these conditions of employment.

5.1.14 Keeping Records

- 5.1.14.1 Every employer must keep a written record of at least the following –
- (a) the worker's name and position;
 - (b) in the case of a task-rated worker, the number of tasks completed by the worker;
 - (c) in the case of a time-rated worker, the time worked by the worker;
 - (d) payments made to each worker.
- 5.1.14.2 The employer must keep this record for a period of at least three years after the completion of the EPWP.

6.1.15 Payment

- 5.1.15 .1 An employer must pay all wages at least monthly in cash or by cheque or into a bank account.
- 5.1.15.2 a worker may not be paid less than the minimum EPWP wage rate of R..... per day or per task. This will be adjusted annually on the 1st of November in line with inflation (Available CPI as provided by Stats SA six (6) weeks before implementation)
- 5.1.15 .3 A task-rated worker will only be paid for tasks that have been completed.
- 5.1.15 .4 An employer must pay a task-rated worker within five weeks of the work being completed and the work having been approved by the manager or the contractor having submitted an invoice to the employer.
- 5.1.15 .5 A time-rated worker will be paid at the end of each month.
- 5.1.15 .6 Payment must be made in cash, by cheque or by direct deposit into a bank account designated by the worker.

- 5.1.15.7 Payment in cash or by cheque must take place –
- (a) at the workplace or at a place agreed to by the worker;
 - (b) during the worker's working hours or within fifteen minutes of the start or finish of work;
 - (c) in a sealed envelope which becomes the property of the worker.
- 5.1.15.8 An employer must give a worker the following information in writing –
- (a) the period for which payment is made;
 - (b) the numbers of tasks completed or hours worked;
 - (c) the worker's earnings;
 - (d) any money deducted from the payment;
 - (e) the actual amount paid to the worker.
- 5.1.15.9 If the worker is paid in cash or by cheque, this information must be recorded on the envelope and the worker must acknowledge receipt of payment by signing for it.
- 5.1.15.10 If a worker's employment is terminated, the employer must pay all monies owing to that worker within one month of the termination of employment.

5.1.16 Deductions

- 5.1.16.1 An employer may not deduct money from a worker's payment unless the deduction is required in terms of a law.
- 5.1.16.2 An employer must deduct and pay to the SA Revenue Services any income tax that the worker is required to pay.
- 5.1.16.3 An employer who deducts money from a worker's pay for payment to another person must pay the money to that person within the time period and other requirements specified in the agreement law, court order or arbitration award concerned.
- 5.1.16.4 An employer may not require or allow a worker to –
- (a) repay any payment except an overpayment previously made by the employer by mistake;
 - (b) state that the worker received a greater amount of money than the employer actually paid to the worker; or
 - (c) pay the employer or any other person for having been employed.

5.1.17 Health and Safety

5.1.17.1 Employers must take all reasonable steps to ensure that the working environment is healthy and safe.

5.1.17.2 A worker must –

- (a) work in a way that does not endanger his/her health and safety or that of any other person;
- (b) obey any health and safety instruction;
- (c) obey all health and safety rules of the EPWP;
- (d) use any personal protective equipment or clothing issued by the employer;
- (e) report any accident, near-miss incident or dangerous behavior by another person to their employer or manager.

5.1.18 Compensation for Injuries and Diseases

5.1.18 .1 It is the responsibility of the employers (other than a contractor) to arrange for all persons employed on a EPWP to be covered in terms of the Compensation for Occupational Injuries and Diseases Act, 130 of 1993.

5.1.18 .2 A worker must report any work-related injury or occupational disease to their employer or manager.

5.1.18 .3 The employer must report the accident or disease to the Compensation Commissioner.

5.1.18 .4 An employer must pay a worker who is unable to work because of an injury caused by an accident at work 75% of their earnings for up to three months. The employer will be refunded this amount by the Compensation Commissioner. This does NOT apply to injuries caused by accidents outside the workplace such as road accidents or accidents at home.

5.1.19 Termination

5.1.15.1 The employer may terminate the employment of a worker for good cause after following a fair procedure.

5.1.19.2 A worker will not receive severance pay on termination.

5.1.19.3 A worker is not required to give notice to terminate employment. However, a worker who wishes to resign should advise the employer in advance to allow the employer to find a replacement.

5.1.19.4 A worker who is absent for more than three consecutive days without informing the employer of an intention to return to work will have terminated the contract. However, the worker may be re-engaged if a position becomes available for the balance of the 24-month period.

5.1.19.5 A worker who does not attend required training events, without good reason, will have terminated the contract. However, the worker may be re-engaged if a position becomes available for the balance of the 24-month period.

5.1.20 Certificate of Service

5.1.20.1 On termination of employment, a worker is entitled to a certificate stating –

- (a) the worker's full name;
- (b) the name and address of the employer;
- (c) the EPWP on which the worker worked;
- (d) the work performed by the worker;
- (e) any training received by the worker as part of the EPWP;
- (f) the period for which the worker worked on the EPWP;
- (g) any other information agreed on by the employer and worker.

5.1.21 Contractor’s default in payment to Labourers and Employees

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

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

5.1.22 Provision of Hand tools

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

5.1.23 Reporting

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

- Signed Muster rolls/pay sheets of temporary workers and permanent staff detailing the number, category, gender, rate of pay and daily attendance.
- Plant utilization returns
- Progress report detailing production output compared to the programme of works intensive and which are undertaken by unskilled or semi-skilled workers.

9.2 Labour intensive competencies of supervisory and management staff

Contractors having a CIDB contractor grading designation of 4CE and higher shall only engage supervisory and management staff in labour intensive works who have either completed, or for the period 1 April 2004 to 30 June 2006, are registered for training towards, the skills programme outlined in Table 1.

The managing principal of the contractor, namely, a sole proprietor, the senior partner, the managing director or managing member of a close corporation, as relevant, having a contractor grading designation of 1GB, 2 GB, 3 GB and 4 GB shall have personally completed, or for the period 1 April 2004 to 30 June 2006 be registered on a skills programme for the NQF level 2. All other site supervisory staff in the employ of such contractors must have completed, or for the period 1 April 2004 to 30 June 2006 be registered on a skills programme for, the NQF level 2 unit standards or NQF level 4 unit standards.

Table 1: Skills programme for supervisory and management staff

Personnel	NQF level	Unit standard titles	Skills programme description
Team leader / supervisor	2	Apply Labour Intensive Construction Systems and Techniques to Work Activities	This unit standard must be completed, and } any one of these 3 unit standards
		Use Labour Intensive Construction Methods to Construct and Maintain Roads and Storm water Drainage	
		Use Labour Intensive Construction Methods to Construct and Maintain Water and Sanitation Services	
		Use Labour Intensive Construction Methods to Construct, Repair and Maintain Structures	
Foreman/ supervisor	4	Implement labour Intensive Construction Systems and Techniques	This unit standard must be completed, and } any one of these 3 unit
		Use Labour Intensive Construction Methods to Construct and Maintain Roads and Storm water Drainage	

		Use Labour Intensive Construction Methods to Construct and Maintain Water and Sanitation Services	standards
		Use Labour Intensive Construction Methods to Construct, Repair and Maintain Structures	
Site Agent / Manager (i.e. the contractor's most senior representative that is resident on the site)	5	Manage Labour Intensive Construction Processes	Skills Programme against this single unit standard

5.2 Employment of unskilled and semi-skilled workers in labour-intensive works – According to SANS 1914-5.

5.2.1 Requirements for the sourcing and engagement of labour.

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

5.2.1.2 The normal Government Gazette rate as published by the department of labour and revised annually will be applicable in case the Ba-Phalaborwa do not have a set rate for the Locals and EPWP Projects. When Government Gazette becomes applicable, the rate will change when the new rates become gazetted by the Minister of Labour

5.2.1.3 Tasks established by the contractor must be such that:

- a) the average worker completes 5 tasks per week in 40 hours or less; and
- b) the weakest worker completes 5 tasks per week in 55 hours or less.

5.2.1.4 The contractor must revise the time taken to complete a task whenever it is established that the time taken to complete a weekly task is not within the requirements of 5.2.1.3.

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

- a) where the head of the household has less than a primary school education;
- b) that has less than one full time person earning an income;
- c) where subsistence agriculture is the source of income.
- d) those that are not in receipt of any social security pension income

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

- a) 55 % women;
- b) 55% youth who are between the ages of 18 and 35; and
- c) 2% on persons with disabilities.

5.3 Specific provisions pertaining to SANS 1914-5

5.3.1 Definitions

Targeted labour: Unemployed persons who are employed as local labour on the project.

5.3.2 Contract participation goals

- 5.3.2.1 There is no specified contract participation goal for the contract. The contract participation goal shall be measured in the performance of the contract to enable the employment provided to targeted labour to be quantified.
- 5.3.2.2 The wages and allowances used to calculate the contract participation goal shall, with respect to both time-rated and task rated workers, comprise all wages paid and any training allowance paid in respect of agreed training programmes.

5.3.3 Terms and conditions for the engagement of targeted labour

Further to the provisions of clause 3.3.2 of SANS 1914-5, written contracts shall be entered into with targeted labour.

5.3.4 Variations to SANS 1914-5

- 5.3.4.1 The definition for net amount shall be amended as follows:
Financial value of the contract upon completion, exclusive of any value-added tax or sales tax which the law requires the employer to pay the contractor.
- 5.3.4.2 The schedule referred to in 5.2 shall in addition reflect the status of targeted labour as women, youth and persons with disabilities and the number of days of formal training provided to targeted labour.

5.3.5 Training of targeted labour

- 5.3.5.1 The contractor shall provide all the necessary on-the-job training to targeted labour to enable such labour to master the basic work techniques required to undertake the work in accordance with the requirements of the contract in a manner that does not compromise worker health and safety.
- 5.3.5.2 The cost of the formal training of targeted labour will be funded by the provincial office of the Department of Labour. This training should take place as close to the project site as practically possible. The contractor, must access this training by informing the relevant provincial office of the Department of Labour in writing, within 14 days of being awarded the contract, of the likely number of persons that will undergo training and when such training is required. The employer must be furnished with a copy of this request.
- 5.3.5.3 A copy of this training request made by the contractor to the DOL provincial office must also be faxed to the EPWP Training Director in the Department of Public Works– **Cinderella Makunike, Fax Number 012 328 6820 or email cinderella.makunike@dpw.gov.za Tel: 083 677 4026.**
- 5.3.5.4 The contractor shall be responsible for scheduling the training of workers and shall take all reasonable steps to ensure that each beneficiary is provided with a minimum of six (6) days of formal training if he/she is employed for 3 months or less and a minimum of ten (10) days if he she is employed for 4 months or more.
- 5.3.5.5 The contractor shall do nothing to dissuade targeted labour from participating in training programmes.
- 5.3.5.6 An allowance equal to 100% of the task rate or daily rate shall be paid by the contractor to workers who attend formal training, in terms of 5.3.5.1 to 5.3.5.5 above.
- 5.3.5.7 Proof of compliance with the requirements of 5.3.5.1 to 5.3.5.5 must be provided by the Contractor to the Employer prior to submission of the final payment certificate.

PART B: AMENDMENTS TO THE STANDARD AND PARTICULAR SPECIFICATIONS

B1 PROJECT SPECIFICATIONS RELATING TO THE STANDARD SPECIFICATIONS AND OTHER ADDITIONAL SPECIFICATIONS

In certain clauses in the standard, standardized and particular specifications, allowance is made for a choice to be specified in the project specifications between alternative materials or methods of construction, and for additional requirements to be specified to suit a particular contract. Details of such alternative or additional requirements applicable to this contract are contained in this part of the project specifications. It also contains the necessary additional specifications required for this particular contract.

The number of each clause and each payment item in this part of the project specifications consists of the prefix B followed by a number corresponding to the relevant clause or payment item in the standard specification.

The number of a new clause or payment item, which does not form part of a clause or a payment item in the standard specifications and which is included here, is also prefixed by B, but followed by a new number which follows on the last clause or item number used in the relevant section of the standard specifications.

SECTION 1100: DEFINITION AND TERMS

In all cases where “**Directorate Transport Planning**” appears in the text or in drawings contained in this document it shall be read as “BA-PHALABORWA MUNICIPALITY”.

SECTION 1200: GENERAL REQUIREMENTS AND PROVISIONS

B1202 SERVICES

DELETE AND REPLACE THE WORDS:

“Clause 15 of the general conditions of contract” *in the first sentence of the eleventh paragraph with* “Clause 5.6 of the General Conditions of Contract for construction works third Edition 2015 edition.”

B1205 WORKMANSHIP AND QUALITY CONTROL

ADD THE FOLLOWING:

“Quality control (Scheme 1) as detailed in Section 8200 will be used for determining the acceptance levels with respect to the properties of the materials and workmanship executed by the contractor.”

B1206 THE SETTING-OUT OF WORK AND PROTECTION OF BEACONS

DELETE THE ENTIRE CONTENTS OF THE FIRST PARAGRAPH AND THE FOLLOWING WORDS IN THE FIRST SENTENCE OF THE SIXTH PARAGRAPH:

“and of clause 14 of the general conditions of contract.”

ADD THE FOLLOWING:

The contractor will be responsible for verifying all dimensions of existing structures before setting out the works.

B1209 PAYMENT

AMEND SUB CLAUSE (E) MATERIALS ON SITE BY DELETING AND REPLACING THE WORDS:

“Clause 52 of the general conditions of contract” *IN THE FIRST SENTENCE OF THE FIRST PARAGRAPH WITH:* “Clause 6.10 of the General Conditions of Contract for construction works third Edition 2015 edition.”

B1210 CERTIFICATE OF PRACTICAL COMPLETION OF THE WORKS

DELETE AND REPLACE THE WORDS IN THE FIRST PARAGRAPH:

“Clause 54 of the general conditions of contract” *in the fourth line of the first sentence with:* “Clause 5.14 of the General Conditions of Contract for construction works third Edition 2015 edition.”

B1212 ALTERNATIVE DESIGNS AND OFFERS

ADD THE FOLLOWING TO THE END OF SUB CLAUSE (M):

"The provision for contract price adjustment in the original Bid summary may not, under any circumstances, be altered in an alternative Bid"

B1215 EXTENSION OF TIME RESULTING FROM ABNORMAL RAINFALL

DELETE AND REPLACE THE WORDS IN THE FIRST PARAGRAPH:

“Clause 45 of the General Conditions of Contract” *IN THE FIRST LINE OF THE FIRST SENTENCE WITH:* “Clause 5.12 of the General Conditions of Contract for construction works third Edition 2015 edition.

ADD THE FOLLOWING AFTER THE FIRST PARAGRAPH:

“Method (I) (Rainfall formula) shall be used on this contract.
The average rainfall of the area is 450.5 mm/year.

B1217 PROTECTION OF THE WORKS AND REQUIREMENTS TO BE MET BEFORE CONSTRUCTION OF NEW WORK ON TOP OF COMPLETED IS COMMENCED

DELETE AND REPLACE THE WORDS IN THE FIRST PARAGRAPH:

“Clause 35 of the general conditions of contract” *IN THE SECOND LINE OF THE FIRST SENTENCE WITH:* “Clause 8.2 of the General Conditions of Contract for construction works third Edition 2015 edition.”

B1224 THE HANDING-OVER OF THE ROAD RESERVE

ADD THE FOLLOWING:

“The full extent of the road reserve will be handed over to the Contractor at the beginning of the contract. The Contractor shall be responsible for the maintenance along this portion of the road until completion of the contract

B1229 SABS CEMENT SPECIFICATIONS

REPLACE ALL PARAGRAPHS WITH THE FOLLOWING:

“The standard cement specifications SABS 471, SABS 626, SABS 831 and SABS 1466 have been withdrawn and are replaced by the new SANS 50197-1 and -2: Common cements, and SANS 50413-1 and -2: Masonry cement. These specifications will be applicable to this contract, and the descriptions and types of cements specified, will be based on the designations as defined in these specifications. The following summary table shall apply:

Old product nomenclature	Typical new product nomenclature	
	Cement type	Cement strength class
OPC	CEM I	32,5
	CEM I	32,5R
RHC	CEM I	42,5
	CEM I	42,5R
LASRC	No provision made	No provision made

PC15SL	CEM II/A-S	32,5
	CEM II/A-S	32,5R
	CEM II/A-S	42,5
PC15FA	CEM II/A-V	32,5
	CEM II/A-V	32,5R
	CEM II/A-W	32,5
	CEM II/A-W	32,5R
RH15FA	CEM II/A-V	42,5
	CEM II/A-V	42,5R
	CEM II/A-W	42,5
	CEM II/A-W	42,5R
PBFC	CEM III/A	32,5
	CEM III/A	32,5R
PFAC	CEM II/B-V	32,5
	CEM II/B-W	32,5
RH30SL	CEM II/B-S	32,5R
	CEM II/B-S	42,5
RH40SL	CEM III/A	32,5R
	CEM III/A	42,5

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

ADD THE FOLLOWING NEW SPECIFICATIONS:

“B1230 ENVIRONMENTAL IMPACT CONTROL

Respect for the environment is an important aspect of this contract. The environmental control of the site shall be governed by the Environmental Management Plan (EMP) included in Particular Specification C3.3 of this document, which provides, inter alia for:

- (a) The Contractor must allow for the satisfactory combating of dust and noise nuisance throughout the contract length during construction.
- (b) The Contractor must make provision for the prevention of excessive erosion and siltation throughout the Contract and in particular on adjacent land. Should excessive erosion and/or siltation take place outside the road reserve as a direct result of the Contractor’s construction activities it will be the Contractor’s responsibility to make good the erosion/siltation to the satisfaction of the landowner and the Engineer.

- (c) No littering by construction workers shall be allowed. A refuse control system shall be established for the collection and removal of refuse to the satisfaction of the engineer.
- (d) Adequate provision shall be made for temporary toilet requirements in construction areas. Use of the veld for this purpose shall not, under any circumstances be allowed.
- (e) Streams, rivers and dams shall be protected from direct or indirect spillage of pollutants, such as refuse, garbage, cement, concrete, sewage, chemicals, fuels, oils, aggregate tailings, wash water, organic materials and bituminous products. In the event of spillage, prompt action shall be taken to clear the affected area. Emergency measures in the event of spillage must be set out and the responsible person made aware of the required action. The construction of temporary and or permanent dams must be done with the necessary approvals from the Department of Water Affairs and Forestry and Environmental Affairs and Tourism.
- (f) Bituminous and/or other hazardous products shall not be spoiled on site and may only be disposed of in licensed authorized disposal facilities.
- (g) Control of invader species of plants.
- (h) Clearing shall be limited to the road prism and, where applicable, detours, which shall be sited in consultation with the Engineer and the local communities.

No separate payment will be made for observing these requirements as it is deemed to be included in the amount Bided for Item 13.01(c) but any avoidable non-compliance with these rules may be considered sufficient grounds for withholding payment of part or all of the amounts to be paid for the above item.”

“B1231 WORKMEN’S COMPENSATION ACT

All labour employed on the site shall be covered by the Workmen’s Compensation Act. The Contractor shall pay in full, including the payment of the necessary levies, such amounts as are due in terms of the Act.

The manner in which Workmen’s Compensation shall be handled shall be resolved by the Contractor at the commencement of the contract.”

“B1232 CARE OF WORKS, DAMAGE, INJURY AND INSURANCE

Compliance with Road Traffic Act:

When a service necessitates vehicles or plant travelling or working on a public road the following shall apply:

- The vehicles and plant shall be licensed in terms of the National Road Traffic Act 1996 (Act No. 93 of 1996) as amended.
- Every driver and operator of a vehicle or an item of plant shall be in possession of a valid permit in respect of the class of vehicle or item of plant he is driving or operating.

The contractor shall provide, erect and maintain sufficient road signs, barricades, fencing and guarding as may be necessary or required by the Engineer or by any act, regulation or statutory authority in order to minimize the danger and inconvenience caused to vehicle and pedestrian traffic.

The Contractor by accepting this contact shall be deemed to have indemnified the Employer and the Engineer against any claims, damages and / or costs that may arise in this regard.”

SECTION 1300: GENERAL REQUIREMENTS AND PROVISIONS

B1303 PAYMENT

ADD THE FOLLOWING AT THE END OF ITEM 13.01(1).

"..... and provided the Contractor has fulfilled his obligations as far as the Engineer's office, laboratory and housing accommodation is concerned".

ADD THE FOLLOWING NEW PAY ITEMS:

ITEM	<u>UNIT</u>
"B13.02 <u>Provision for a Community Liaison Officer</u>	
a) Provisional sum for the payment of the Community Liaison Officer and PSC Members	P Sum
b) Handling cost and profit in respect of sub-item (a) above <i>(state % and extent as an amount)</i>	Percentage (%)

The provisional amount for sub-items B13.02 (b)(I) allows for the remuneration of the community liaison officer. The reimbursement shall be a fixed amount per month to be instructed by the Engineer.

The percentage Bided in pay items B13.02(a)(II), (IV) and (b) (II) shall be applied to the amount expended under pay items (a)(I), (a)(III) and (b)(I) respectively to generate an amount that covers all the monies required by the contractor for managing costs that may arise from the payment, including the contractor's profit and overheads."

ITEM	<u>UNIT</u>
"B13.03 <u>Provision for accredited training</u>	
a) Generic skills	P Sum
b) Entrepreneurial skills	P Sum
c) Handling cost and profit in respect of sub-item (a) and (b) above <i>(state % and extend as an amount)</i>	Percentage (%)
d) Training venue (only if required)	L Sum

The percentage Bided in pay items B13.03 (c) and (d) shall be applied to the amount expended under pay items (a) and (b) respectively to generate an amount that covers all the monies required by the contractor for managing costs that may arise from the payment, including the contractor's profit and overheads."

<u>ITEM</u>	<u>UNIT</u>
"B13.04 <u>Contract name board:</u>	
(a) Supply and erect one contract name board	Lump Sum

The Bided lump sum shall be for full compensation for providing two contractor's name board as detailed on the drawings, erected at appropriate position to be indicated by the engineer. The rate shall include all materials, manufacturing, delivery to site and erection of the board and all materials, plant and labour required for the erection of the board."

<u>ITEM</u>		<u>UNIT</u>
“B13.05	<u>Relocation of existing services:</u>	
(a)	Excavating material within the following depth ranges below ground level for the exposing of/or searching for services:	
(i)	0m to 2m:	
	(1) soft material	cubic metre (m ³)
	(2) hard material	cubic metre (m ³)
(b)	Extra over item B13.05(a) for excavation by means of hand tools such as picks, crowbars and pneumatic tools or mechanical breakers in close vicinity of services where no machine excavation is permitted:	
	(1) soft material	cubic metre (m ³)
	(2) hard material	cubic metre (m ³)
	Measurement and payment for excavations shall be as specified for item 22.01 in the standard specifications.	
(c)	Backfilling	
(i)	Using the excavated material	cubic metre (m ³)
(ii)	Using imported selected material	cubic metre (m ³)
(d)	Relocation of services	
(i)	Provisional sum for the relocation of existing services	Prov. Sum
(ii)	Handling costs and profit in respect of sub-item B13.05(d)	Percentage (%)

The provisional sum provided shall cover the cost of any existing services that might need to be relocated or extended or any work to existing services as ordered in writing by the Engineer. It is the contractor’s responsibility to identified services that will interact with the construction work. The contractor will be responsible to do the application and negotiation on the relocation of the siting of services.

<u>ITEM</u>		<u>UNIT</u>
“B13.06	<u>Occupational Health & Safety:</u>	
	“Provision for the cost related to the Occupational Health and Safety Act, 85 of 1993, and the relevant Regulations:	
(a)	Preparation of a Health and Safety Plan	L Sum
(b)	Compilation of a risk assessment prior to construction	L Sum
(c)	Health and Safety Induction Training of employees	L Sum
(d)	Compilation and keeping up with date the Health & Safety file which shall include all documentation required in terms of the Act. Implementation of the health and Safety plan over the entire construction period	Month

The Bided sums shall include full compensation for providing the above services as required from the Occupational Health and Safety Act. The rate shall include all related costs incurred by the Act, remuneration to personnel, trainers, etc. and equipment required for the execution of the required services as depicted by the Act. The Bided amount for items a, b and c shall only be paid on the successful completion of each task as approved by the client or his Agent. The Bided amount for item d shall be paid on a monthly basis.

The amount under (e) shall be paid within thirty (30) days of receiving a invoice from the independent Occupational Health & Safety Agent appointed by the client.

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

<u>ITEM</u>	<u>UNIT</u>
“B13.07	<u>Confirmation of survey data and benchmarks</u>
(a)	Provisional Sum for the confirmation and setting out of benchmarks and survey data as required by the Engineer
	Prov. Sum
(b)	Handling costs and profit in respect of sub-item B13.07(a)
	Percentage (%)

The provisional sum shall cover all costs in verifying, setting out and confirming existing benchmark PI's etc as ordered in writing by the engineer.”

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

B1402 OFFICES AND LABORATORIES

(a) General

ADD THE FOLLOWING NEW PARAGRAPH AT THE END OF THIS SUB-CLAUSE:

“The offices, laboratory and stores shall, unless otherwise agreed, be erected in close proximity to the contractor's offices and laboratory, and the entire area shall be fenced with security fencing and provided with a gate. The contractor shall take all reasonable precautions to prevent unauthorized entry to the Engineer's offices and laboratories and to ensure the general security of the offices and laboratories.”

ADD THE FOLLOWING NEW SUB CLAUSE:

“1402 (i) Survey equipment

The contractor shall provide and make available at all times for the exclusive use of the Engineer and his staff the necessary survey equipment comprising of the following:

- a) 1 x tachometer capable of reading to 20 seconds of arc with tripod,
- b) 1 x engineer's automatic level with tripod,
- c) 2 x tachometer staff with staff's bubble,
- d) 1 x level staff with staff bubble,
- e) 2 x ranging rods,
- f) 1 x builder's spirit level of length 900mm,
- g) 1 x steel tape of length 30m,
- h) 1 x pocket tape of length 3m,
- i) 1 x 6V, 8-cell torch with spare batteries, and
- j) all steel and wood pegs, concrete, hammers, picks, etc., that the Engineer may require.

The contractor shall provide proof, at the start of the Contract, that the tachometer and level have recently been serviced by an acceptable institution and shall, throughout the Contract, service and maintain all survey equipment and he shall insure same and indemnify the Employer and the Engineer against all claims for loss, breakage or theft of such equipment.

The tachometer and tachometer staffs may be shared by arrangement between the Contractor and the Engineer, but the other instruments shall be provided for the exclusive use of the Engineer.

On completion of the Works, the equipment will be returned to the Contractor who shall remove it from the site.

Two suitable, trained and experienced workmen to be used as survey assistants and two suitable labourers to assist with control testing shall be made available to the Engineer during the working hours as and when required. As far as practical the same assistants and labourers, shall be allocated to the Engineer for the full duration of construction.”

ADD THE FOLLOWING NEW SUB-ITEM:

<u>ITEM</u>	<u>UNIT</u>
"B14.02 (g) i) Survey Equipment needed by the Engineer	P Sum
ii) Handling cost and profit in respect of sub-item B14.02(g)(i)	Percentage (%)

The prime cost sum shall be expended in accordance with the provisions of the general conditions of contract. Payment to the Engineers shall be made within fourteen (14) days after such order has been given by the engineer. The contractor shall provide detailed proof of payment before payment shall be certified to the contractor.

The Bided percentage in item B14.02 (g) is an extra over percentage on the amount actually spent under sub-item B14.02 (g) (i) which shall include full compensation for the handling costs and profit of the contractor."

B1406 MEASUREMENT AND PAYMENT

ADD THE FOLLOWING NEW SUB-ITEM:

<u>ITEM</u>	<u>UNIT</u>
"B14.03 (b) (ix) 1. Provision of cellular telephones, computers, printing	P Sum
2. Provisional sum for the costs of cellular calls and other charges	P Sum
3. Handling cost and profit in respect of sub-item B14.03(b)(ix) 1 and 2	Percentage (%)

The prime cost sum shall be expended in accordance with the provisions of the general conditions of contract. Payment to the Engineers shall be made within fourteen (14) days after such order has been given by the engineer. The contractor shall provide detailed proof of payment before payment shall be certified to the contractor.

The Bided percentage in item B14.03 (b) (ix)(3) is an extra over percentage on the amount actually spent under sub-item B14.03 (b) (ix)(1, 2) which shall include full compensation for the handling costs and profit of the contractor."

SECTION 1500: ACCOMMODATION OF TRAFFIC

B1501 SCOPE

ADD TO CLAUSE 1501 THE FOLLOWING:

“The scope of this section shall also include the preparation and submission to the Engineer for approval of a traffic management plan. The traffic management plan shall demonstrate how the Contractor intends accommodating and controlling traffic through the site. The plan must incorporate all the requirements of the specifications in respect of the accommodation of traffic, including the traffic control devices and the personnel involved. A traffic safety officer shall be specifically named in the plan together with 24 hr contact details. Copies of the plan shall be made available to the Engineer, the Employer, Local Authorities, the Police and Emergency Services.

The accommodation of traffic shall generally be undertaken in the following manner:

- (a) Via gravel diversions, where practical in terms of space and the terrain.
- (b) By dealing with traffic under construction where no diversions are possible.
- (c) By diverting traffic along the existing road where the route is being realigned.”

B1502 GENERAL REQUIREMENTS

(b) Providing Temporary Deviations

ADD TO THE SUB-CLAUSE THE FOLLOWING:

“The contractor shall keep the provincial traffic police, the municipal traffic departments and the engineer fully informed with regard to any changes in the normal traffic flow and obtain their approval for these changes.

During the non-working hours, all unnecessary obstructions to the traffic shall be removed and all signs no longer applicable to the situation shall be removed or effectively covered.

It is a condition of this contract that not more than 10 km of deviation should be open to public traffic at any one time, and that not more than three separate deviations should be open at any one time. No additional payments will be made where situations arise that the contractor has deviations crossing over the roadway under construction.”

(i) Traffic Safety Officer

ADD TO SUB-CLAUSE 1502(I) THE FOLLOWING:

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

REPLACE SUB-CLAUSE 1502(I), SUB-SUB-CLAUSES (ii) AND (iii) WITH THE FOLLOWING:

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

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

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

- (iii) Personally, inspect the position and condition of each traffic accommodation feature on the whole site of works twice each day by 9:30 and by 16:30, to record all irregularities discovered and the remedial action taken, and to sign off as correct and submit to the Engineer such record sheets by 10:00 and by 17:00 each day. The traffic Safety Officer shall keep a duplicate book for this specific purpose.

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

The traffic safety officer shall be equipped with a cellular telephone and shall have a vehicle and 3 labourers at his disposal 24 hrs a day and he shall be directly answerable to the Contractor's Site Agent. The Traffic Safety vehicle shall be a truck with a capacity of 5 tons and shall be equipped with a high visibility rear panel as shown on Figure 24 of Road Signs Note No.13. The traffic Safety Officer shall have a direct line of communication at all times with the police and traffic officers responsible for the area within limits of the Contract. The provision of the Road Safety Vehicle, driver, three labourers and the cost of the cellular telephone shall be deemed to be included in the rates Bided for the Contractor's establishment on site."

ADD TO SUB-CLAUSE 1502(I) THE FOLLOWING NEW SUB-SUB-CLAUSES:

- "(ix) Ensure that all obstructions, soil and gravel heaps, related to the Contractors activities be removed before nightfall where applicable and as instructed by the Engineer and that the roads are safe for night traffic.
- (x) The Traffic Safety Officer shall, in addition to the duties listed in Clause 1502 (i), also be responsible for removal of broken-down vehicles off the roadway and implementing actions requested by the traffic authorities with regard to the work to be carried out, and shall be responsible for the erection and maintenance of all traffic signs necessary for the accommodation of traffic."

ADD THE FOLLOWING NEW SUB-CLAUSES TO CLAUSE 1502:

"(j) Public traffic

The contractor must plan and conduct his activities so as to bring about the least possible disruption to the traffic on the road. All halting of traffic will require the prior approval of the engineer and must be pre-arranged with the appropriate traffic authorities.

In all dealings with the public the Contractor shall bear in mind the public's right to enjoy the use of the road, and the Employer's desire to interfere as little as possible with this right. At all points of contact with the public, the Contractor shall deal with deliberate courtesy and understanding in any discussions or disputes.

(k) Failure to comply with provisions

The failure or refusal of the Contractor to provide barricades or traffic signs at the proper time, or to take the necessary precautions for the safety and convenience of public traffic as specified or instructed by the Engineer, shall be sufficient cause for the suspension of all work under this Contract without any additional compensation to the Contractor until the required accommodation of traffic has been completed to the satisfaction of the Engineer.

(l) Access to work area

Construction traffic will only be permitted to enter or leave the work area at points approved by the Engineer and as clearly indicated on the traffic management plans. When any access point is in use, flagmen shall be provided for each such point. At least two flagmen shall be stationed at the access point to control the movement of construction traffic, and to warn public traffic on both lanes of the existing road. It is not the purpose of these flagmen to stop public traffic flow.

(m) Extension of time for completion

Accommodation of public traffic on the works or any delays caused thereby, as well as any suspensions due to failure by the Contractor to comply with the provisions for the accommodation of traffic, will not be regarded as special circumstances for an extension of time.”

B1503 TEMPORARY TRAFFIC-CONTROL FACILITIES

REPLACE THE FIRST SENTENCE OF THE FIRST PARAGRAPH OF CLAUSE 1503 WITH THE FOLLOWING:

“The Contractor shall provide, erect and maintain the necessary traffic-control devices, road signs, channelization devices, barricades, warning devices and road markings (hereinafter referred to as traffic-control devices) in accordance with these special provisions and as shown on the drawings and in the South African Road Traffic Signs Manual in conjunction with the latest edition of Road Signs Note No.13 Road works, and remove them when no longer required. It shall be incumbent upon the Contractor to see to it that the abovementioned traffic-control devices are present where required at all times and are functioning properly, and he shall replace any that have been damaged, lost, stolen or obliterated at his own cost.”

REPLACE THE THIRD PARAGRAPH OF CLAUSE 1503 WITH THE FOLLOWING:

“The type of construction, spacing and placement of traffic-control devices shall be in accordance with the latest edition of Road Signs Note No.13, Road works, these special provisions, the drawings and the South African Road Signs Manual. The recommended arrangements of the traffic control devices illustrated in Appendices 1 to 6 of Road Signs Note No.13 and/or drawings shall not be departed from without prior approval of the Engineer. Typical arrangements expected to be used in the Contract are given on the Bid drawings.

However, this shall not absolve the Contractor of his obligations in preparing traffic management plans as per this Project Specification.

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

(b) Road signs and barricades

ADD TO SUB-CLAUSE 1503(B) THE FOLLOWING:

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

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

The traffic-control devices, temporary signs and devices required in the Contract are those designated in Road Signs Note No.13.

The covering of permanent road signs, if applicable, shall be by utilising a hessian bag, which shall be pulled over the sign in the form of a hood and fastened to the sign posts. Plastic bags or other materials and fastening by means of adhesive tape shall not be permitted. The cost of covering of permanent road signs shall be deemed to be covered by the Bided rates of items B15.01 and 15.10.

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

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

(c) Channelization devices and barricades

ADD TO SUB-CLAUSE 1503(C) THE FOLLOWING:

"Delineators shall be of plastic and shall be capable of withstanding winds caused by passing traffic in typical working conditions without falling over. To achieve this, the base shall be ballasted using sand bags.

Traffic cones manufactured in a fluorescent red-orange or red plastic material shall be used only at short term lane deviations during daylight. Cones used on all deviations shall be 750 mm high. Lane closures which continue into the night time shall be demarcated by delineators only.

All traffic cones and road signs shall be kept clean and visible at all times. All bituminous or other foreign material shall be removed by the Contractor, or the dirty traffic cones and road signs shall be replaced with new ones at the cost of the Contractor, as directed by and to the satisfaction of the Engineer.

The use of steel drums as Channelization devices will not be allowed on this Contract unless instructed by the Engineer. Channelization shall be effected by the use of delineators or cones as detailed in Road Signs Note No. 13 - Road works."

(e) Warning devices

ADD TO SUB-CLAUSE 1503(E) THE FOLLOWING:

"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 shall obtain a clearance permit from the Engineer before being allowed onto the site.

Rotating lights shall have an amber lens of minimum height of 200 mm and shall be mounted to ensure clear visibility from all directions. The lights on construction vehicles shall not be switched on while vehicles are being operated on unrestricted sections of a public road, but shall be switched on while construction vehicles are operating within the accommodation of traffic area, as the vehicles decelerate to enter a construction area, and as the vehicles accelerate to the general speed when entering the road from a construction area. Lights on plant shall operate continuously while the plant is working alongside sections of road open to public traffic.

All LDV's and cars operating on site shall also be equipped with rotating amber flashing lights which shall be placed so as to be clearly visible and operated continuously while the vehicles are maneuvering in or out of traffic or are travelling or parked alongside roads open to public traffic.

Rotating lights and the "Construction Vehicle" signs on the Contractor's vehicles and plant shall not be paid for separately but shall be included in the rates covering the use of the vehicles.

The Contractor shall apply and maintain lights together with temporary mounting brackets, to the approval of the Engineer. Vehicles and plant that do not comply with these requirements shall be removed from the site.

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

ADD THE FOLLOWING NEW SUB-CLAUSES TO CLAUSE 1503:

“(g) Other signs and facilities

The Engineer may instruct the Contractor to provide any other road sign, reflective tape, etc not measured in standard pay items. The road signs shall conform with the requirements of the South African Traffic Signs Manual, Road Note 13 or specification provided by the Engineer.

(h) High visibility Safety jackets

The Contractor will be responsible to ensure that all construction workers, staff of the Engineer and visitors shall wear high visibility safety jackets when moving around on site. The jackets shall be of an approved type, orange in Colour and shall be to the approval of the Engineer. The Contractor shall provide the Engineer with six jackets. No separate payment will be made for the jackets."

B1511 MAINTENANCE OF GRAVEL TEMPORARY DEVIATIONS AND EXISTING GRAVEL ROADS USED AS TEMPORARY DEVIATIONS

ADD TO CLAUSE 1511 THE FOLLOWING:

"Where applicable, all references to gravel roads and/or diversions shall also include gravel shoulders used as diversions."

B1517 MEASUREMENT AND PAYMENT

AMEND PAYMENTS AS FOLLOW:

<u>ITEM</u>	<u>UNIT</u>
B15.01 Accommodating traffic and maintaining temporary deviations.	(as specified)

ADD THE FOLLOWING:

"The Bided rate shall also include for the preparation of traffic management plans and their submission to the Engineer for approval.

The Bided rate shall also include for all costs associated with constructing the road under traffic and for complying with the restricted working conditions as per Clause SCC 13.1 of the Special Conditions of Contract."

<u>ITEM</u>	<u>UNIT</u>
B15.04 Relocation of traffic control facilities	Lump sum

ADD TO THE PAYMENT ITEM 15.04 THE FOLLOWING:

"The Bided lump sum shall cover all costs regardless of how many times the traffic control facilities are relocated. The Contractor can anticipate frequent relocations due to the nature of the site and restrictions on working space. Details of how often traffic control facilities need to be moved should be set out in the traffic management plans.

Payment of this item will be made on a monthly basis over the duration of the Contract, starting when traffic control measures are first implemented. The Bided lump sum shall be divided by the construction period to obtain a monthly claim."

SECTION 1600: OVERHAUL

B1602 DEFINITIONS

(a) Overhaul material

ADD TO SUB-CLAUSE 1602(A) THE FOLLOWING:

“Overhaul is not measured separately for payment for materials obtained from commercial sources.”

SECTION 1700: CLEARING AND GRUBBING

B1704 MEASUREMENT AND PAYMENT

<u>ITEM</u>	<u>UNIT</u>
B17.01 Clearing and grubbing	hectare (ha)

ADD TO PAYMENT ITEM 17.01 THE FOLLOWING:

“Clearing and grubbing for the construction of camp sites shall not be measured separately. Payment shall be regarded as included in the rates Bided for the applicable items for the above-mentioned work.

Within the road reserves clearing and grubbing will only be measured and paid for where required for road works.”

<u>“ITEM</u>	<u>UNIT</u>
B17.01 Clearing and grubbing of:	
a) Normal areas:	
i) Within the road reserve	hectare (ha)
ii) In borrow pits	hectare (ha)
b) Existing fill embankments with slopes steeper than 1:4	hectare (ha)

Measurement and payment for sub-items (a) and (b) shall be as specified for item B17.01 of the standard specifications. Where distinction is made for clearing and grubbing existing fill embankments with slopes steeper than 1:4 (vertical : horizontal), payment shall be made under item B17.01.”

SECTION 1800: DAYWORKS

B1801 Day works

Day works are specified in C3.3 Particular Specification, Section DWK: Day works

B1802 Measurement and Payment

ADD THE FOLLOWING PAYMENT ITEMS:

<u>ITEM</u>	<u>UNIT</u>
B18.00 DAYWORK SCHEDULE	
B18.01 Laborers:	
(a) Unskilled	hr
(b) Semi-skilled	hr
(c) Skilled	hr
B18.02 Foreman	hr
B18.03 Tipper trucks:	
(a) 3 – 5-ton	hr
(b) 5,1 – 10-ton	hr
B18.04 Loader (0.5 m ³ bucket)	hr
B18.05 Excavator (Cat 350 or similar)	hr
B18.06 Grader (Cat 140G or similar)	hr
B18.07 Compaction Rollers:	
(i) Vibratory roller	hr
(ii) Tamping roller	hr
(iii) Grid roller	hr
B18.08 Hand Controlled Compactors	
(i) Pedestrian roller (Bomag BW90 or similar)	hr
(ii) Vibrating plate	hr
(iii) Rammers (whackers)	hr
B18.09 Back loader (Cat 416D or similar)	hr
B18.10 Water truck (minimum 10 000-liter capacity)	hr
B18.11 Dozer (D7 or similar)	hr
B18.12 Flatbed truck	km
B18.13 LDV (1800cc minimum)	km
B18.14 Materials acquired under day works:	
(a) Provisional sum for materials acquired under days works	P Sum
(b) Handling costs and profit in respect of sub-item 18.16 (a) above	%

The payment of Day works will be dealt with as specified in C3.3 Particular Specification, Section DWK: Day works.

SECTION 2100: DRAINS

B2104 SUBSOIL DRAINAGE

(a) **Materials**

(i) Pipes

ADD TO SUB-CLAUSE 2104(A)(I) THE FOLLOWING:

“Perforated or slotted un-plasticized PVC pipes shall be used for subsurface drainage.”

(ii) Natural Permeable Material

ADD TO SUB-CLAUSE 2104(A)(II) THE FOLLOWING:

“The crushed stone shall be coarse graded (19 mm nominal size) and shall conform to the following requirements:

Percentage passing through a 26,5 mm sieve: 100 %.
Percentage passing through a 19,0 mm sieve: 60-85 %.”

ITEM

UNIT

ADD TO CLAUSE 2100 THE FOLLOWING:

“The subsoil drainage shall be installed before construction of any layer works. Construction shall only commence after final approval of subsoil drains by the Engineer.”

B21.20 Galvanised wire mesh 250 x 250 mm, at the outlets
of subsoil drainage systems. Mesh 10 mm x 2,5 mm
wire diameter

Number (No)

The unit of measurement shall be the number of 250 mm x 250 mm pieces of wire mesh, with a 10 mm x 10 mm spacing and 2,5 mm wire diameter built into the subsurface drain outlet structure as shown on the drawings.

The Bided rate shall include for procuring, furnishing and installing the material, cutting, waste and keeping the mesh in the pipe opening clean during installation.

ITEM

UNIT

B21.21 Subsoil drainage markers

Number (No)

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

SECTION 2200: PREFABRICATED CULVERTS

B2201 SCOPE

ADD TO CLAUSE 2201 THE FOLLOWING:

“It should be noted that the information given on the drawings may have to be altered due to actual site conditions. Construction shall only commence after final approval of information on the drawings.

Precast units shall only be ordered after actual measurements of length on site and not from lengths stated in the schedule of quantities.

The levels given for culverts on the drawings are subject to confirmation on site, and the contractor shall submit all levels to the engineer for confirmation before he commences with construction work for each culvert.

This section also covers work associated with the removal of existing pipes and their inlet and outlet structures. Due to the nature of the project, the Contractor can expect that works associated with the installation of pipe culverts will have to be carried out under traffic.”

B2210 LAYING AND BEDDING OF PREFABRICATED CULVERTS

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

Replace with the following:

"In accordance with the drawings, transverse construction joints are required in cast in situ concrete invert slabs for portal culverts. In addition, longitudinal construction joints as shown on the drawings between the invert slabs of each of the barrels of multiple culverts are required. Allowance for measurement and payment for a Class F1 surface finish and soft board in these joints is made in the bill of quantities. No payment shall be made for formwork on the outside edges of invert slabs (closest to excavated face). All culverts (precast as well as in situ) shall be constructed with an in situ reinforced concrete floor laid on a 75mm concrete screed".

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

B2211 BACKFILLING OF PREFABRICATED CULVERTS

ADD TO THE FOURTH PARAGRAPH OF CLAUSE 2211 THE FOLLOWING:

“Where backfilling is done in the upper layers of the road formation, the quality and strength of the backfill material shall at least match that of the surrounding layers.”

B2218 MEASUREMENT AND PAYMENT

Add the following:

<u>“ITEM</u>	<u>UNIT</u>
B22.01(c) Extra over sub item B22.01(a) for excavation by hand using hand tools	cubic metre (m3)

Measurement shall be as specified for pay item 22.01 of the standard specifications.

The Bided rate shall include full compensation for carrying out the excavations by hand where circumstances prevent the use of mechanical excavators.

ITEM	UNIT
B22.07(f) Formwork for joints in cast in situ concrete invert slabs	
(i) Transverse construction joints (type indicated)	square metre (m ²)
(ii) Longitudinal joints (as per drawing)	metre (m)

Measurement and payment shall be as specified in item 22.07 of the standard specifications with the exception that formwork for construction joints in cast in situ invert slabs in trench conditions as indicated on the drawings, shall be measured and paid for in accordance with section 6200 of the standard specifications. No payment shall be made for formwork to the outside edges of invert slabs (closest to excavated face)."

ITEM	UNIT
B22.08 Concrete backfills for culverts	cubic metre (m ³)

Add the following to this item:

"In addition to the requirements for measuring concrete backfill to rectangular culverts as specified for item 22.08, the following shall apply:

Concrete backfill shall be measured to the actual dimensions of the precast units, i.e. actual volumes between ribs and haunches shall be taken into account. For the purpose of calculating concrete backfill quantities, the horizontal dimensions of the concrete backfill on the outside of the culvert(s) (closest to excavated face), shall be taken as 100mm maximum irrespective of what type or make of precast portal is used or the actual width of the excavation.

The width of the concrete backfill between portals in the case of multiple culverts, shall be taken as 80mm for precast units with a leg height of 1500mm and 100mm for precast units with a leg height exceeding 1500mm. The vertical dimensions, in both cases, shall be equal to the height of the portal."

AMEND PAYMENT ITEM 22.12 TO READ AS FOLLOWS:

ITEM	UNIT
"B22.12 Removing existing concrete, brickwork and stonework	
(a) Plain concrete	Cubic metre (m ³)
(b) Reinforced concrete	Cubic metre (m ³)
(c) Brickwork	Cubic metre (m ³)
(d) Stone Masonry walls and grouted stone pitching	Cubic metre (m ³)
(e) General stone pitching	Cubic metre (m ³)"

ADD TO THE FIRST PARAGRAPH, WHICH DESCRIBES THE UNIT OF MEASUREMENT, THE WORDS: "brickwork and stonework" AFTER THE WORD: "concrete".

PARAGRAPHS 2, 3 AND 4 OF PAYMENT ITEM 22.12 IN THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS ITEM B 22.12.

Add the following new items:

ITEM	UNIT
B22.29	Tie bars for joining in situ concrete invert slabs to inlet and outlet structures, as indicated on the drawings (Type, diameter and length indicated)
	Number (No.)

The unit of measurement shall be the number of tie bars installed as specified and indicated on the drawings.

The Bided rate shall include full compensation for supply and installation of the tie bars.

ITEM	UNIT
B22.30	a) Preparation and compaction of in-situ bedding material to 90% of Mod. AASHTO density (depth indicated)
	cubic metre (m3)
	b) Extra over sub-item B22.30(a) for compaction to 93% of Mod. AASHTO density (depth indicate)
	cubic metre (m3)

The unit of measurement shall be the cubic metre of material ripped and compacted as specified.

The Bided rate shall include full compensation for the ripping of the in-situ material to the specified width and depth, wetting of the material to such an extent that the specified density can be achieved.

ITEM	UNIT
B22.31	Dewatering and keeping dry of culvert excavations
	Number (No.)

The unit of measurement shall be the number of culverts constructed. The Bided rate shall be full compensation for dewatering and keeping dry of the culvert excavations until the backfill is completed.

Payment shall be as follows:

- (i) 80% of the payment shall be made after the barrel of the culvert has been constructed and backfilled.
- (ii) Remaining 20% of the payment shall be made after the wing walls have been constructed and backfilled.

ITEM	UNIT
B22.32	Cutting of concrete pipes
a)	Diameter indicated
	Number (No.)
<p>The unit of measurement shall be the number of pipes that have been cut. The Bided rate shall be full compensation for the cutting, by means of mechanical saw (angle grinder) and finishing off of the pipes for the specific angle of skew at which the pipes must be laid.</p> <p>Cutting of pipes shall only be paid for if the headwall of the wing walls are at such a skew angle in respect to the center line of the pipes that cutting is required and where non-standard lengths are required. The maximum skew angle at which pipes are allowed to be cut shall be 30 degrees and the minimum length of pipe, measured along the shortest side, shall be 1,5m.</p> <p>Classification of soft/hard materials as well as all quantities shall be agreed upon and finalised as the work progresses.”</p>	

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

B2304 CONSTRUCTION

(e) Cast in-situ Kerbs and channels

ADD TO SUB-CLAUSE 2304(E) THE FOLLOWING:

“Where new kerbing and channeling has to be laid in an existing bitumen surface, the surface shall be neatly cut to a straight line with an angle grinder or similar approved means along the edge of the channel. The existing road foundation shall then be carefully removed over the width and depth required to construct the new kerb and channel.

During the construction of the in-situ channel, the contractor shall take care not to stain or damage the existing road surface. Any damage, excess over break, undermining or staining shall be repaired by the Contractor at his own expense.”

(i) Construction sequence

REPLACE PARAGRAPHS (I), (II), AND (III) WITH THE FOLLOWING:

“In all cases where kerbing, and/or channeling adjoin the asphalt or bituminous surface of road, the kerbing and/or channeling will be constructed prior to any asphalt or bituminous surfacing will take place. The contractor will only be allowed to prime the base prior to the start of the concrete works, no other seal work may commence before the completion of kerbing and/or channeling next to the road surface. Before commencing with the kerbing and/or channeling, the base must be accurately cut to line with a mechanical saw to a minimum depth of 75mm. After excavation the concrete shall then be casted or pre cast kerbs laid against the base. Any damage to the edge of the base shall be repaired prior to the surfacing of the base.

All material outside the cut line must be removed to the required thickness of concrete before commencing with the casting of the concrete. The bedding of the drain shall thereafter be compacted as described in sub clause 2304(a)(ii).

The contractor shall, therefore take note of areas where concrete drains etc. are to be constructed against the edge of surfacing in order not to lose significant areas of surfacing when saw cutting is undertaken.

No payment shall be made or repair work to the satisfaction of the engineer for damage caused by the cutting/excavation process of the bituminous surface and base layers.”

ADD THE FOLLOWING NEW SUB-CLAUSES TO CLAUSE 2304:

“(l) Shrinkage joints for cast in-situ concrete work.

Unless shown otherwise on the drawings, cast in situ channels shall be provided with shrinkage joints spaced a maximum of 2m apart. Shrinkage joints shall be constructed so that shrinkage cracks are generated at the joints. Sections of channel which have cracked between shrinkage joints shall be removed and replaced by the contractor at his own cost.

(m) Formwork and finish

All visible edges of cast in-situ channels edge beams, kerbs, etc. shall be rounded with a rounding tool.”

SECTION 3100: BORROW MATERIALS

B3102 NEGOTIATIONS WITH OWNERS AND AUTHORITIES

ADD TO SUB-CLAUSE 3102(A) THE FOLLOWING:

“Arrangements with regard to access to borrow pits and alignment of haul roads shall be made between the contractor and the owners of the land on which the borrow pits are situated as well as the applicable local authorities. The engineer’s representative on site shall be present at such negotiations. All costs involved with such negotiations as well as the requirements contained in clause 3102 and clause 1225 of the specifications shall be borne by the contractor except that provision is made herein for compensation to the landowner for land used for borrow areas.”

B3103 OBTAINING BORROW MATERIALS

(a) General

ADD TO SUB-CLAUSE 3103(A) THE FOLLOWING:

“The Contractor shall note that natural materials which meet the requirements for the base and sub-base layers are limited, even when the properties are improved via stabilisation. Therefore, careful selection of materials will be required in the borrow pits. The Contractor shall refer to Section 3200 of the standard specifications with regard to his liabilities in respect of the contamination of good quality materials.

The expropriation and compensation for land from which borrow material is obtained shall be negotiated and paid for by the Contractor. A prime cost is allowed in the schedule of quantities for payment for royalties for land taken up by borrow pits. Cost incurred by the contract will only be disbursed if agreed to and approved by the Engineer.”

(c) Use of borrow materials

ADD TO SUB-CLAUSE 3103(C) THE FOLLOWING:

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

B3104 OPENING AND WORKING BORROW PITS AND HAUL ROADS

(a) Removing topsoil

ADD TO SUB-CLAUSE 3104(A) THE FOLLOWING:

“The topsoil to be stockpiled shall be placed between the public road and the physical borrow pit area so as to provide a temporary visual screen in front of the borrow activities. The topsoil shall not be stockpiled for longer than 6 months, nor shall the stockpile be higher than 2,5m.”

(g) Unproclaim private access roads

ADD TO SUB-CLAUSE 3104(G) THE FOLLOWING:

“The Contractor is responsible for proper maintenance of haul roads in cases where the material from the borrow pit areas has to be transported over secondary, tertiary, private or access roads. At the completion of activities in the borrow pits, the haul roads shall be restored to their original state and to the satisfaction of the Engineer.

Expropriation of borrow pits on private property by the Employer, will include access roads to the borrow pits. However, the Contractor is fully responsible for negotiating details of the right of access to the borrow pits with the private owners as well as for the building, maintenance and later removal of all access roads. No additional payment will be made for this work and full remuneration will be deemed to be included in the Bided rates for the various items where the material is to be used.”

B3108 MEASUREMENT AND PAYMENT

CHANGE ITEM 31.01 TO READ AS FOLLOWS:

ITEM

UNIT

B31.01 Excess overburden:

- | | |
|---|------------------|
| (a) Depth up to and including 0,5m | cubic meter (m3) |
| (b) Depth exceeding 0,5m and up to 1,0m | cubic meter (m3) |

Measurement and payment shall be as specified for item 31.01 of the standard specifications with the abovementioned depth ranges applicable."

ADD THE FOLLOWING NEW ITEMS:

ITEM

UNIT

"B31.04 Compensation to owners:

- | | |
|--|----------------|
| a. Allow a Prime Cost Sum as compensation to owner/authority for royalties for land used as gravel borrow pits | P Sum |
| b. Handling costs and profit in respect of sub item B31.04(a) above | Percentage (%) |

Payment shall be made in accordance with the stipulations of the general conditions of contract."

SECTION 3300: MASS EARTHWORKS

B3301 SCOPE

ADD TO CLAUSE 3301 THE FOLLOWING:

“The Contractor shall note the restricted nature of the earthworks in general, and where the widening of existing cuts and fills are required in particular. No extra over rates for widening of cuts, widening of fills or for working in restricted areas shall be applicable to this Contract.”

B3303 CLASSIFICATION OF CUT AND BORROW EXCAVATION

(a) Classes of excavation

REPLACE THE FIRST PARAGRAPH WITH THE FOLLOWING:

“The excavation of materials from cut or borrow for fills including excavation in layer works of existing roads, shall be classified as follows for purposes of measurement and payment. No distinction will be made between the material from the existing road and other materials in the road reserve.”

ADD THE FOLLOWING:

“Payment items 33.14 and 33.15 will not apply on this Contract.”

B3306 CUT AND BORROW

(a) Dimensions of Cuts

Delete the third paragraph from Clause 3306(a), apart from the first sentence thereof.

ADD THE FOLLOWING:

“Cut and borrow to fill will be measured under Item 33.01. The Contractor shall take note of the nature of the earthworks alongside the existing road. No extra over payments will be made in respect of the nature of the site or due to the dimensions of a particular cutting.”

B3307 FILLS

(i) Widening of fills

IN THE EIGHT PARAGRAPH OF SUB-CLAUSE 3307(I), DELETE THE SENTENCE: “An extra over payment for the widening of existing fills will apply under Item 13.16.”

ADD THE FOLLOWING:

“No extra over payments will be made in respect of the nature of the site or due to the dimensions of the fills being widened or constructed.”

B3312 MEASUREMENT AND PAYMENT

General directions

DELETE NOTE: “(3) Work in restricted areas” AND REPLACE WITH THE FOLLOWING:

“It may be necessary for the contractor to work in confined areas but no additional payment will be made for work done in “restricted areas”. In certain area the width of the fill material and pavement layers may reduce to zero and the working space may be confined. The method of construction in these confined areas depends on the contractor’s constructional plant. However, the contractor must note that measurement and payment will be in accordance with the specified cross-sections and dimensions, and that the rates and amounts Bided will be deemed to include full compensation for all special equipment or construction methods or for any difficulty encountered when 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 additional payment be considered on account of such difficulties.”

OMIT PAYMENT ITEMS 33.14 AND 33.15

SECTION 3400: PAVEMENT LAYERS OF GRAVEL MATERIAL

B3402 MATERIALS

(a) General

DELETE THE FIRST SENTENCE OF THE SIXTH PARAGRAPH AND REPLACE WITH:

“No distinction will be made for payment purposes between materials from the pavement layers of existing roads and other materials from the road reserve, or between cemented and non-cemented material from pavement layers of existing roads.”

B3406 QUALITY OF MATERIALS AND WORKMANSHIP

ADD TO CLAUSE 3406 THE FOLLOWING:

“Test results and re-measurements shall be assessed in accordance with the provisions of Section 8300: Quality Control (Scheme 2) of the standard specifications, as amended in these project specifications.”

B3407 MEASUREMENT AND PAYMENT

REPLACE THE FIRST PARAGRAPH WITH THE FOLLOWING:

“It may be necessary for the contractor to work in confined areas but no additional payment will be made for work done in “restricted areas”. In certain areas the width of the fill material and pavement layers may reduce the zero and the working space may be confined. The method of construction in these confined areas depends on the contractor’s constructional plant. However, the contractor must note that measurement and payment will be in accordance with the specified cross-sections and dimensions, and that the rates and amounts Bided will be deemed to include full compensation for all special equipment or construction methods or for any difficulty encountered when 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 additional payment be considered on account of such difficulties.”

ITEM

UNIT

B34.01 Pavement layers constructed from gravel taken from cut or borrow, including free-haul up to 1,0 km:

(a) 150mm Gravel selected layer compacted to:

ADD THE FOLLOWING SUB-ITEM:

“(iii)	90% of modified AASHTO density (150mm thickness)	Cubic metre (m ³)”
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SECTION 3500 : STABILISATION

B3502 MATERIALS

(a) Chemical stabilizing agents

ADD TO SUB-CLAUSE 3502(A) THE FOLLOWING:

“The new SABS ENV 197-1 standard specifications will be applicable to this Contract (Refer to Clause B1229 in the Project Specification). According to these specifications the following cements are prescribed:

- (ii) Ordinary Portland cement: CEM 1
- (iii) Portland blast-furnace cement: CEM III/A, III/B AND III/C
- (iv) Ground granulated blast-furnace cement: As specified in 3502(a)(iv)

- (v) Portland fly-ash cement: CEM II/A-V, CEM II/B-V, CEM II/A-W, CEM II/B-W”

B3509 QUALITY OF MATERIALS AND WORKMANSHIP

ADD TO CLAUSE 3509 THE FOLLOWING:

“Test results and re-measurements shall be assessed in accordance with the provisions of Section 8300: Quality Control (Scheme 2) of the standard specifications, as amended in these project specifications.

The Contractor shall advise the Engineer at least 24 hours in advance of any stabilization work to enable him to organise and conduct his own control tests.

Where the stabilizing agent is to be spread by hand, the pockets of stabilizing agent shall be placed on the layer at regular intervals. However, spreading shall not be carried out before the engineer is satisfied that the correct quantity of stabilizing agent can be spread.

Stabilized layers shall be primed within 24 hours of construction. Stabilized layers shall be covered for curing within 7 days by means of seal or covered by sand. If the stabilized layer is found to have failed, the cover material shall be removed and the layer rectified if instructed by the engineer. No additional payment shall be made for such removal and remedial work.”

B3510 MEASUREMENT AND PAYMENT

DELETE THE NOTE AT THE START OF THE MEASUREMENT AND PAYMENT CLAUSE DEALING WITH WORK IN RESTRICTED AREAS AND REPLACE WITH:

“On this contract, no extra over payment will be made due to the nature of the site or the size of the work area available. All costs associated with carrying out the works in restricted areas are deemed to be included in the Bided rates of the specific item in the bill of quantities.”

B35.02 Chemical stabilising agent:

ADD THE FOLLOWING NOTE TO THIS PAYMENT ITEM:

“The notation used for Portland cement and Portland blast-furnace cement corresponds with the notation specified in SABS ENV 197-1.”

SECTION 4100: PRIME COAT

B4102 MATERIALS

(a) Priming Material

ADD TO THE WORDS: "such as MSP 1 or similar." TO THE LAST OF THE LISTED PRIMING MATERIALS.

B4106 APPLICATION OF THE PRIME COAT

ADD THE FOLLOWING TO SUBCLAUSE (c):

"The nominal rate of application of the prime for Bid purposes shall be 0.75l/m²."

SECTION 4200: ASPHALT BASE AND SURFACING MIXTURES**B4204: COMPOSITION OF****Add the following to the fifth paragraph:**

The mix designs for continuously graded asphalt surfacing shall be executed to conform to the test requirements given in following Table B4203/1, which replaces the requirements for these mixes given in Table 4203/1 of the standard specifications.

Number of Marshall compaction blows on each side of briquette = 75.”

TABLE B4203/1		
PROPERTY	CONTINUOUSLY GRADED ASPHALT SURFACING	
	MINIMUM	MAXIMUM
Stability (kN)	8,0	15,0
Flow (mm)	2,0	4,0
Stability/flow (kN/mm)	2,5	-
Voids (%)	3,0	6,0
Air permeability (cm ³)	-	1 x 10 ⁻⁸
Film thickness (µm)	5,0	-
Immersion index (%)	75	-
VMA (%)	15	-
Dynamic Creep Modulus (Mpa) at 40° C	15	-
Static Creep Modulus (Mpa) at 40° C	100	-
Indirect tensile strength at 25° C (kPa)	1 000	-
Filler/bitumen ratio	1,0	1,5

SECTION 5600: ROAD SIGNS

B5602 MATERIALS

(g) Retro-reflective material

IN THE FIRST SENTENCE, REPLACE "SABS 1519" WITH "SABS 1519-1" AND DELETE "and the adhesion requirements of CKS 191."

ADD THE FOLLOWING:

"When measured with a field retro-reflectometer in accordance with section B8118, the coefficient of retro-reflection of a retro-reflective material shall not be less than the appropriate value given in Table B8118/1."

(k) Black vinyl

IN THE SECOND SENTENCE REPLACE "SABS 1519" WITH "SABS 1519-1" AND DELETE THE REST OF THE SENTENCE.

ADD THE FOLLOWING SUBCLAUSE:

"(m) Temporary covers for road signs

When required, existing road signs shall be fully or partially covered with burlap or other approved material to obscure destinations that are temporarily inapplicable or irrelevant.

The covers shall be neatly applied and firmly fixed in position on the rear side of the sign so that they will be able to withstand strong gusts of wind or eddies caused by passing traffic."

B5603 MANUFACTURING OF ROAD SIGN BOARDS AND SUPPORTS

(a) Road sign boards

(i) Steel plate road sign boards

ADD THE FOLLOWING AS THE FOURTH PARAGRAPH:

"Steel plate used to manufacture guidance signs shall be pre-punched by means of an automated process with 5 mm holes in a rectangular grid pattern not exceeding 150 mm c/c."

B5610 DANGER PLATES AT CULVERTS/STRUCTURES

ADD THE FOLLOWING:

The unit of measurement shall be the number of danger plates provided and erected in accordance with the drawings.

<u>ITEM</u>	<u>UNIT</u>
B56.10 Danger plates at culverts/structures	
(a) Type A at stormwater culverts (size indicated)	number (No.)
(b) Type B at bridges (size indicated)	number (No.)

The Bided rate shall include full compensation for all labour and material, painting, posts, excavation, backfilling with soil etc., as may be necessary for completing the work in accordance with the details shown on the drawings."

SECTION 5700: ROAD MARKINGS

B5702 MATERIALS

- (a) **Paint**
- (ii) Retro-reflective road-marking paint

ADD TO SUB-CLAUSE 5702(A)(II) THE FOLLOWING:

"During actual painting the Contractor shall supply sealed samples of the paint to be used to the Engineer together with details of the paint batch numbers and testing carried out on these particular batches by the paint manufacturer to prove compliance with this specification. These samples shall be kept until the end of the defects liability period."

B5704 MECHANICAL EQUIPMENT FOR PAINTING

ADD TO CLAUSE 5704 THE FOLLOWING:

"The machine shall always operate in the direction of the traffic when applying lane markings."

B5712 FAULTY WORKMANSHIP OR MATERIALS

ADD THE FOLLOWING PARAGRAPH:

"Should less than 95% of the road markings comply with the specified coefficient of retro-reflected luminance when tested in accordance with Section B8119, the Contractor shall repaint the works at his own cost."

SECTION 6400: CONCRETE FOR STRUCTURES

B.6402 MATERIALS

(a) Cement

Replace this sub-section with the following:

"Refer to section 1142 for specification of cement."

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

B.6404 CONCRETE QUALITY

(b) Strength concrete

Add the following paragraph:

"The cement content for any class of structural concrete or mass concrete used in structures shall not be less than 300kg/m³ of concrete.

The contractor must provide the engineer with complete mix designs and materials for strength concrete at least six (6) weeks before the first concrete is cast on the project".

B.6405 MEASURING THE MATERIALS

(c) Aggregates

Add the following:

"All concrete for structures shall be manufactured by mechanical mass batching unless authorised otherwise by the engineer for minor concrete structures or for labor-intensive methods."

B.6407 PLACING AND COMPACTING

(a) General

Add the following after the third paragraph:

"Concrete shall only be placed up to 20h00 at the latest. Under exceptional circumstances the Engineer may allow night work on condition that proper lighting arrangements can be made and a new and rested shift for night work is provided and ambient temperatures are such as to not adversely affect the setting of the concrete."

B.6408 CONSTRUCTION JOINTS

(a) General

Add the following:

"No construction joints other than those indicated on the drawings will be permitted without the written approval of the engineer".

B.6409 CURING AND PROTECTING

Add the following:

"The surface area of bridge and culvert floor slabs and decks shall be cured as follows:

- (i) The area of freshly cast and finished concrete surface shall be immediately covered as specified in clause 6409(e).
- (ii) After the concrete has set sufficiently the entire area shall be treated with an approved curing compound as specified in clause 6409(f)."

B.6414 QUALITY OF MATERIALS AND WORKMANSHIP

(a) Criteria for compliance with the requirements

Add the following:

"Quality control shall be carried out by the engineer as specified in Section 8200: Quality Control (Scheme 1)."

Add the following new paragraph:

“(d) Concrete cores - strength requirements

Cores will only be drilled if authorised by the engineer. This will only be considered if the contractor's own cubes, when crushed by the engineer, attained the required 28-day cube strength."

B.6416 MEASUREMENT AND PAYMENT

ITEM

UNIT

B64.01	Cast in situ concrete:	cubic metre (m ³)
--------	------------------------	-------------------------------

Add the following after the first paragraph:

"Where foundation slabs are set directly against the face of excavations, the volume of concrete measured for payment shall include the total volumes of concrete placed, allowing for up to a maximum over the neat footing dimensions of 200mm where in the opinion of the engineer accurate excavation to neat lines and levels indicated on the drawings is not possible. (No formwork to the footing shall be measured when the concrete is cast against the face of the excavations)."

SECTION 8100: TESTING MATERIALS AND WORKMANSHIP

B8111 TESTS ON PAVEMENTS

B8111 (b) Straight-Edge Test for Surface Irregularities on Surfaces with a Coarse Surface Texture

ADD TO SUB-CLAUSE 8111(B) THE FOLLOWING:

“The Contractor shall perform surface irregularity tests on base course by means of a 3,0 m straight-edge with the necessary wedge as described in Clause 8111 (b), and shall have the straight-edge and wedge on site throughout the production of the base course for the use of himself during process control testing and for the use of the Engineer during acceptance control testing.

No separate payment shall apply for having the straight edge and wedge on site.”

ADD THE FOLLOWING NEW CLAUSES:

“B8118 TESTS ON RETRO-REFLECTIVE MATERIAL FOR USE ON ROAD SIGNS

On site testing of the retro-reflective properties of road signs shall be done with a field retro-reflectometer measuring at an entrance angle of 5,0° and an observation angle of 0,33°. The coefficient of retro-reflection so determined shall not be less than the relevant values given in Table B 8118/1 below. The coefficients of retro-reflection are expressed in candelas per lux per square meter (cd/(lux/m²)).

TABLE B 8118/1 COEFFICIENTS OF RETRO-REFLECTION

1	2	3	4	5	6	7	8	9	10	11
Class	Observation angle (degrees)	Entrance angle (degrees)	Coefficient of retro-reflection for different colors of material when measured with Standard Illuminant A* (cd/(lux/m²)) minimum							
			Red	Orange	Yellow	Green	Blue	Purple	White	Brown
I	0,33	5	10	20	35	7	3	2	50	3
II	0,33	5	20	40	70	14	6	4	100	6
III	0,33	5	30	60	105	21	9	6	150	9

*See CIE Publication 15 (E-1.3.1)

B8119 TESTING OF APPLIED ROAD MARKINGS

Road markings will be checked for compliance with the specifications utilising appropriate equipment and in accordance with the following standard:

Night-time retro-reflectivity: SABS 1261: *Determination of retro-reflected luminance by means of a portable retro-reflectometer.* (Measurement to SABS 1261 shall be made in accordance with the 30 m measurement geometry).

(a) Sampling procedure for testing of road markings

Acceptance testing shall be done per uniform section of road and will be based on a sample not exceeding 5% of the works for retro-reflective measurements.

The procedure shall be as follows:

- (i) Per uniform section, test locations shall be identified randomly. Each randomly selected position shall be 200m in length. At each test location the 200m section shall be marked out into four 50m long sections. One 5m length shall be selected within each 50m section and measurements shall be made on such a length. (One 200m section length shall therefore be considered as a 5% sample for a road section of 4km in length)

- (ii) The following number of tests for retro-reflectivity will be done per 200m section. (Depending on roadway cross-section).

Line location	No of tests	Sample %
Left edge line (yellow)	2	2,5%
Lane lines (white)	2	2,5%
No overtaking line (white)	4	5%
Dividing line (white)	4	5%

The following line types will be tested individually, subject to the indicated sampling rate:

Line location	Sample %
Stop lines or yield lines	20% in total
Painted islands	2,5% of square metre

Each reported retro-reflection test will comprise the average of three (3) readings.”

SECTION 8300: QUALITY CONTROL (SCHEME 2)

B8301 SCOPE

ADD THE FOLLOWING TO CLAUSE 8301 OF THE SPECIFICATIONS:

“Quality control shall be carried out in accordance with the requirements of Section 8300: Quality Control (Scheme 2).”

B8309 PROCESS CONTROL BY THE CONTRACTOR

ADD TO CLAUSE 8309 THE FOLLOWING:

“For the purpose of this Contract process or quality control by the Contractor comprises at least the following:

Soil Tests:

Field densities, maximum dry density and optimum moisture content determinations, CBR, UCS, indicator tests (grading and PI), moisture contents, solid densities and chemical tests relating to stabilizing agent contents;

Aggregate tests:

Grading, flakiness index, average least dimension (ALD);

Concrete tests:

Concrete mix designs, slump and cube crushing strengths.”

GENERIC LABOUR-INTENSIVE SPECIFICATION

The Generic Labour-intensive specification below is the same as SANS 1921-5, Construction and management requirement for works contracts- Part 5: Earthwork’s activities which are to be performed by hand and should be included in the scope of works without amendment or modification as set out below.

SCOPE

This specification establishes general requirements for activities which are to be executed by hand involving the following:

- a) Trenches having a depth of less than 1.5 metres
- b) Storm water drainage
- c) Low-volume roads and sidewalks

PRECEDENCE

Where this specification is in conflict with any other standard or specification referred to in the Scope of Works to this Contract, the requirements of this specification shall prevail.

HAND EXCAVATEABLE MATERIAL

Hand excavatable material is material:

- a) Granular materials:
 - i) Whose consistency when profiled may in terms of table 1 be classified as very loose, loose, medium dense, or dense; or
 - ii) Where the material is a gravel having a maximum particle size of 10mm and contains no cobbles or isolated boulders, no more than 15 blows of a dynamic cone penetrometer is required to penetrate 100mm;

b) Cohesive materials:

i) Whose consistency when profiled may in terms of table 1 be classified as very soft, soft, firm, stiff and stiff / very stiff; or

ii) Where the material is a gravel having a maximum particle size of 10mm and contains no cobbles or isolated boulders, no more than 8 blows of a dynamic cone penetrometer is required to penetrate 100mm;

Note:

1) A boulder, a cobble and gravel are material with a particle size greater than 200mm, between 60 and 200mm.

2) A dynamic cone penetrometer is an instrument used to measure the in-situ shear resistance of a soil comprising a drop weight of approximately 10 kg which falls through a height of 400mm and drives a cone having a maximum diameter of 20mm (cone angle

of 60° with respect to the horizontal) into the material being used.

Table 1: Consistency of materials when profiled

GRANULAR MATERIALS		COHESIVE MATERIALS	
CONSISTENCY	DESCRIPTION	CONSISTENCY	DESCRIPTION
Very loose	Crumbles very easily when scraped with a geological pick.	Very soft	Geological pick head can easily be pushed in as far as the shaft of the handle.
Loose	Small resistance to penetration by sharp end of a geological pick.	Soft	Easily dented by thumb; sharp end of a geological pick can be pushed in 30-40 mm; can be moulded by fingers with some pressure.
Medium dense	Considerable resistance to penetration by sharp end of a geological pick.	Firm	Indented by thumb with effort; sharp end of geological pick can be pushed in upto 10 mm; very difficult to mould with fingers; can just be penetrated with an ordinary hand spade.
Dense	Very high resistance to penetration by the sharp end of geological pick; requires many blows for excavation.	Stiff	Can be indented by thumb-nail; slight indentation produced by pushing geological pick point into soil; cannot be moulded by fingers.
Very dense	High resistance to repeated blows of a geological pick.	Very stiff	Indented by thumb-nail with difficulty; slight indentation produced by blow of a geological pick point.

Trench excavation

All hand excavateable material in trenches having a depth of less than 1,5 metres shall be excavated by hand.

Compaction of backfilling to trenches (areas not subject to traffic)

Backfilling to trenches shall be placed in layers of thickness (before compaction) not exceeding 100mm. Each layer shall be compacted using hand stampers

- a) to 90% Proctor density;
- b) such that in excess of 5 blows of a dynamic come penetrometer (DCP) is required to penetrate 100 mm of the backfill, provided that backfill does not comprise more than 10% gravel of size less than 10mm and contains no isolated boulders, or
- c) such that the density of the compacted trench backfill is not less than that of the surrounding undisturbed soil when tested comparatively with a DCP.

Excavation

All hand excavateable material including topsoil classified as hand excavateable shall be excavated by hand. Harder material may be loosened by mechanical means prior to excavation by hand.

The excavation of any material which presents the possibility of danger or injury to workers shall not be excavated by hand.

C3.3 PARTICULAR SPECIFICATIONS

In addition to the Standardized and Project Specifications the following Particular Specifications shall apply to this contract and are bound in hereafter.

SECTION EMP	ENVIRONMENTAL MANAGEMENT SPECIFICATION
SECTION DWK	DAY WORKS
SECTION OHS	OHSA 1993 SAFETY SPECIFICATION

SECTION EMP: ENVIRONMENTAL MANAGEMENT SPECIFICATION

EMP.1 General

In order to ensure that the construction works is carried out in an environmentally sensitive matter, strict compliance to the Environmental Management Plan (EMP) guidelines is required. The EMP is bounded to this document under Part C4: **Site Information**. The purpose of the EMP is to:

- Encourage good management practices through planning and commitment to environmental issues,
- Provide rational and practical environmental guidelines to:
 - i. Minimize disturbance of the natural environment,
 - ii. Prevent pollution of land, air and water,
 - iii. Prevent soil erosion and facilitate re-vegetation.
- Adopt the best practicable means available to prevent or minimize adverse environmental impact,
- Develop waste management practices based on prevention, minimization, recycling, treatment or disposal of wastes,
- Train employees and contractors with regard to environmental obligations.

EMP.2 Training and Induction of Employees

- The Contractor has a responsibility to ensure that all those people involved in the project are aware of and familiar with the environmental requirements for the project (this includes sub-contractors, casual labour, etc.). The EMP shall be part of the terms of reference for all contractors, sub-contractors and suppliers.

EMP.3 Complaints Register and Environmental Incident Book

Any complaints received by the project team from the public will be recorded. The complaint should be brought to the attention of the site manager, who will respond.

The following information must be recorded:

- Time, date and nature of the complaint,
- Type of communication (telephone, letter etc.),
- Name, contact address and telephone number of the complainant,
- Response and investigation undertaken and
- Actions taken and by whom.

All complaints received will be investigated and a response given to the complainant within 14 days.

All environmental incidents occurring on the site will be recorded. The following information will be provided:

- Time, date, location and nature of the incident,
- Actions taken and by whom.

EMP.4 Site Cleanliness and Neatness

- Location of a construction camp is to be approved by the Engineer and is to be restored to its previous condition after completion of construction.
- The construction camp should preferably be fenced with a 1.8m bonnox fence or similar approved.
- All materials, equipment, plant and vehicles must be stored within the construction camp.
- A dedicated area must be made available for construction staff to change and store their personal belongings.

EMP.5 Access

- Access to existing roads, schools, buildings, shops and residential properties must not be impeded during construction.
- Access roads utilised by the Contractor must be maintained in good condition.

EMP.6 Borrow Pits

- Mining authorizations (permits) for borrow pits must be obtained from the Department of Minerals and Energy (DME) in consultation with the Department of Water Affairs and Forestry (DWAF).
- Spoil dumps resulting from borrow pits must not interfere with any natural surface drainage.
- Borrow pits must be rehabilitated after use in accordance with the requirements of DME and DWAF.
- Borrow pits will be fenced and the necessary warning signs will be erected.

EMP.7 Dust Control / Air Quality

- Dust suppression measures must be implemented during construction by ensuring that all surfaces prone to dust generation are kept damp (e.g. use of water tanker).
- Ensure that vehicles and equipment are in good working conditions and that emissions are not excessive.
-
- Ensure that vehicles and equipment are in good working conditions and that emissions are not excessive.
- Special care must be taken in areas where the route passes close to schools and residential areas.
- The speed of construction vehicles must be reduced.

EMP.8 Fauna

- Contractor staff may not chase, catch or kill animals encountered during construction.

EMP.9 Fire Prevention and Control

- Smoking is prohibited in the vicinity of flammable substances.
- The contractor must ensure that fire-fighting equipment is available on site, particularly where flammable substances are being stored or used, and that construction staff are aware of where it is kept and how it is operated.
- Fires started for comfort (warmth) are prohibited, due to the risk of veld fires and risk to adjacent property owner's lands.

EMP.10 Grave Sites

- Gravesites in close proximity to the road must not be disturbed during construction.

EMP.11 Materials Handling and Spills Management

- Any hazardous materials to be used during construction (e.g. lime, fuel, paint, etc) are to be stored in a designated area at the campsite.
- The storage containers/facilities (including any diesel/petrol tanks) must be placed on an impermeable surface and surrounded by a bund wall, in order to ensure that accidental spillage does not pollute the environment.
- Workers must at all times be made aware of the health and safety risks associated with any hazardous substances used (e.g., smoking near fuel tanks), and must be provided with appropriate protective clothing/equipment in case of spillages or accidents.
- Ensure all staff and contractors undergo relevant training in the maintenance of equipment to prevent the accidental discharge or spill of fuel, oil, lubricants and other chemicals.
- Any spill of potentially hazardous materials must be cleaned up immediately (Potentially hazardous materials on site include paint, oil, grease, fuel, turpentine, etc.).
- The area of contaminated soil or spill must be deposited into the hazardous waste container(s).
- The contractor should keep Peat, Sorb or a similar absorbent on site to clean up any spills. The absorbent must be stored in a designated area and be available for inspection.
- All spills are to be recorded in the environmental incident book.

EMP.12 Noise

- Noise generating activities must be restricted to between 07:00 and 17:00 Monday to Friday, unless otherwise approved by the appropriate competent person in consultation with adjacent landowners/affected persons.
- All equipment, vehicles and machinery must be in good working condition and be equipped with sound mufflers if necessary.
- Construction staff must be trained and made aware of not creating unnecessary noise such as hooting and shouting.

EMP.13 Pollution Control

- Soil and water pollution through usage of fuel, oil, paint, bitumen or other hazardous substances must be avoided.
- All construction vehicles are to be maintained in good working order so as to prevent soil or water pollution from oil, fuel or other leaks, and to reduce noise pollution.

EMP.14 Rivers and Streams

- During construction of bridge structures, there must be no obstruction of the water flow of rivers and streams.
- Excavated material must not be stockpiled on or near riverbanks, in order to prevent sedimentation occurring.
- Erosion control measures must be employed both during and after construction.
- No impediments to natural surface water flow, other than approved erosion control measures, must occur.

EMP.15 Safety

- Safety measures, such as detour signs, must be implemented during construction to ensure the safety of workers, pedestrians and drivers/passengers in vehicles in the vicinity of construction work.
- Special care must be taken in the vicinity of schools to ensure the safety of children wishing to cross the road under construction.
- The relevant signage (e.g. speed control signs) must be erected alongside the road during the operation phase in order to control traffic.
- Accommodation must be made for pedestrian pathways alongside the road during the construction and operation phases.

EMP.16 Soil Management

- Stormwater drainage pipes must be installed alongside the road in all areas susceptible to soil erosion.
- Erosion should be minimized by the construction of meadow drains and the planting of indigenous vegetation on the side slopes and drains to reduce flow velocity of stormwater.
- Spoil from cuts may be used in existing erosion galleys.
- Stone pitching and gabions should be constructed at pipe culvert outlets.
- Accidental spills of contaminants onto the ground e.g., oil, concrete, fuel and chemicals should be removed together with the contaminated soil.
- If necessary, an absorbent such as Peat Sorb should be used the aid in cleaning up the spill. The contaminated soil should be disposed of in an appropriate container, depending on its classification.
- Servicing and re-fueling of vehicles must only be carried out at construction camp.

EMP.17 Worker Conduct

Code of Conduct for Construction Personnel:

- Do not leave the construction site untidy and strewn with rubbish which will attract animal pests.
- Do not set fires.
- Do not cause any unnecessary, disturbing noise at the construction camp/site or at any designated worker collection/drop off points.
- Do not drive a construction-related vehicle under the influence of alcohol.
- Do not exceed the national speed limits on public roads or exceed the recommended speed limits on the site.
- Do not drive a vehicle which is generating excessive noise or gaseous pollution (noisy vehicles must be reported and repaired as soon as possible).
- Do not litter along the roadsides, including both the public and private roads.
- Do not pollute any water bodies (whether flowing or not).
- No member of the construction team is allowed to enter the areas outside the construction site.

EMP.18 Traffic Disturbances and Diversions

- Any traffic diversions must be undertaken with the approval of all relevant authorities and in accordance with all relevant legislation.
- Wherever possible, traffic diversion must only take place on existing disturbed areas and remain within the existing road reserve.
- Traffic diversion routes must be rehabilitated after use.

EMP.19 Vegetation

- Only vegetation falling directly on the route must be removed where necessary.
- Alien vegetation within the road reserve must be eradicated, and management measures must be implemented for future control of these species.
- Vegetation that has been removed from large areas (e.g. on traffic diversion routes) during construction must be replaced with indigenous vegetation after construction has been completed.

EMP.20 Waste Management

- All general, non-hazardous waste must be placed in a skip container and disposed of at a registered waste disposal site.
- The contractor is to ensure that the portable toilet facilities at the campsite are properly maintained and in working order.
- No disposal, or leakage, of sewage must occur on or near the site.
- All hazardous waste (e.g. oil, paint, empty lime bags, contaminated wash water, etc) must be stored in leak proof containers and disposed of at a registered hazardous waste disposal site.
- The contents of waste storage containers must, under no circumstances, be emptied to the surrounding area. In general, littering, discarding or burying of any materials is not allowed on site or along the route.
- Adequate waste receptacles must be available at strategic points around the construction camp and site for all domestic refuse and to minimize the occurrence of littering.
- Concrete rubble must be collected and disposed of as directed by the Project Manager.
- Each working area must be cleared of litter and building waste (e.g., rubble, wood, concrete packets etc.) on completion of the day's work.
- Any spill around the container(s) should be treated as per Section EMP11 and EMP16.

SECTION DWK: DAY WORKS

This part of the Project Specifications deals with the provision for Day works in the Schedule of Quantities. Rates for Day works shall be entered in Section 1800 of the Schedule of Quantities in accordance with the following specifications.

DWK. 1 SCOPE

According to clause 6.5 of the General Conditions of Contract for construction works (GCC) 2015 edition, certain work may be carried out using rates tendered in the day work schedule. A schedule of personnel, plant and equipment which may be necessary to perform work on a day work basis is included in the schedule of quantities. The quantities used in the schedule are for tender evaluation purposes only and the use or not of these items shall not constitute a variation in terms of Clause 6.5 of the General Conditions of Contract 2015 edition.

No work will be paid for as Day works without the written instruction or approval of the Engineer.

DWK. 2 TYPE OF WORK

The Engineer may order day work in certain cases where it is necessary to vary or to extend the works due to new or unforeseen circumstances to such an extent that the tendered rates for specific items of work are no longer applicable, or where no suitable combination of tendered rates can be used to pay for such work.

As a general rule, applicable rates for additional work items will be agreed between the Contractor and the Engineer. Day works will only be used in exceptional circumstances.

DWK. 3 MATERIALS

Materials for use in works carried out under Day work shall be purchased by the Contractor who shall also arrange for delivery to site, and shall be responsible for any other requirements associated with specific materials. A Provisional Sum has been allowed in Section 1800 for Day work materials. The Contractor shall enter a tendered percentage in the schedule to cover his handling costs and profit, as per other provisional and prime cost sums in this Contract.

Materials shall be paid for using the method described in the Pricing Data. No contract price adjustment will be applicable to materials.

The Contractor shall submit proof of ownership for any materials used in Day works with his day works claim to the Engineer. Further, if specific materials are required for Day works, quotations will be called for as per Clause 6.5.2 of the General Conditions of Contract 2015 edition.

DWK. 4 CONSTRUCTION PLANT HIRE

Where daywork is ordered, the tendered rates for plant hire in Section 1800 shall be used in calculating the payment due for any plant required to execute the daywork. If no rate is included in the schedule for a particular piece of equipment, and where no other rate or combination of rates would provide suitable compensation, then the daywork method of payment described in Clause 6.5.1.3 of the General Conditions of Contract 2015 edition will be used.

The tendered rates for each item of constructional plant shall include for all operating costs associated with the said item of plant. Such costs are deemed to include fuel, re-fuelling costs, lubrication and routine servicing / maintenance, breakdowns and spares, all overhead costs, site management costs and administration costs. The tendered rates shall also include the plant operator and the general supervision of the plant while it is engaged in the day works.

DWK. 5 SALARIES AND WAGES OF WORKMEN

The salaries and wages of workmen executing daywork shall be paid for using the tendered rates in Section 1800. The tendered rates shall include for all costs associated with the employment of personnel, including salaries, wages, allowances, workmen's compensation, medical aid and pension contributions, government levies and taxes, training costs and any costs associated with living on the site. The tendered rates shall also include for the transportation of the workmen to the site of the day works.

All overhead costs, administration costs, site management costs and the Contractor's profit are deemed to be covered by the DAY WORKS rates and no additions or mark ups will be made to the tendered rates.

The tendered rates shall also include any hand tools normally associated with the workmen's job description e.g. picks, shovels, hammers, saws, spirit levels, etc. The tendered rate for labourers shall also include for the casual supervision by a gang boss or foreman. Only when specifically called for by the Engineer, will payment be made for the use of a gang boss or foreman supervising on a continuous basis.

DWK. 6 MEASUREMENT AND PAYMENT

The following principles shall also apply to the measurement and payment of day works.

The unit of measurement for plant shall be the number of vibroclock hours worked and each item of plant shall be fitted with a vibroclock, the cost of which shall be included in the rates. Excessive non-productive time when the engine is idling will not be paid for. Where there is ambiguity between the flywheel horsepower and mass of the machine, the flywheel horsepower shall govern the measurement category. Where width and mass are specified, mass shall govern the measurement category.

The Contractor's attention is drawn to the requirements of Sub-clauses 6.5.1.2.1, 6.5.1.2.2 & 6.5.1.2.3 of the General Condition of Contract 2015 edition with regard to the submission of day works claims.



CLIENT: BA-PHALABORWA MUNICIPALITY

PRINCIPAL CONTRACTOR: _____

CONTRACT FOR:

START DATE: _____ END DATE: _____

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1. DOCUMENT PURPOSE AND INTENT

- The specifications contained in this document relate to the occupational health and safety requirements pertaining to the associated work of the aforementioned client so as to ensure the occupational health and safety of persons.
- Compliance to the Occupational Health and Safety Act 85 of 1993 and Regulations shall not be limited to the specification and definitions contained in this document.
- A comprehensive documented Health and Safety Plan is to be drawn up by the Principal Contractor, based on the result of Health and Safety Risk Assessment conducted by him/her and the specification provided and presented to the agent for the approval prior to commencement of work.
- Monitoring of compliance on site shall be to the requirements of the OHS Act and Regulations as well as the contents of the Health and Safety Plan of the Principal Contractor or Contractors.

2. SPECIFICATION CONTROL SHEET

Project Name: _____

Declaration

This document has been prepared and received by the undersigned:

Prepared: Ba-Phalaborwa Local Municipality

Name: _____

Signature: _____

Date: _____

Capacity: OHS Officer

PRINCIPAL CONTRACTOR RECEIPT

Received by: _____

Name: _____

Signature: _____

Date: _____

Capacity: _____

3. APPLICATIONS AND INTERPRETATION

This document is to be read and understood in conjunction with the following, inter alia:

- Occupational Health and Safety Act 85 of 1993.
- All regulations published in terms of the Occupational Health and Safety Act.
- Construction Regulation as amended on the 07 February 2014.
- SABS/SANS codes referred to by the Occupational Health and Safety Act.
- Contract Documents.
- Basic Conditions of Employment Act.
- Unemployment Insurance Act.
- Compensation for Occupational Injuries and Diseases Act 103 of 1993.

ABBREVIATIONS

- OHS: Occupational Health and Safety.
- CEO: Chief Executive Officer.
- CR: Construction Regulations.
- HCS: Hazardous Chemical Substances.
- MSDS: Material Safety Data Sheet.
- AIA: Approved Inspection Authority.
- HBA: Hazardous Biological Agent.
- OEL: Occupational Exposure Limit.

Definitions

The following definitions from the Occupation Health and Safety Act are listed as following:

Chief Executive Officer

In relation to a body corporate or an enterprise conducted by the State, means the person who is responsible for the overall management and control of the business of such body corporate or enterprise.

Danger

Means anything that may cause injury or damage to persons or property.

Employee

Means, subject to the provisions of Subsection (2), any person who is employed by or works for any employer and who receives or is entitled to receive any remuneration or who works under the direction or supervision of an employer or any other person.

Employer

Means, subject to the provisions of Subsection (2), any person who employs or provides work for any person or remunerates that person or expressly or tacitly undertakes to remunerate him, but excludes a labour broker as defined in Section 9(1) of the Labour Relations Act, 1953 (Act No. 28 of 1956).

Hazard

Means a source of or exposure to danger.

Healthy

Means free from illness or injury attributable to occupational causes.

Machinery

Means any article or combination of articles assembled, arranged or connected and which is used or intended to be used for converting any form of energy to performing work, or which is used or intended to be used, whether incidental thereto or not, for developing, receiving, storing, containing, confining, transforming, transmitting, transferring or controlling any form of energy.

Medical Surveillance

Means a planned programme of periodic examination (which may include clinical examinations, biological monitoring or medical tests) of employees by an occupational health practitioner or, in prescribed cases, by an occupational medicine practitioner.

Plant

Includes fixtures, fittings, implements, equipment, tools and appliances, and anything which is used for any purpose in connection with such plant.

Properly Used

Means used with reasonable care, and with due regard to any information, instruction or advice supplied by the designer, manufacturer, importer, seller or supplier.

User

In relation to plant or machinery, means the person who uses plant or machinery for his own benefit or who has the right of control over the use of plant or machinery, but does not include a lessor of, or any person employed in connection with, the plant or machinery.

Reasonably Practicable

Means practicable having regards to:

- (a) the severity and scope of the hazard or risk concerned,
- (b) the state of knowledge reasonably available concerning that hazard or risk and of any means to remove or mitigate that hazard or risk.
- (c) The availability and suitability of means to remove or mitigate that hazard or risk; and
- (d) The cost of removing or mitigating that hazard or risk in relation to the benefits deriving there from.

Risk

Means the probability that injury or damage will occur.

Safe

Means free from any hazard.

Standard

Means any provision occurring:

- (a) in a specification, compulsory specification, code of practice or standard method as defined in Section 1 of the Standards Act, 1993 (Act No. 29 of 1993);
OR
- (b) in any specification, code or any other directive having standardization as its aim and issued by an institution or organization inside or outside the Republic which, whether generally or with respect to any particular article or matter and whether internationally or in any particular country or territory, seeks to promote standardization.

The following definitions from the Construction Regulations are listed as follows:

Agent

Means any person who acts as a representative for a client.

Competent Person

Means any person having the knowledge, training, experience and qualifications specific to the work or task being performed:

Provided that where appropriate qualifications and training are registered in terms of the provisions of the South African Qualifications Authority Act, 1995 (Act No. 58 of 1995), these qualifications and training shall be deemed to be the required qualifications and training.

Construction

Means any work in connection with:

- (a) the erection, maintenance, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure;
- (b) the installation, erection, dismantling, or maintenance of a fixed plant where such work includes the risk of a person falling;
- (c) the construction, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system or any similar civil engineering structure; OR
- (d) The moving of earth, clearing of land, the making of an excavation, piling or any similar type of work.

Contractor

Means an employer, as defined in Section 1 of the Act, who performs construction work and includes principal contractors.

Hazard Identification

Means the identification and documenting of existing or expected hazards to the health and safety of persons, which are normally associated with the type of construction work being executed or to be executed.

Health and Safety File

Means a file, or other record in permanent form, containing the information required as contemplated in these regulations.

Health and Safety Plan

Means a documented plan, which addresses hazards, identified and includes safe work procedures to mitigate, reduce or control the hazards identified.

Health and Safety Specification

Means a documented specification of all health and safety requirements pertaining to the associated works on a construction site, so as to ensure the health and safety of persons.

Method Statement

Means a document detailing the key activities to be performed in order to reduce as reasonably as practicable the hazards identified in any risk assessment.

Principal Contractor

Means an employer, as defined in Section 1 of the Act who performs construction work and is appointed by the client to be in overall control and management of a part of or the whole of a construction site.

Risk Assessment

Means a program to determine any risk associated with any hazard at a construction site, in order to identify the steps to be taken to remove, reduce or control such hazard.

4. NOTIFICATION OF CONSTRUCTION WORK

- The principal Contractor shall notify by registered mail, the Limpopo Provincial Director of the Department of Labour, before commencing with construction work, of the intended work in the form of Annexure A of the Construction Regulations.
- A copy of the completed Annexure of the Construction Regulations, as well as proof of notification shall be included in the Health and Safety Plan. (Proof of fax or proof of hand delivery).
- A copy of the completed Annexure A is to be kept on site by the principal Contractor. (Health and Safety file).

5. APPLICATION FOR A PERMIT TO DO CONSTRUCTION WORK

- Contractor to apply for the work permit on project above R13 000 000-00 as per the amended OHS Act.

6. LEGAL DOCUMENTATION/APPOINTMENTS

The following documents must be provided in the Health and Safety File:

- Health and Safety Policy signed by CEO.
- Letter of good standing with the Compensation Commissioner, Federated Employers or similar insurer.
- Notification of work signed by Contractor, Client and Dept. of Labour
- Certificate of fitness for all employees issued by a competent Occupational health Practitioner.
- Health and Safety Organogram (or table), outlining the Health and Safety Team, as well as the appointment(s) they have under the Act and Regulations (reference to specific section/regulation applicable to appointment).
- The competency of each member of the Health and Safety Team must be provided and should include knowledge, training, experience & qualifications specific to the work or task being performed. (CV and copies of qualifications).

Signed copies of the following legal appointments must be provided in the Health and Safety File:

APPOINTMENT	OHS-ACT / REGULATION REFERENCE
Section 16.2 appointment	Section 16.2
Health and Safety Representative (if necessary)	Section 17
Health and Safety Committee members (if necessary)	Section 19
Incident Investigator	GAR 8(2)
First Aiders (Include training certificates)	GSR 3
Fire Fighters	ER 9 & CR 29(h)
Risk Assessor	HC (Incl. Asbestos & Lead); CR 9 and equipment

The following information must be provided in the Health and Safety File.

- Indicate the estimated number of employees to be working on site.
- Indicate the expected number of contractors to be appointed by the Principal Contractor.

The following Competent Persons, where applicable, shall be appointed in writing by the Principal Contractor, prior to any work being carried out, and shall adhere to the requirements of the specific sub-regulations.

The Competency of each of these appointed competent persons must be provided and should include knowledge, training, experience and qualifications specific to the appointment (CV and Copies of qualifications).

The next table indicates the applicability of the appointments but contractors should by no means be limited to these indications.

APPOINTMENT	OHS-ACT / REGULATION REFERENCE
Construction Supervisor	CR 8 (1)
Assistant Construction Supervisor	CR 8 (2)
Fall Protection Competent Person	CR 10 (1)
Excavation Work Competent Person	CR 13(1)
Construction Vehicle and Mobile Plant Competent Person	CR 23 (1)(j)
Electrical Installation Competent Person	CR 24 (d)
Fire equipment Competent Person	CR 29 (h)
Confined Spaces Competent Person	GSR (5)
Blasting Competent Person	
Safety Officer	CR 8(5)
General Machinery Competent Person	GMR (2)
Lifting Machines Operators	DMR 18(11)

- No work involving any of the listed appointments may be performed without the knowledge and approval of an appointed competent person.
- The competent person shall be responsible to determine the level of supervision required for each activity.
- The agent must be informed of any changes made to the above appointments.
- The agent reserves the right to require from any contractor at any stage to appoint a full or part time construction health and safety officer.

7. GENERAL DUTIES OF PRINCIPAL CONTRACTOR

- ♦ The principal contractor will be responsible for co-operation between all contractor to ensure compliance to the OHS –Act and Regulations on site.
- ♦ To ensure the above, the Principal Contractor must carry out the following and provide proof of such in his H&S plan:
 - Provide health and safety specifications to Contractors.
 - Appoint Contractors in writing.
 - Proof that Contractors H&S Plan has been approved, implemented and maintained.
 - Proof that Contractors are registered with the Compensation Commissioner or similar insurer.
 - Proof that Contractors made provision for the cost of Health and Safety measures during the construction process.
 - A comprehensive & updated list of all contractors on site, also indicating the type of work being done.
 - Copies of Section 37(2) agreements with the relevant contractors.

8. SUPERVISION OF CONSTRUCTION WORK

- ▲ The agent must be informed if the Construction Work Supervisor is also appointed as a Construction Supervisor in writing.

9. RISK ASSESSMENT

- Risk assessments of all required activities shall form an integral part of the Health and Safety plan.
- All risk assessments shall be conducted in terms of an acceptable methodology covering at least the elements frequency, likelihood and consequence, prior to commencement of work, according to the provisions of CR 9 and should cover at least the following:
 - Movement of construction vehicles
 - All work near overhead power lines and underground cables
 - Locating underground cables/existing services
 - Hand excavation of trenches
 - Mechanical excavation of trenches
 - All work carried out inside trenches, including compacting, pipe laying, backfilling etc.
 - Temporary stockpiling and removal of excavated material
 - Transporting material

- Cutting into existing sewage line
 - All work carried out from scaffolding
 - Exposure to raw sewerage (see paragraph 19)
 - All work carried out on live electrical installations
 - Welding in confined spaces
 - Working at heights
 - Cladding
 - Stripping of existing roof sheets or other material
 - Piling
 - Formwork/Support work
 - Demolition work
 - Working with hand tools
 - Working with portable electrical tools
 - All health hazards that can be present during any of the above activities and should include individual dusts, gases, fumes, vapors, noise, extreme temperatures, illumination, vibration and ergonomic hazards due to any of the above activities.
- The above list is by no means exhaustive and should not be limited to these activities but must cover all activities that forms part of the said construction work. Each activity must be split down to individual tasks and all associated hazards identified and listed in the risk assessment. This ensures that critical tasks and subsequent critical hazards are not missed.
- The risk assessment to be included in the H&S Plan must clearly indicate:
 - The methodology used to do the risk assessments.
 - Breakdown of processes and activities covered.
 - High risks anticipated.
- All risk assessments are to be conducted by a competent person as appointed under paragraph 5 of this document. The plan must include a declaration in this regard or the risk assessment must contain the signature(s) of this appointed persons.
- Risk assessments are to be handed to the agent prior to commencement of work.
- The agent reserves the right to stop any work if such work is not conducted in terms of the recommendations of the risk assessment.
- Risk assessments are to cover safety as well as health hazards.

10. SAFE WORK PROCEDURES

Safe Work Procedures are to form part of the H&S Plan and must be compiled for all the above-identified activities.

The safe work procedures must address the following elements:

- The work method to be followed to conduct work safely
- Mitigation of identified risks
- Reducing and controlling risks and hazards that have been identified
- Responsibilities of competent persons
- Required personal protective equipment
- Correct equipment / tools/ machinery to be used
- Reference to relevant registers to be completed
- Reference to applicable risk assessment
- The following two tables provides information on all factors to be taken into account when the Risk Assessments and Safe Work Procedures are compiled:

Physical	Chemical	Biological	Mechanical	Psycho-social
Noise	Liquids	Insects	Guards	Stress
Vibration	Dusts	Fungi	Hand tools	Work pressure
Ionizing radiation	Fumes	Bacteria	Machinery	Monotony
Non-ionizing radiation	Fibers	Viruses		Unsociable hours
Health and cold	Mists			Ergonomical:
Electricity	Gases			• Posture
Pressure	Vapors			• Movement
				• Repetitive tasks

System	Stress	Disease
Musculoskeletal	Lifting/loads Repetitive strain Abnormal postures Whole body vibration	Muscular pain syndromes Tenosynovitis Bursitis Osteoarthritis
Sensory	Noise	Hearing loss
Skin	Cement (chromates), rubber Thinners, epoxies Tar, pitch Solar radiation	Allergic contact dermatitis Irritant contact dermatitis Acne, Skin cancer Keratoses, cancer
Respiratory	Silica Asbestos Spray paints, woods, epoxies Irritant dusts, welding fumes Organic Solvents	Silicosis, TB Asbestosis, Cancer Asthma Bronchitis Headaches, Dizziness, Cancer
Psychosomatic	Physical stress Psychosocial stress	Head aches Depression Fatigue Substance abuse
Nervous System	Lead Organic solvents	Peripheral and central neuropathy Headaches, Dizziness, Mood disorder, Dementia, Cancer

11. SAFETY OF PUBLIC/PEDESTRIANS

- Access to the construction site must be cordoned off as much as possible in all work areas.
- All excavations are to be fenced/barricaded to prevent access by public / pedestrians.
- Work must be planned in such a manner as to ensure that the minimum amount of trenches are left open after hours or during weekends.

12. FALL PROTECTION

- Contents of the fall protection plan must cover all the requirements as stated in sub-regulation CR10 (2)
- The fall protection plan is to be handed to the agent before work commences.
- The level of supervision is to be stated in the fall protection plan.
 - Medical certificates, work near edges, presence of dew, dangerous walking areas etc. should be addressed in the fall protection plan.

13. REGISTERS

- Examples of the registers listed below must be provided in the Health and Safety Plan.
- All registers must be available at the site offices at all times for inspection by the agent.
- The list of registers to be kept is by no means exhaustive and the H&S Plan should list all the registers that are applicable and at what frequency they are going to be maintained.

ACTIVITY	FREQUENCY
Form work / Support work	Daily, prior to any shift
Excavation Work	Daily, prior to any shift, after rain or blasting or after unexpected fall of ground
Material Hoist	Daily
Crane(s) Logbook	As per DMR 18
Construction Vehicles and Mobile Plant	Daily
Temporary Electrical Installation	Weekly
Stacking	Weekly
Fire Extinguishers	Bi- Monthly
Ablution Facilities	Weekly
Ladders	Weekly
Incident Register in terms of GAR 9	As Required
Fall Protection Equipment	Daily
Portable electrical tools	Weekly
Firefighting equipment	Monthly

14. TRAINING

Each Health and Safety Plan shall indicate the following regarding training:

- Name and contents of the following training courses which have to be conducted:
 - Induction Training
 - Training regarding hazards identified and any corrective measures in place
 - Training regarding all applicable regulations
 - Specific training regarding applicable competencies
- Attendance registers must be kept as proof of training provided
- Method of informing visitors and other persons entering the site of hazards prevalent on site.
- Method of providing personal protective equipment to visitors and non-employees.
- An example of ID training card for each employee (if used).
- Methodology to be used in the issuing and communication of written instructions/safe work procedures.

15. GENERAL REQUIREMENTS

(a) Personal Protective Equipment

The procedures for issuing and control over PPE shall be indicated in the Health and Safety Plan, as well as the enforcement for the wearing thereof.

(b) Hired Plant

The responsibility for the safe condition and use of all hired plant shall be that of the contractor e.g. fire extinguisher service, motor disc validity and etc.

(c) Transport of Employees

Transport of employees shall be carried out in terms of the National Road Ordinances.

The Health and Safety Plan shall detail the arrangements and methods of the transportation of workers.

(d) Signs

The Principal Contractor shall indicate in his Health and Safety Plan the arrangements regarding the posting of danger signs.

(e) Medical Certificates of fitness

A Contractor must ensure that all his or her employees have a valid medical certificate of fitness specific to the construction work to be performed and issued by an Occupational health practitioner in the form of Annexure 3.

(f) Site Visitors Register

- A site visitor's register is to be kept on site and steps are to be taken to ensure that all visitors sign the visitors' register before entering the site.
- A sign should also be provided directing all visitors to report to the site officer.

16. HAZARDOUS CHEMICAL SUBSTANCES (including Asbestos and Lead)

In addition to the requirements in the HCS Regulations, the principal contractor must provide proof in the H&S Plan that:

- ▲ Material Safety Data Sheets (MSDS's) of the relevant materials/hazardous chemical substances are available prior to use by the contractor. Mention should be made how the principal contractor is going to act according to special/unique requirements made in the relevant MSDS's. All MSDS's shall be available for inspection by the client at all times.
- ▲ Risk assessments are done at least once every two years.
- ▲ Exposure monitoring is done according to Occupational Exposure Sampling Strategy Manual (OESSM) and by an AIA and that the medical surveillance programme is based on the outcomes of the exposure monitoring.
- ▲ How records are going to be kept safe for the stipulated period of 30 years.
- ▲ How the relevant HCS's are being/going to be controlled by referring to:
 - Limiting the amount of HCS
 - Limiting the number of employees
 - Limiting the period of exposure
 - Substituting the HCS
 - Using engineering controls
 - Using appropriate written work procedures
- ▲ The correct PPE is being used.
- ▲ HCS are stored and transported according to SABS 072 and 0228.
- ▲ Training with regards to these regulations was given.
- ▲ The H&S plan should make reference to the disposal of hazardous waste on classified sites and the location thereof (where applicable).

17. ASBESTOS

Should asbestos be identified as a hazard whilst work is carried out, the following must be included in the health and safety plan:

- Notification to the Provincial Director in writing, prior to commencement of asbestos work.
- Proof of a structured medical surveillance programme, drawn up by an occupational medicine practitioner.
- Proof that an occupational health practitioner carried out an initial health evaluation within 14 days after commencement of work.
- Copies of the results of all assessments, exposure monitoring and the written inventory of the location of the asbestos at the workplace.
- Only proof that medical surveillance has been conducted and not the actual records itself since these areas of confidential nature.
- How records are going to be kept safe for the stipulated period of 40 years.
- Proof that asbestos demolition (if applicable) is going to be done by a registered asbestos contractor and provide proof that a plan of work for such demolition is submitted to an Approved Asbestos Inspection Authority 30 days prior to commencement of the demolition.
- Provide proof that the plan of work was approved by the asbestos AIA and submitted to the provincial director 14 days prior to commencement of demolition work together with the approved standardized procedures for demolition work.

18. LEAD

Besides the requirements listed under par. 15 should lead be identified as a hazard at the workplace, the following must be included in the health and safety plan or as soon as its available:

- Proof that an occupational health practitioner carried out an initial health evaluation within 14 days after commencement of work.
- Copies of the results of all assessments, exposure monitoring and the written inventory of the location of the lead at the workplace.
- Only proof that medical surveillance has been conducted and not the actual records since these are of a confidential nature.
- How records are going to be kept safe for the stipulated period of 40 years.

19. NOISE INDUCED HEARING LOSS

Where noise is identified as a hazard the requirements of the NIHL regulations must be complied with and the following must be included/ referred to in the Health and Safety Plan:

- Proof of training with regards to these regulations.
- Risk assessment done within 1 month of commencement of work.
- That monitoring carried out by an AIA and done according to SABS 083.
- Medical surveillance programme established and maintained for the necessary employees.
- Control of noise by referring to:
 - Engineering methods considered
 - Admin control (number of employees exposed) considered
 - Personal protective equipment considered/decided on
- Describe how records are going to be kept for 40 years.

20. LIGHTING

Where poor or lack of illumination is identified as a hazard the lighting regulations must be complied with and the following must be included in the H&S Plan:

- How lighting will be ensured/ provided where daylight is not sufficient and / or after hours are worked.
- Planned maintenance programme for replacing luminaires.
- Proof of illumination levels of artificial illumination equipment.

21. HAZARDOUS BIOLOGICAL AGENTS (HBA)

Because of the possible exposure of workers to raw sewage the H&S Plan shall include details of the following:

- The conducting of Risk Assessment specifically aimed at exposure to HBA which shall include the following:
 - ◻ Nature and dose of HBA
 - ◻ Where HBA may be present and in what physical form
 - ◻ The nature of work or process
 - ◻ Steps in the event of failure of control measures
 - ◻ The effect of the HBA
 - ◻ The period of exposure
 - ◻ Control measures to be implemented

- Monitoring of exposure of workers shall be conducted to establish whether any worker is infected with an HBA associated with working or being exposed to raw sewage, in terms of the following:
 - By an occupational medical practitioner
 - Before entering the site to establish the workers baseline
 - During the period of the contract the risk assessment indicate possible exposure
 - After completion of the contract
- Medical surveillance should such be required after the above-mentioned by an occupational health practitioner.
- Indication on how all records of assessment, monitoring; etc will be kept, taking into account that records have to be kept for a period of 40 years.
- How exposure to HBA is to be controlled.
- The provision of personal protective equipment.
- What information and training is to be provided to employees regarding the following:
 - The contents of these regulations.
 - Potential risks to health.
 - Control measures to be implemented.
 - The correct use and maintenance of personal protective equipment.
 - The results of the risk assessment.

Approval by the Municipal Manager

Comments: _____

Name (Print): _____ Date: _____

Signature: _____

SECTION OHS : OHS 1993 HEALTH AND SAFETY SPECIFICATION

OHS.1 SCOPE

This specification covers the health and safety requirements to be met by the Contractor to ensure a continued safe and healthy environment for all workers, employees and subcontractors under his control and for all other persons entering the site of works.

This specification shall be read with the Occupational Health and Safety Act (Act No 85 and amendment Act No 181) 1993, and the corresponding Construction Regulations 2014, and all other safety codes and specifications referred to in the said Construction Regulations.

In terms of the OHS Agreement in Section C1.2.4 of the Contract document, the status of the Contractor as mandatory to the Employer (client) is that of an employer in his own right, responsible to comply with all provisions of OHS 1993 and the Construction Regulations 2014.

This safety specification and the Contractor's own Safety Plan as well as the Construction Regulations 2014, shall be displayed on site or made available for inspection by all workers, employees, inspectors and any other persons entering the site of works.

The following are possible risks associated with this project:

- Working high above the ground on top and below the bridge, most of the time in a restricted environment with limited landings (working platforms)
- Working above a continuously flowing river and in an flood plain environment subject to flooding
- Lifting and lowering of materials and equipment from the ground to the bridge and vice versa, exposed to cross winds
- Steep and restricted access to the lower flood plain below the bridge
- Potentially dangerous existing services, i.e. gas lines, water and sewerage mains, electrical high voltage cables, on the bridge, buried and overhead
- Deep excavations in soils requiring shoring or reducing of slopes
- Blasting of hard rock or demolition of concrete
- High pressure during testing of the relocated pipe lines, which could result in potentially dangerous situations in the event of the pipeline or fittings failing
- Potentially harmful gasses when tying into the existing sewer mains
- Movement of construction vehicles on site, taking into consideration steep slopes, other traffic and existing services
- Exposure to possible injuries due to mishandling or failure of power and hand tools
- Falling debris, tools and materials from bridge
- Non-conformance to specifications with regards to fasteners and materials
- Risks related to general safety and security on site

Additional risks may arise from specific methods of construction selected by the Contractor which are not necessarily covered in the above.

OHS.2 DEFINITIONS

For the purpose of this contract the following shall apply:

- (a) **Employer** where used in the contract documents and in this specification, means the Employer as defined in the General Conditions of Contract and it shall have the exact same meaning as **client** as defined in the Construction Regulations 2014. **Employer** and **client** is therefore interchangeable and shall be read in the context of the relevant document.
- (b) **Contractor** wherever used in the contract documents and in this specification, shall have the same meaning as **Contractor** as defined in the General Conditions of Contract.

In this specification the terms **principal contractor** and **contractor** are replaced with **Contractor** and **subcontractor** respectively.

For the purpose of this contract the **Contractor** will, in terms of OHS 1993, be the mandatory, without derogating from his status as an employer in his own right.

- (c) “**Engineer**” where used in this specification, means the Engineer as defined in the General Conditions of Contract. In terms of the Construction Regulations the Engineer may act as agent on behalf of the Employer (the client as defined in the Construction Regulations).

OHS.3 TENDERS

The Contractor shall submit the following with his tender:

- (a) a documented Health and Safety Plan as stipulated in Regulation 7 of the Construction Regulations. The Safety Plan must be based on the Construction Regulations 2014 and will be subject to approval by the Employer;
- (b) a declaration to the effect that he has the competence and necessary resources to carry out the work safely in compliance with the Construction Regulations 2014;
- (c) a declaration to the effect that he made provision in his tender for the cost of the health and safety measures envisaged in the Construction Regulations.
- (d) Failure to submit the foregoing with his tender, will lead to the conclusion that the Contractor will not be able to carry out the work under the contract safely in accordance with the Construction Regulations.

OHS.4 NOTIFICATION OF COMMENCEMENT OF CONSTRUCTION WORK

After award of the contract, but before commencement of construction work, the Contractor shall, in terms of Regulation 4, notify the Provincial Director of the Department of Labour in writing if the following work is involved:

- (a) the demolition of structures and dismantling of fixed plant of height of 3,0m or more;
- (b) the use of explosives;
- (c) construction work that will exceed 30 days or 300 person-days;
- (e) excavation work deeper than 1,0m; or
- (f) working at a height greater than 3,0m above ground or landings.

The notification must be done in the form of the pro forma included under Section 9 (Forms to be Completed by Successful Tenderer) of the tender document.

A copy of the notification form must be kept on site, available for inspection by inspectors, Employer, Engineer, employees and persons on site.

OHS.5 RISK ASSESSMENT

Before commencement of any construction work during the construction period, the Contractor shall have a risk assessment performed and recorded in writing by a competent person. (Refer Regulation 9 of the Construction Regulations 2014).

The risk assessment shall identify and evaluate the risks and hazards that may be expected during the execution of the work under the contract, and it shall include a documented plan of safe work procedures to mitigate, reduce or control the risks and hazards identified.

The risk assessment shall be available on site for inspection by inspectors, Employer, Engineer, subcontractors, employees, trade unions and health and safety committee members, and must be monitored and reviewed periodically by the Contractor.

OHS.6 APPOINTMENT OF EMPLOYEES AND SUBCONTRACTORS**6.1 Health and Safety plan**

The Contractor shall appoint his employees and any subcontractors to be employed on the contract, in writing, and he shall provide them with a copy of his documented Health and Safety Plan, or relevant sections thereof. The Contractor shall ensure that all subcontractors and employees are committed to the implementation of his Safety Plan.

6.2 Health and safety induction training

The Contractor shall ensure that all employees under his control, including subcontractors and their employees, undergo a health and safety induction training course by a competent person before commencement of construction work. No visitor or other person shall be allowed or permitted to enter the site of the works unless such person has undergone health and safety training pertaining to hazards prevalent on site.

The Contractor shall ensure that every employee on site shall at all times be in possession of proof of the health and safety induction training issued by a competent person prior to commencement of construction work.

OHS.7 APPOINTMENT OF SAFETY PERSONNEL**7.1 Construction Supervisor**

The Contractor shall appoint a full-time **Construction Supervisor** with the duty of supervising the performance of the construction work.

He may also have to appoint one or more competent employees to assist the construction supervisor where justified by the scope and complexity of the works.

7.2 Construction safety officer

Taking into consideration the size of the project and the hazards or dangers that can be expected, the Contractor shall appoint in writing a full-time or part-time **Construction Safety Officer** if so decided by the Inspector of the Department of Labour. The Safety Officer shall have the necessary competence and resources to perform his duties diligently.

Provision shall be made by the Contractor in his rates, to cover the cost of this dedicated construction safety officer appointed after award of the contract.

7.3 Health and safety representatives

In terms of **Section 17 and 18 of the Act (OHSA 1993)** the Contractor, being the employer in terms of the Act for the execution of the contract, shall appoint a **health and safety representative** whenever he has more than 20 employees in his employment on the site of the works. The health and safety representative must be selected from employees who are employed in a full-time capacity at a specific workplace.

The number of health and safety representatives for a workplace shall be at least one for every 100 employees.

The function of health and safety representative(s) will be to review the effectiveness of health and safety measures, to identify potential hazards and major incidents, to examine causes of incidents (in collaboration with his employer, the Contractor), to investigate complaints by employees relating to health and safety at work, to make representations to the employer (Contractor) or inspector on general matters affecting the health and safety of employees, to inspect the workplace, plant, machinery etc. on a regular base, to participate in consultations with inspectors and to attend meetings of the health and safety committee.

7.4 Health and safety committee

In terms of Sections **17 and 18 of the Act (OHS Act 1993)** the Contractor (as employer), shall establish one or more **health and safety committee(s)** where there are two or more health and safety representatives at a workplace. The persons selected by the Contractor to serve on the committee shall be designated in writing.

The function of the health and safety committee shall be to hold meetings at regular intervals, but at least once every three months, to review the health and safety measures on the contract, to discuss incidents related to health and safety with the Contractor and the inspector, and to make recommendations regarding health and safety to the Contractor and to keep record of recommendations and reports made by the committee.

7.5 Competent persons

In accordance with the Construction Regulations the Contractor has to appoint in writing **competent persons** responsible for supervising construction work on each of the following work situations that may be expected on the site of the works.

- (a) Risk assessment and induction training as described in Regulation 9 of the Construction Regulations;
- (b) Fall protection as described in Regulation 10;
- (c) Excavation work as described in Regulation 13;
- (d) Demolition work as described in Regulation 14;
- (e) Scaffolding work as described in Regulation 16;
- (f) Suspended platform operations as described in Regulation 17;
- (g) Material hoists as described in Regulation 19;
- (h) Bulk Mixing plant operations as described in Regulation 20;
- (i) Explosive actuated fastening device as described in Regulation 21;
- (j) Cranes as described in Regulation 22;
- (k) Construction vehicle and mobile plant inspections on a daily basis by a competent person as described in Regulation 23(1);
- (l) Control of all temporary electrical installation on the construction site as described in Regulation 24;
- (m) Stacking and storage on construction sites as described in Regulation 28; and
- (n) Fire precautions on construction sites as described in Regulation 29.

A competent person may be appointed for more than one part of the construction work with the understanding that the person must be suitably qualified and able to supervise at the same time the construction work on all the work situations for which he has been appointed.

The appointment of competent persons to supervise parts of the construction work does not relieve the Contractor from any of his responsibilities to comply with **all** requirements of the Construction Regulations.

OHS.8 RECORDS AND REGISTERS

In accordance with the Construction Regulations the Contractor is bound to keep records and registers related to health and safety on site for periodic inspection by inspectors, the Engineer, the Employer, trade union officials and subcontractors and employees. The following records and registers must be kept on site and shall be available for inspection at all times.

- (a) A copy of the OHS Act 1993 Construction Regulations 2014;
- (b) A copy of this Health and Safety Specification;
- (c) A copy of the Contractor's Health and Safety Plan (Regulation 7);
- (d) A copy of the Notification of Construction Work (Regulation 4);
- (e) A health and safety file in terms of Regulation 7(1b) with inputs by the Construction Safety Officer (Regulation 8(5));
- (f) A copy of the risk assessment described in Regulation 9;
- (g) A full protection plan and the corresponding records of evaluation and training of employees working from elevated positions as described in Regulation 10;
- (h) Drawings pertaining to the design of structures (Regulation 11(1c)) and temporary works (Regulation 10) must be kept on site;
- (i) Pronouncement of the safety of excavations must be recorded in a register to be kept on site (Regulation 13(2)(h));

- (j) A copy of the certificate of the system design for suspended platforms (Regulation 17(3));
- (k) A notice must be affixed around the base towers of material hoists to indicate the maximum mass load, which may be carried at any one time by material hoists (Regulation 11(2));
- (l) Maintenance records of material hoists and inspection results must be kept in a record book to be kept on site (Regulation 19(8));
- (m) A record of any repairs to or maintenance of a batch plant must be kept on site (Regulations 19(8));
- (n) A warning notice must be displayed in a conspicuous manner when and wherever an explosive powered tool is used (Regulation 21(2));
- (o) A register for recording of findings by the competent person appointed to inspect construction vehicles and mobile plant (Regulation 23(1) (k)).

OHS.9 CONTRACTORS RESPONSIBILITIES

For this contract the Contractor will be the mandatory of the Employer (Client), as defined in the Act (OHSA 1993), which means that the Contractor has the status of employer in his own right in respect of the contract. The Contractor is therefore responsible for all the duties and obligations of an employer as set out in the Act (OHSA 1993) and the Construction Regulations 2014.

Before commencement of work under the contract, the Contractor shall enter into an agreement with the Employer (Client) to confirm his status as mandatory (employer) for the contract under consideration.

The Contractor's duties and responsibilities are clearly set out in the Construction Regulations 2014, and are not repeated in detail but some important aspects are highlighted hereafter, without relieving the Contractor of any of his duties and responsibilities in terms of the Construction Regulations.

(a) Contractor's position in relation to the Employer (Client) (Regulation 5)

In accordance with Section 4 of the Regulations, the Contractor shall liaise closely with the Employer or the Engineer on behalf of the Employer, to ensure that all requirements of the Act and the Regulations are met and complied with.

(b) The Principal Contractor and Contractor (Regulation 7)

The Contractor is in terms of the definition in Regulation 2(b) the equivalent of Principle Contractor as defined in the Construction Regulations, and he shall comply with all the provisions of Regulation 7.

Any subcontractors employed by the Contractor must be appointed in writing, setting out the terms of the appointment in respect of health and safety. An independent subcontractor shall however provide and demonstrate to the Contractor a suitable, acceptable and sufficiently documented health and safety plan before commencement of the subcontract. In the absence of such a health and safety plan the subcontractor shall undertake in writing that he will comply with the Contractor's safety plan, the health and safety specifications of the Employer and the Construction Regulations 2014.

(c) Management Supervision of construction work (Regulation 8)

The Contractor shall appoint the safety and other personnel and employees as required in terms of Regulation 8 and as set out in paragraph 7 above. Appointment of those personnel and employees does not relieve the Contractor from any of the obligations under Regulation 8.

(d) Risk assessment for construction works (Regulation 9)

The Contractor shall have the risk assessment made as set out in paragraph 3 above before commencement of the work and it must be available on site for inspection at all times. The Contractor shall consult with the health and safety committee or health and safety representative(s) etc. on a regular basis to ensure that all employees, including subcontractors under his control, are informed and trained by a competent person regarding health hazards and related work procedures.

No subcontractor, employee or visitor shall be allowed to enter the site of works without prior health and safety induction training, all as specified in Regulation 9.

(e) Fall protection (Regulation 10)

Fall protection, if applicable to this contract shall comply in all respects with Regulation 10 of the Construction Regulations.

(f) Structures (Regulation 11)

The Contractor will be liable for all claims arising from collapse or failure of structures if he failed to comply with all the specifications, project specifications and drawings related to the structures, unless it can be proved that such collapse or failure can be attributed to faulty design or insufficient design standards on which the specifications and the drawings are based.

In addition the Contractor shall comply with all aspects of Regulation 11 of the Construction Regulations.

(g) Temporary works (Regulation 12)

The Contractor will be responsible for the adequate design of all formwork and support structures by a competent person.

All drawings pertaining to formwork shall be kept on site and all equipment and materials used in formwork, shall be carefully examined and checked for suitability by a competent person.

The provisions of Regulation 12 of the Construction Regulations shall be followed in every detail.

(h) Excavation (Regulation 13)

It is essential that the Contractor shall follow the instructions and precautions in the Standard Specifications and Project Specifications as well as the provisions of the Construction Regulations to the letter as unsafe excavations can be a major hazard on any construction site. The Contractor shall therefore ensure that all excavation work is carried out under the supervision of a competent person, that inspections are carried out by a Professional Engineer or Technologist, and that all work is done in such a manner that no hazards are created by unsafe excavations and working conditions.

Supervision by a competent person will not relieve the Contractor from any of his duties and responsibilities under Regulation 13 of the Construction Regulations.

(i) Demolition work (Regulation 14)

Whenever demolition work is included in a contract, the Contractor shall comply with all the requirements of Regulation 14 of the Construction Regulations. The fact that a competent person has to be appointed by the Contractor does not relieve the Contractor from any of his responsibilities in respect of safety of demolition work.

(j) Tunneling (Regulation 15)

The Contractor shall comply with Regulation 15 wherever tunneling of any kind is involved.

(k) Scaffolding (Regulation 16)

The Contractor shall ensure that all the provisions of Regulation 16 of the Construction Regulations are complied with. [Note: Reference in the Regulations to "Section 44 of the Act" should read "Section 43 of the Act"].

(l) Suspended platforms (Regulation 17)

Wherever suspended platforms will be necessary on any contract, the Contractor shall ensure that copies of the system design issued by a Professional Engineer are submitted to the Engineer for inspection and approval. The Contractor shall appoint competent persons as supervisors and competent scaffold erectors, operators and inspectors and ensure that all work related to suspended platforms are done in accordance with Regulation 17 of the Construction Regulations.

(m) Rope Access (Regulation 18)

Where rope access are required on the construction site, the Contractor shall comply with Regulation 18.

(n) Material Hoists (Regulation 19)

Wherever applicable, the Contractor shall comply with the provisions of Regulation 19 to the letter.

(o) Bulk Mixing plants (Regulation 20)

Wherever applicable, the Contractor shall ensure that all lifting machines, lifting tackle, conveyors, etc. used in the operation of a batch plant shall comply with, and that all operators, supervisors and employees are strictly held to the provisions of Regulation 20. The Contractor shall ensure that the General Safety Regulations (Government Notice R1031 of 30 May 1986), the Driven Machinery Regulations (Government Notice R295 of 26/2/1988) and the Electrical Installation Regulations (Government Notice R2271 of 11/10/1995) are adhered to by all involved.

In terms of the Regulations, records of repairs and maintenance shall be kept on site.

(p) Explosive actuated fastening devices (Regulation 21)

The Contractor shall ensure that, wherever explosive-powered tools are required to be used, all safety provisions of Regulation 21 are complied with.

It is especially important that warning notices are displayed and that the issue and return of cartridges and spent cartridges be recorded in a register to be kept on site.

(q) Cranes (Regulation 22)

Wherever the use of tower cranes becomes necessary, the provisions of Regulation 22 shall be complied with.

(r) Construction vehicles And mobile plant (Regulation 23)

The Contractor shall ensure that all construction vehicles and plant are in good working condition and safe for use, and that they are used in accordance with their design and intended use. The vehicles and plant shall only be operated by workers or operators who have received appropriate training, all in accordance with all the requirements of Regulation 23.

All vehicles and plant must be inspected on a daily basis, prior to use, by a competent person and the findings must be recorded in a register to be kept on site.

(s) Electrical installation and machinery on construction sites (Regulation 24)

The Contractor shall comply with the Electrical Installation Regulations (Government Notice R2920 of 23 October 1992) and the Electrical Machinery Regulations (Government Notice R1953 of 12 August 1993). Before commencement of construction, the Contractor shall take adequate steps to ascertain the presence of, and guard against dangers and hazards due to electrical cables and apparatus under, over or on the site.

All temporary electrical installations on the site shall be under the control of a competent person, without relieving the Contractor of his responsibility for the health and safety of all workers and persons on site in terms of Regulation 24.

(t) Use of temporary storage of flammable liquids on construction sites (Regulation 25)

The Contractor shall comply with the provisions of the General Safety Regulations (Government Notice R1031 of 30 May 1986) and all the provisions of Regulation 25 of the Construction Regulations to ensure a safe and hazard-free environment to all workers and other persons on site.

(u) Water environments (Regulation 26)

Where construction work is done over or in close proximity to water, the provisions of Regulation 26 shall apply.

(v) Housekeeping and general safeguarding on construction sites (Regulation 27)

Housekeeping on all construction sites shall be in accordance with the provisions of the environment Regulations for workplaces (Government Notice R2281 of 16 October 1987) and all the provisions of Regulation 27 of the Construction Regulations.

(w) Stacking and storage on construction sites (Regulation 28)

The provisions for the stacking of articles contained in the General Safety Regulations (Government Notice R1031 of 30 May 1986) as well as all the provisions Regulation 28 of the Construction Regulations shall apply.

(x) Fire precautions on construction sites (Regulation 29)

The provisions of the Environmental Regulations for Workplaces (Government Notice R2281 of 16 October 1987) shall apply.

In addition the necessary precautions shall be taken to prevent the incidence of fires, to provide adequate and sufficient fire protection equipment, sirens, escape routes etc. all in accordance with Regulation 29 of the Construction Regulations.

(y) Construction welfare facilities (Regulation 30)

The Contractor shall comply with the construction site provisions as in the Facilities Regulations (Government Notice R1593 of 12 August 1988) and the provisions of Regulation 30 of the Construction Regulations.

(z) Non-compliance with the Construction Regulations 2014

The foregoing is a summary of parts of the Construction Regulations applicable to all construction projects.

The Contractor, as employer for the execution of the contract, shall ensure that all provisions of the Construction Regulations applicable to the contract under consideration are complied with to the letter.

Should the Contractor fail to comply with the provisions of the Regulations 4 to 30 as listed in Regulation 33, he will be guilty of an offence and will be liable, upon conviction, to the fines or imprisonment as set out in Regulation 33.

The Contractor is advised in his own interest to make a careful study of the Act and the Construction Regulations as ignorance of the Act and the Regulations will not be accepted in any proceedings related to non-conformance to the Act and the Regulations.

OHS.10 MEASUREMENT AND PAYMENT

10.1 Principles

It is a condition of this contract that Contractors, who submit tenders for this contract, shall make provision in their tenders for the cost of all health and safety measures during the construction process. All associated activities and expenditure are deemed to be included in the Contractor's tendered rates and prices.

(a) Safety personnel

The Construction Supervisor, the Construction Safety Officer, Health and Safety Representatives, Health and Safety Committee and Competent Persons referred to in clauses 9.1 to 9.5 shall be members of the Contractor's personnel, and no additional payment will be made for the appointment of such safety personnel.

(b) Records and Registers

The keeping of health and safety-related records and registers as described in 8 is regarded as a normal duty of the Contractor for which no additional payment will be considered, and which is deemed to be included in the Contractor's tendered rates and prices.

BA-PHALABORWA MUNICIPALITY



Covid-19 OHS SPECIFICATIONS FOR CONSTRUCTION OF STORM WATER CULVERTS FOR HUMULANI ACCESS BRIDGE TO CEMETERIES WARD 16

1. CORONAVIRUS (COVID-19) OUTBREAK

1.1 Introduction

BA-PHALABORWA Municipality is taking the health and safety of the employees very seriously, with the spread of the coronavirus or “COVID-19,” a respiratory disease caused by the SARS-CoV-2 virus; the Company must remain vigilant in mitigating the outbreak. The Company is a proud part of the construction industry, which many have deemed “essential” during this Declared National Emergency. In order to be safe and maintain operations, we have developed this COVID-19 OHS Specifications to be implemented by **the contractor**, to the extent feasible and appropriate, throughout the Jobsite and to assist the OHS Officer to compile OHS Plan which will include prevention and work practice controls.

The regulations seek to ensure that we, as a country, implement appropriate measures to contain the outbreak of COVID-19. These measures have far-reaching implications for employers.

On the 15th of March 2020, the Minister of Co-Operative Governance and Traditional Affairs, designated under Section 3 of the Disaster Management Act, 2002 (Act No. 57 of 2002), published in Government Gazette No. 43096 the Regulations, setting out the necessary steps to prevent an escalation of the disaster or to alleviate, contain and minimise the effects of the disaster.

In addition, the Department of Employment and Labour has appealed to employers to use the prescriptions of the Occupational Health and Safety (OHS) Act of 1993 in governing workplaces in relation to COVID-19.

The Department wishes to appeal to employers who have not prepared for pandemic events to prepare themselves and their workers as far as in advance as possible of potentially worsening outbreak conditions. The Department advises employers to go back to basics by conducting hazard identification and risk assessment to determine the level of risk exposure and communicate to all workers.

On the 09th of March 2020, the Department of Employment and Labour identified that Corona Virus infections had spread to eight new countries – increasing to 102 countries affected worldwide.

International human rights law guarantees everyone the right to the highest attainable standard of health and obligates governments to take steps to prevent threats to public health and to provide medical care to those who need it. Human rights law also recognizes the context of serious public health threats and public emergencies.

1.2 Applicable Legislation and Guidelines

- Occupational Health and Safety Act No. 85 of 1993 and Regulations (as Amended in 2014)
- Compensation for Injury and Occupational Diseases Act No. 100 of 1993 (as amended)
- National Disaster Management Act No 57 of 2002 and COVID-19 Regulations
- Department of Employment and Labour: Covid-19 Guideline
- World Health Organisation (WHO)
- National Institute for Communicable Diseases (NICD) (South Africa)
- Centre for Disease Control and Prevention (CDC)

1.3 Purpose of the COVID-19 Occupational Health and Safety Specification

At this time, it is necessary for Contractors to implement a policy and protocol to manage COVID-19 in the workplace and on site.

Employers need to remain alert and flexible as this issue continues to develop. Contractors who are proactive and forward-thinking in terms of their plans for business continuity will ensure that they contain, as far as possible, any negative impact on their businesses, and spread of the virus to their employees. The COVID-19 is an addendum to the Health and Safety Specification issued as a guideline to the Contractor, to understand the virus, to implement his policies, plans and procedures, as precautionary and vital measures on his project, and in his workplace, to ensure that the Corona Virus is not contaminated and / or spread amongst his, not limited to, workplace and employees.

For this purpose, this Covid-19 Health and Safety Specification, but not limited to, requires the contractor to use it to plan, identify, compile and implement a Covid-19 plan.

No advice, approval of any document required by the Project Specific Health and Safety Specification (PSHSS), such as hazard identification and risk assessments, or any other form of communication from the Client shall be construed as acceptance by the Client of any obligation that

absolves the Principal Contractor from achieving the required level of performance and compliance with legal requirements. Furthermore, there is no acceptance of liability by the Client, which may result from the Principal Contractor failing to comply with this Covid-19 PSHSS, i.e. the Principal Contractor remains responsible for achieving the required performance and Health levels.

The PSHSS *highlights the aspects* to be considered, over and above the minimum requirements of current guidelines and regulations set -out by legislature, governance and organisations as listed in the applicable legislations and guidelines above.

Requirements may be changed should new risks or issues are identified, or proposed.

The implementation of the proposed contingency plan shall remain at review continuously, since it is an outbreak of a virus still under scientific scrutiny, and each case (of infection, symptoms or outbreak) is dealt with individually and/ or independently.

Any new legislation or standards that are promulgated or accepted during the contract is automatically applied to your contract and/ or project.

1.4 Rights, Roles & Responsibilities in Occupational Health & Safety

The Contractor is expected to incorporate a **Care/Support Team for Covid-19** to maintain his Covid-19 plan implementation. Whilst the 16.1 remains responsible at all times, the President of South Africa, has mandated every citizen to maintain diligence and cautious precautionary measures to “flatten the curve” of the outbreak.

On these projects, it is expected that the 16.1, 16.2, safety officer, first aider, construction work supervisor, emergency coordinator, SHE representatives and construction managers etc. would make up this team and they should be included in the compilation of the Covid-19 plan, and the **Health and Safety Organogram** extended to include the Covid-19 Reaction/Support Team.

Every worker / Team member is identified at the front line of any outbreak response and as such are exposed to hazards that put them at risk of infection with an outbreak pathogen (in this case COVID-19).

Hazards include pathogen exposure, long working hours, psychological distress, fatigue, occupational burnout, stigma, physical and psychological violence.

This document highlights the rights and responsibilities of all workers, including specific measures needed to protect occupational safety and health.

The mandate of these role-players is crucial, and the initial Health & Safety Specification, Contractors Plan should be taken into consideration when putting this team together and identifying role-playing, planning and procedures etc.

The information relative to the scope of the project, the works etc. are to be considered when further instituting roles and responsibilities.

There shall be no contradictory appointments to the appointments already in place, and no infringement of anyone’s willingness or right to not participate, unless otherwise it is a “normal” requirement of the Employer to place such employee under such title/s.

No work may commence without written approval of the Health and Safety COVID-19 plan by the client and/or SHE Agent.

2. HEALTH & SAFETY PLAN & IMPLEMENTATION REQUIREMENTS

2.1 Information

The following requirements, but not limited to, are required to be considered, inclusive, part-planning and identification in the Contractor Covid-19 Health and Safety plan.

The Contractor is expected to add an addendum to his Health & Safety Plan, considering and outlying the following factors, and submit for approval.

Whilst this is a “new” virus and outbreak, it is expected that research is done (where necessary) and normal health management protocols are applied.

The Guideline from the Department of Employment and Labour refers:

“For employers who have already planned for influenza outbreaks involving many staff members, planning for COVID-19 may involve updating plans to address the specific exposure risks, sources of exposure, routes of transmission, and other unique characteristics of respiratory infections (i.e., compared to influenza virus outbreaks).”

2.2 COVID-19 POLICY

A Covid-19 Company / Site Policy is required **including the objectives** per the Health and Safety Act and Regulations 85 of 1993.

Refer: Section 7 of the Health & Safety Act and Regulations 85 of 1993 (under Construction Regulations, as amended in 2014).

2.3 Reporting to work / Engagement in the COVID-19 Pandemic

The outbreak focuses on a need for Employers / Contractors to implement certain controls for/when employees report to work and engage with works or each other.

Particular measures should be put into place and or considered where possible:

These measures should include / consider:

- Engineering Controls / Alternatives
- Administrative Controls / Alternatives
- Safe Work Procedures
- Quantity of Employee Controls per activity or engagement
- Personal Protective Equipment (PPE)
- Risk Level identification.

Some of the controls would include alternatives or consider:

- Screening employees for risk or symptoms
- Educating employees and offering awareness or informative training (on the coronavirus)
- Isolating employees
- Isolating employees from hazardous risk areas
- Ensuring good and proper hygiene controls
- Ensuring good and proper ventilation and access to sufficient ventilation equipment
- Allowing administration to be done off-site (where technical and practically just)
- Planning and scheduling activities in such a way to minimise teams amalgamating (bricklaying vs general labour) in particular area etc. i.e. minimizing the number of workers on site at any given time e.g. rotation or shift work.

24 Role Players to COVID-19 Policy and Plan of Contractor With reference to item 1.3:

The Contractor should establish a care/support team which can handle the process of cross contamination and infection on-site. The team should also be available / referred for answering workers' concerns and communicating accurate media updates etc. With employees, site visitors and others coming to site from unknown origins, it is imperative that the Covid-19 plan is drafted with the identification of the care/support individuals to form this team, as these individuals will be required to avail themselves, as per the procedure put into place.

The role-players will be expected to attend to all who report to site on arrival, make decisions to allow such individuals to proceed onto site, make decisions on those who are deemed a potential risk, identify and make decisions on those who are high risk, call upon, intervene and drive the procedure to those who are at risk or potentially-infected towards healthcare, testing and prognosis.

The role-players will also be expected to deal with issues of resources, and maintaining of resources, e.g. using a glove, then re-using a glove is not permitted. Using a glove then taking off a hand where the hand is bare and infecting then the hand is also not correct.

All these controls need monitoring by role-players.

The organogram must be re-defined and submitted, and include appointment letters for such.

2.5 Risk Assessment & Risk Assessment Reviews

In all Health and Safety Protocols – Risk Analysis is key. Compiling the Covid-19 plan requires that employers and workers should use this planning guidance to help identify risk levels in workplace settings and to determine any appropriate control measures to implement.

Planning for COVID-19 involves updating plans to address the specific exposure risks, sources of exposure, routes of transmission, and other unique characteristics of respiratory infections (i.e., compared to influenza virus outbreaks)

Covid-19 measures require that a revised risk assessment is compiled and inclusive of:

- Hazard
- Risk
- Risk to Health
- Risk to Safety
- Precautionary / Prevention Measures
- PPE listed inclusive referred in Precautionary Measures
- Risk Rating / Residual Risk

The contractor is to identify and pre-determine the risks or potential risk exposure to this project and thereafter deep the hazards and risks. In other words the risk assessment should be more site-specific than global- specific.

The Department of Employment and Labour Guidelines also refers:

“The Department advises employers to “go back to basics” by conducting hazard identification and risk assessment to determine the level of risk exposure and communicate to all workers”.

Remember: In determining your Hazards, Risks and Control Measures – you need to achieve:

Reduce and omit infection of the Corona Virus by:

- Not spreading the Virus
- Not cross-contaminating
- Proper, Real and **Stringent** Hygiene Practices
- Proper, sufficient and correct supply, use and disposal of PPE
- Good Health Practices at home
- Sufficient, Clean and Adequate water and sanitary

Hazards include pathogen exposure, long working hours, psychological distress, fatigue, occupational burnout, stigma, and physical and psychological violence.

2.6 Health Management and Medicals

Health Management is crucial for the Covid-19 Disease Maintenance and Management.

Contractors must assume overall responsibility to ensure that all necessary preventive and protective measures are taken to minimize Occupational Health and Safety risks.

Contractors are to include in their Systems, at least the following, in their **Health Management Protocol** the Covid-19 Health and Safety Plan addendum:

- Screening Process
- Isolation and Management Process (in the event of suspected or infected cases)
- Provide information, instruction and training on Occupational Hygiene and Management;
- Refresher Training on infection and contamination prevention and control (IPC); and Use, Putting on,
- Taking off and disposal of correct and identified personal protective equipment (PPE); provide adequate IPC and PPE supplies (masks, gloves, goggles, gowns, hand sanitizer, soap, water and cleaning supplies) in sufficient quantity to healthcare or other staff caring for suspected or confirmed
- Taking consideration of social distancing of or at least 1,5m to 2 m
- Communicate health risks
- Identify a procedure for maintaining health and hygiene practices
- Monitoring and Reviewing of Health Status' of all employees daily

Health Management includes the workplace and not only the workforce. There are certain areas that shall need disinfectant or to be hygienically maintained, e.g. high-trafficked areas, areas where food and gatherings take place (lunch facilities) etc.

International human rights law guarantees everyone the right to the highest attainable standard of health and obligates governments to take steps to prevent threats to public health and to provide medical care to those who need it .

Medical Surveillance Programme

- Whilst the OHS Construction Regulations 7(g) refers to The Contractor ensuring that all employees are fit to the specific work they perform, the Covid-19 outbreak, is identified as a threat to all on-site, and would deem any person who is infected or potentially infected, with the Corona Virus incompetent.

- Therefore, after a global outbreak, and a National Lockdown, it is required that **all employees** including management would have to undergo a Medical fitness test in relation with Covid-19 and a Certificate of Fitness must be in place prior to resume or commence works on site.
- The Medical Surveillance programme for Covid-19 is hereby set as follows: For this Project

261 If there is an Occupational Medical Examination (Annexure 3) for the employee dated within 2020, and the employee had NO-FLU LIKE symptoms, DID NOT visit the clinic, doctor or hospital at all since Lockdown, and still does not have any symptoms (upon screening), then a General Practitioner (GP) Certificate of Fitness will be accepted.

262 If there is NO Occupational Medical Examination (Annexure 3) for the employee for **this Project**, then an Annexure 3 Occupational Medical Practitioner (OMP), Annexure 3 Certificate of Fitness is required.

263 If there is an Occupational Medical Examination (Annexure 3) for the employee dated within 2020, and the employee **had flu like symptoms, visited the clinic, doctor or hospital just before, during and currently after lockdown**, then an Annexure 3 is renewed Annexure 3 is required from the OMP*.

*It may be that the OMP also requires a letter from the GP – It is not guaranteed.

2.7 Personal Protective Equipment (PPE)

As a normal part of Health and Safety Systems, it is a known factor that PPE is a key to the prevention of most Injuries, Accidents, Diseases, Contaminations and Incidents. The Covid-19 outbreak proves this again.

Personal Protective Equipment (PPE) – while engineering and administrative controls are considered more effective in minimizing exposure to SARS-CoV-2; PPE is also needed to prevent exposures, contamination and cross-contamination.

The PPE identification and Resource requirements should be identified and proven in the Hazard Identification and Risk Assessment (HIRA) per clause 2.5.

Although the HIRA may not conclude all the PPE, the Contractor is also to determine the same from all the requirements herein listed in the Covid-19 Health and Safety Specification.

Examples of PPE include: gloves, goggles, face shields, face masks, gowns, aprons, coats, overalls, hair and shoe covers and respiratory protection, Hand Soap, Hand Sanitizer, No-touch Disposal / Waste Bins for Contaminated Waste only etc.

Employers should check the NICD website regularly for updates about recommended PPE, and should also include **Health and Safety Signage and display notices**, where required.

A register including the PPE for Covid-19 (not on the usual PPE Register) should be submitted with the Covid-19 Health and Safety Plan addendum.

2.8 First Aid/Health Care/ Emergency Contingency Planning

A First Aider is deemed competent in identifying symptoms or reactions that the Coronavirus would portray, whilst each individual case, is different.

The First Aider is therefore expected to be included in the Support/Reaction Team as noted in 1.3 and 2.4.

The First Aider / Support Team should therefore be diligent and even-more cautious to prevent and ensure no cross contamination, and no infection on-site even when applying First aid for another cause.

Whether acting as a First Aider, or a member of the Support Team, all Emergency Contingency planning should consider at least:

- Follow established Occupational Health and Safety procedures, avoid exposing others to health and safety risks and ensure participation in Employer-provided Occupational Health and Safety training;
- Stringent Hygiene Practice;
- Use provided protocols to assess and treat patients;
- Treat patients with respect, compassion and dignity;
- Maintain patient confidentiality;
- Swiftly follow established public health reporting procedures of suspect and confirmed cases;
- Identify Call Centre and External Emergency Services for Covid-19
- Provide or reinforce accurate infection prevention, control and public health information, including to concerned people who have neither symptoms nor risk (i.e. other employees)
- Use and Disposal of personal protective equipment properly;
- Self-monitor for signs of illness and self-isolate or report illness to managers, if it occurs;
- advise management if they are experiencing signs of undue stress or mental health challenges that require support interventions; and
- Report to Construction Manager or appointed person any situation which they have reasonable justification to believe presents an imminent and serious danger to life or health.

The Following, but not limited to, will be required, and expected to be Displayed, and with Key Personnel:

- An isolation area / space / facility on-site including the Disinfecting

Management of this Facility **On-Site**;

- External Emergency Contacts List of Facilities identified for Covid-19 Management;
- Call Centre Contacts Lists Information for the Corona virus (Covid-19) 24- Hour Hotline No.: 0800 029 999, Corona virus (Covid-19) WhatsApp No.: 0600 123 456, Local Mpulanga Province, WHO, NICD, Local Department of Labour, CDC etc.
- Emergency Plan to deal with Covid-19 screening, infection, contamination including the process of all employees when one is found to be infected (its deemed an emergency).
- Inclusion of PPE Resource Plan in the Covid-19 Emergency Plan.

2.9 Training and Awareness

Training and Awareness of the Covid-19 Addendum to your approved Health and Safety Plan is crucial, and part of the Implementation of the Contractors System.

Employees need to be informed and education with accurate information. Knowledge is Power.

The Contractor is to outline Safe Work Procedures pertaining to the compiled system to manage and alleviate the Covid-19 disease.

- What is Covid-19 and Disease Information
- Role Players
- Hazards and Risks to Covid-19
- Hygiene Management and Practice
- Infection Prevention and Control (IPC) measures
- Safe Working Systems (working apart etc)
- Emergency Protocols
- PPE Use and Disposal
- Employee Benefits or Non-Benefits (Remuneration, UIF Claims, Compensation Claims, etc.) Zero-Tolerance Policies towards workplace violence and harassment, etc...

The **Contractors manual or safe work procedure sheets** inclusive, but not limited to, the above should be attached to the Covid-19 plan.

2.10 Reporting, Recording and Document System of COVID-Plan

The Contractor is required to record all systems implemented, controlled and handled. The Contractor shall record all screening processes, hygiene maintenance, medical reports, suspected and infected cases etc.

The Contractor shall amend, where applicable, and add, where applicable, suitably designed registers for the additional systems, protocols and resources needed to be recorded.

The contractor shall include **Covid-19 matters in his monthly report** including statistics.

2.11 Sub-Contractor / Supplier Management

The Contractor is to review his Sub-Contractor Management plan, and sub-contractor plans.

The Contractor shall ensure that his Sub-contractors and suppliers have sufficient systems on their own part to address items within this Health & Safety Covid-19 Specification, and to ensure that they do not contaminate or infect employees or facilities at this project.

The Health and Safety Officer, who is deemed to be part of the support team, should ensure that all necessary protocols are followed, and that the Principal Contractor and Sub Contractor's and/ or Suppliers do not contradict his own protocols and plans to control, manage and handle Covid-19. The Contractor is to produce evidence of the same.

2.12 Occupational Diseases (Reporting and Recording)

Whilst Covid-19 is not an Occupational Disease, it can be contracted at the workplace. The President has identified that the Compensation Fund will make available funding to accommodate claims of Covid-19 infection. The Contractor must identify his Procedure to identify Contraction / Contamination on-site (on duty), and his claims procedure.

The Contractor shall include the Contact Details of the Limpopo Rapid Response person at Department of Employment & Labour in the Limpopo Province Provisional Costing and Budget

The Contractor is expected to compile his Provisional Costing and Budget expected to derive from this Health and Safety Specification and his plan, with the Health and Safety Covid-19 plan.

A Bill of Quantities (BoQ) template can be requested either from the Engineers or the Client for Covid-19 Implementation Measures should the Contractor require the same. All items provisionally expected to be required should be in this.

This provisional budget and / or costing requirement relates to **Construction Regulation 5(1)(g)**, and is not a guarantee to Contingency Claims, a Variation Order that may be deemed due to Covid-19, or Time Extension Claims. Such Claims or variations must be dealt with the Principal Agent accordingly.

2.13 Safe Site Shutdown/ Support Systems

Once Lockdown is suspended, and perhaps an outbreak on site or another Lockdown is required, or at any given interval whereby Covid-19 has demanded a close or interval, the Contractor shall ensure proper Safe Site Shutdown procedure and practice. The Contractor is to ensure that proper systems of shutdown, lock-out and security of all is carried out, and that proper support systems are communicated and offered, where applicable and possible, to all employees, teams and surrounding communities or facilities Support Call Centre, Support Counselling centers and so forth are to be sourced, and the information of such to be communicated. The contractor shall provide his procedure for such in his addendum of the Health and Safety plan. No PPE disposed must be left on-site should Shutdown take place. All hazardous waste must be removed and disposed as per the procedure identified; this should also be in the Risk Assessment.

2.14 Deep Cleaning at Construction Site

The Principal contractor must ensure that the construction site, particularly in communal areas such as security access control room, site office, working areas, ablution facilities, welfare facilities, eating facilities, hand washing facilities and confined spaces are disinfected and cleaned, regularly, in addition, this must include, all touch points such as taps, toilets flushers and seats, door handles and push plates, handrails and corridors, lift and hoist controls, machinery and equipment controls, eating area chairs, telephone equipment, keyboards, photocopiers and other office equipment

Employees that are appointed to conduct deep cleaning must be trained on all the Health and Safety protocols, including the Handling of Hazardous Chemical Substances, the Material Safety Data sheet and must be provided with the correct PPE and supervision in accordance with Regulations for Hazardous Biological Agents 4 Information and Training.

2.15 Waste Disposal

Principal contractor must ensure that all waste is disposed in the correct and required manner. All disposal masks and gloves are biological waste and must be disposed:

- Separate waste bins (must be labelled) for used PPE (gloves, masks) must be supplied by the principal contractor.
- Dust masks and Gloves to be disposed as hazardous waste.
- Waste must be disposed at a registered waste facility.
- Proof of waste disposal must be kept for record keeping.
- Employees handling waste must comply with the PPE requirements before handling such.

2.16 Transportation of Employees

Wherever possible Principal contractor employees must travel to site alone making use of their own transport. If principal contractor employees have no option but to share transport the following must be adhered to:

- Journeys should be shared with the same individuals and with the minimum number of people at any one time as per Government guidelines.
- Good ventilation (i.e. keeping the windows open) and facing away from each other may help to reduce the risk of transmission.
- The vehicle should be cleaned regularly, using gloves and standard cleaning products, with particular emphasis on handles and other areas where passengers may touch surfaces.
- Hand cleaning facilities must be provided at entrances and exits.

2.17 Travelling to and from Construction site

Professional teams, Principal contractor management, Client's project team to minimize travelling to site. Work from home should be priority as far as reasonably practicable especially for office staff. Progress and Technical meetings must be scheduled through available technology platforms such as Microsoft teams, Zoom or Skype.

Professional teams travelling to sites by vehicle will be limited to 2 persons, if 1 person drives/operate the vehicle and another person need to be seated at the back. If the vehicle is a single cab, strictly only 1 person will be allowed in the vehicle. Bus services and e-hailing services shall not carry more than 50% of the licensed capacity and taxi services shall not carry more than 70% of the licensed capacity.

C4: SITE INFORMATION

C4.1 LOCALITY PLAN

C4.2 CONDITIONS ON SITE: GEOTECHNICAL REPORT SUMMARY

C4.3 TENDER DRAWINGS

C4.1 LOCALITY PLAN



C4.2 CONDITIONS ON SITE: GEOTECHNICAL REPORT

Humulani Ward 16

At up to 600mm the material is clay sand and blackish brown in nature and its origin is transported, as a results is not good for foundation. Whole material should be taken out. From 600mm to the depth of 1600mm, materials is gravel (weathered rock) and greyish brown in nature, dense and its origin is residual. The results of initial geotechnical investigation show that generally there was refusal at 1600mm and no ground water was encountered. Excavation of 1000mm minimum should be done then do a rock fill. From observation done, we recommend that excavation should be done for entire 1600mm and then do a rock fill.

MATERIALS SUMMARY –

C4.3 TENDER DRAWINGS

DESCRIPTION	DRAWING NO.	SHEETS
LOCALITY MAP	01	1
STORM WATER CULVERTS	02	2
SETTING OUT DATA	SO 001	1
LONG SECTION	LS 001	1
CROSS SECTIONS	XS 001	1
TYPICAL CROSS SECTION	SD 00	1
GUARDRAILS PLACING DETAILS	SD 01	1
GABIONS DETAILS	SD 02	1
TYPICAL PIPE CULVERT INLET AND OUTLET STRUCTURES	SD 03	1
TYPICAL DETAILS FOR OPEN CHUTES	SD 04	1
SUBSOIL DRAINAGE DETAILS	SD 05	1
CONCRETE SIDE DRAINS, KERBS AND ENERGY BREAKERS	SD 06	1
PIPE CULVERT DETAILS	SD 07	1
TRAFFIC MANAGEMENT	SD 08	1
SIGN BOARD	SD 09	1



BA-PHALABORWA MUNICIPALITY

BOOK OF DRAWINGS



REVISIONS			
No	DATE	INIT	DESCRIPTION

PROJECT
 INSTALLATION OF STORM WATER CULVERTS
 (MASHISHIMALE TO LEJORI WARD 10, MAKHU
 SHANE WARD 2, LULEKANI ACCESS BRIDGE
 TO CEMENTRIES WARD 15 AND HUMULANI
 ACCESS BRIDGE TO CEMENTRIES WARD 16)

CONTRACT NUMBER: 9/4/1/39

TITLE
 BOOK OF DRAWINGS

CLIENT:

 BA-PHALABORWA MUNICIPALITY
PRIVATE BAG X01020, PHALABORWA, 1390
 Tel: 015 780 6300 Fax: 015 781 0726

CONSULTANT:

 PHAMELA ENGINEERING SERVICES
SUITE 02, RONDEBOSCH, 82 HANS VAN RENSBURG
 Polokwane, 0700
 Tel: 015 065 0585 Fax: 086 669 6824

SCALE ON REDUCED DRAWING

 80mm SCALE ON ORIGINAL DRAWING

DESIGNED AB MABUNDA	CHECKED F. BALOYI-Pr.ENG
DRAWN VL. RATSHIBVUMO	APPROVED
DATE JULY 2019	SCALE AS SHOWN

REVISION	0
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BA-PHALABORWA MUNUCIPALITY
INSTALLATION OF STORM WATER CULVERTS

ANNEXURE

DRAWING LIST

25/07/19

DRG	TITLE	REV.
01	LOCALITY MAP	
02	STORM WATER CULVERTS	2
SO 001	SETTING OUT DATA	1
LS 001	LONG SECTIONS	1
XS 001	CROSS SECTIONS	1
SD 00	TYPICAL CROSS SECTION	1
SD 01	GUARDRAILS PLACING DETAILS	1
SD 02	GABIONS DETAILS	1
SD 03	TYPICAL PIPE CULVERT INLET AND OUTLET STRUCTURES	1
SD 04	TYPICAL DETAILS FOR OPEN CHUTES	1
SD 05	SUBSOIL DRAINAGE DETAILS	1
SD 06	CONCRETE SIDE DRAINS, KERBS AND ENERGY BREAKERS	1
SD 07	PIPE CULVERT DETAILS	1
SD 08	TRAFFIC MANAGEMENT	1
SD 09	SIGN BOARD	1

REVISIONS

DATE	INIT	DESCRIPTION

PROJECT INSTALLATION OF STORM WATER CULVERTS
(MASHISHIMALE TO LEJORI WARD 10, MAKHU
SHANE WARD 2, LULEKANI ACCESS BRIDGE
TO CEMENTRIES WARD 15 AND HUMULANI
ACCESS BRIDGE TO CEMENTRIES WARD 16)
1/4/1/39

TITLE

DRAWING LIST

CLIENT:



BA-PHALABORWA MUNICIPALITY
PRIVATE BAG X01020 ,PHALABORWA, 1390
Tel: 015 780 6300 Fax: 015 781 0726

CONSULTANT:



PHAMELA ENGINEERING SERVICES
SUITE 02, RONDEBOSCH, 82 HANS VAN RENSBURG
Polokwane, 0700
Tel: 015 065 0585 Fax: 086 669 6824

SCALE ON REDUCED DRAWING



DESIGNED AB MABUNDZA	CHECKED F.BALOYI-Pr.ENG
DRAWN VL.RATSHIBVUMO	APPROVED
DATE JULY 2019	SCALE AS SHOWN

DRAWING LIST

REVISION

0

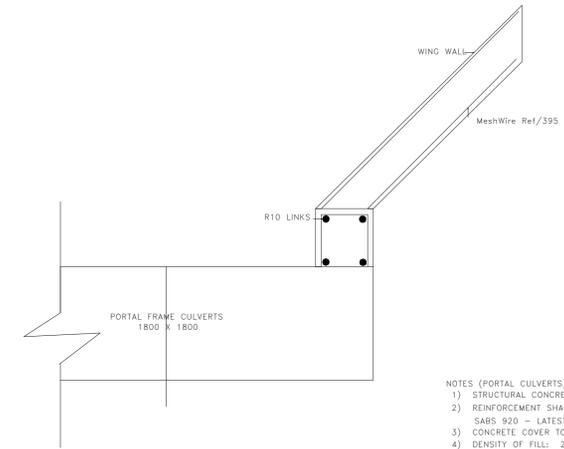
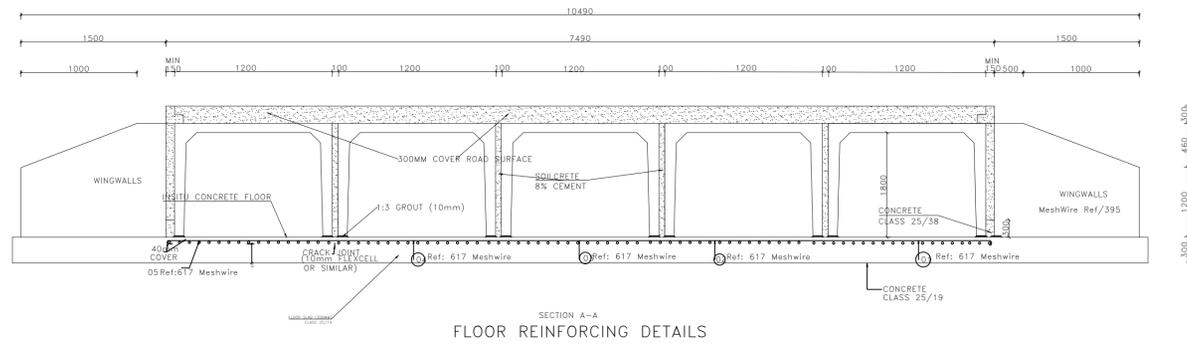
HUMULANI WARD 16



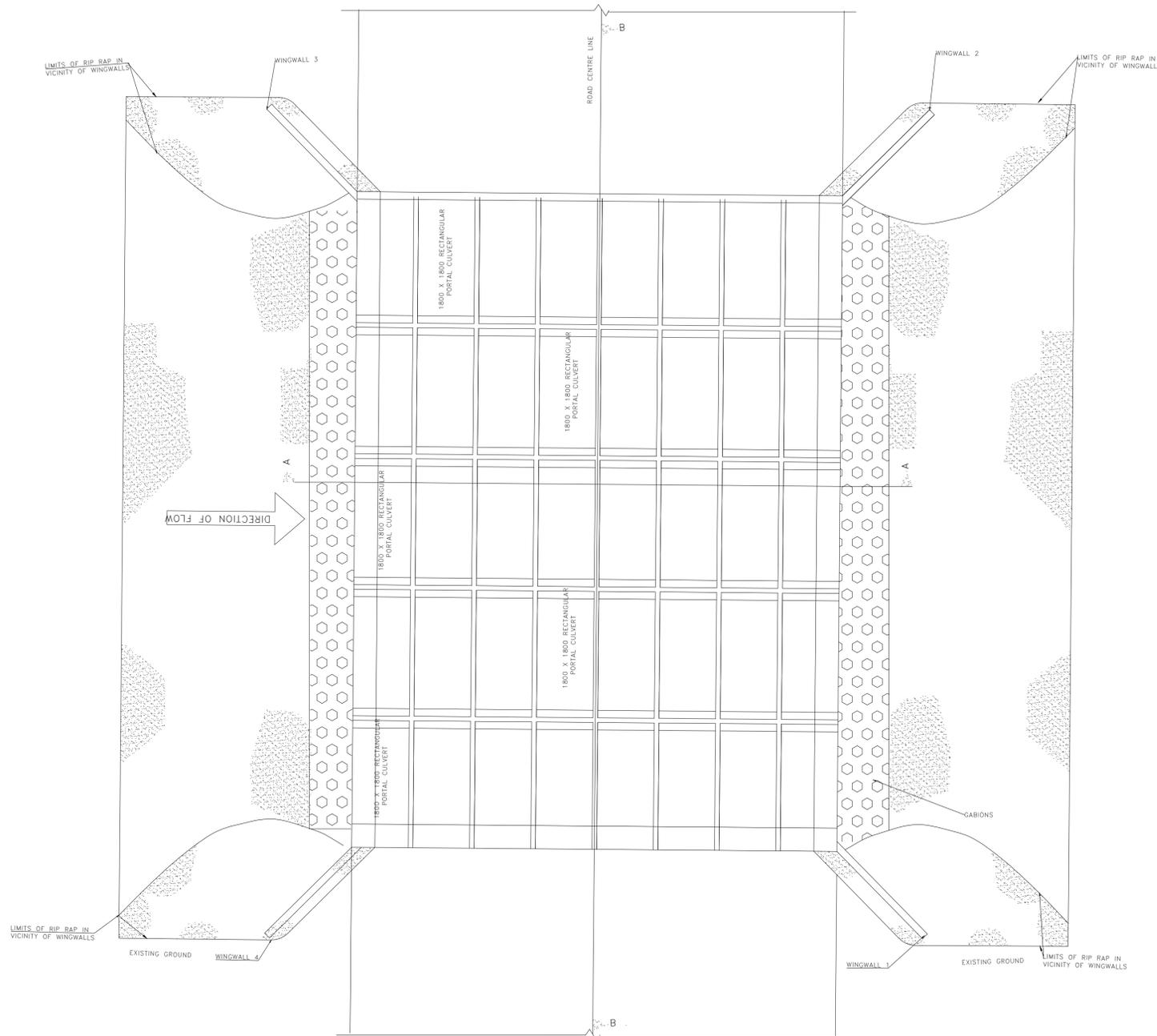
Google Earth

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				CLIENT  BA-PHALABORWA MUNICIPALITY PRIVATE BAG X01020 PHALABORWA, 1390 TEL: (015) 780-6300 FAX: (015) 781-0726		CONSULTANT  PHAMELE ENGINEERING SERVICES SUITE 02, RONDEBOSCH, 82 HANS VAN RENSBURG Polokwane, 0700 Tel: 015 065 0585 Fax: 086 669 6824		CLIENT DRAWN BY: VL RATSHIBVUMO DATE: _____ APPROVED BY: _____ DATE: _____ DESIGNED BY: AB MABUNDZA DATE: _____ CHECKED BY: FIDELIS BALOYI-PR.ENG DATE: _____ PR. ENG. No. _____ PROJECT MANAGER DATE: _____ SCALE: _____		PROJECT INSTALLATION OF STORM WATER CULVERT HUMULANI ACCESS BRIDGE TO CEMETRIES WARD 16 DRAWING TITLE: LOCALITY MAP PROJECT No: 9/4/1/39 DRAWING NO: BPM/07/2019/LP/01 REVISION: 0	
REVISION	INITS	DATE	INITS	DATE	REF. No.	DESCRIPTION	REFERENCES				
	CHECKED		APPROVED								



- NOTES (PORTAL CULVERTS):
- 1) STRUCTURAL CONCRETE IS CLASS 25/19
 - 2) REINFORCEMENT SHALL COMPLY WITH THE REQUIREMENTS OF SABS 920 - LATEST VERSION
 - 3) CONCRETE COVER TO STEEL: 40mm
 - 4) DENSITY OF FILL: 2000 kg/m³
 - 5) LOAD FACTOR FOR PROOF LOAD OF SABS 986 = 1.5
 - 6) CHARACTERISTIC STRENGTH OF HIGH TENSILE STEEL = 450 MPa
 - 7) PRECAST REINFORCEMENT CULVERTS SHALL COMPLY WITH THE REQUIREMENTS OF SABS 986 AS WELL AS THE ADDITIONAL TEST LOADING AND CRITICAL TEST LOAD COMBINATION FOR THE TEST OF SHEAR RESISTANCE
 - 8) DIMENSIONS AND REINFORCEMENT DETAILS FOR IN-SITU INVERT SLABS ARE VALID ONLY:
 - (a) IF THE HEIGHT OF FILL IS LESS THAN 5000mm
 - (b) WHERE THE TYPE OF MATERIAL UNDER THE BASE SLAB IS NOT ROCK
 - 9) THE DIMENSIONS IN THE TABLE MAY NOT CONFORM TO ALL MARKETED UNITS AND IT MAY BECOME NECESSARY TO REVISE TABULATED DIMENSIONS
 - 10) MAXIMUM SPACING OF TRANSVERSE JOINTS IN FLOORSLABS IS 6m
 - 11) BACKFILL ON TOP OF CULVERTS TO BE SOIL CEMENT (8% CEMENT) IF TOP OF CULVERT EXTENDS INTO THE SUBBASE



CULVERT DESCRIPTION	
CLASS BOX CULVERT	100 D
BARRELS	5
SPAN	1220
HEIGHT	1800

GENERAL ARRANGEMENT OF 5 RECTANGULAR PORTAL CULVERTS

				CLIENT  BA-PHALABORWA MUNICIPALITY PRIVATE BAG X01020 PHALABORWA, 1390 TEL: (015) 780-6300 FAX: (015) 781-0726		CONSULTANT  PHAMELA ENGINEERING SERVICES SUITE 02, RONDEBOSCH, 82 HANS VAN RENSBURG Polokwane, 0700 Tel: 015 065 0585 Fax: 086 669 6824				CLIENT DRAWN BY: VL RATSHIBVUMO DATE: _____ APPROVED BY: _____ DATE: _____ DESIGNED BY: AB MABUNDZA DATE: _____ CHECKED BY: FIDELIS BALOYI-Pr.ENG DATE: _____ PROJECT MANAGER DATE: _____ SCALE: _____				PROJECT INSTALLATION OF STORM WATER CULVERT HUMULANI ACCESS BRIDGE TO CEMENTRIES WARD 16 DRAWING TITLE: PORTAL CULVERT DETAILS PROJECT No: 9/4/1/39 DRAWING No: BPM/07/2019/CD/001 REVISION: 0			
REVISION	DESCRIPTION	CHECKED	APPROVED	INITS DATE	INITS DATE	REF. No.	DESCRIPTION	REFERENCES									



ROAD SETTING OUT DATA Lo 29

PI No.	CH	YLo	XLo	Radius	DA	TL	AL
Const:				(m)	D M S	(m)	(m)
PI 1	0.000	-5470.664	2642639.425	HUMULANI ACCESS BRIDGE ROAD			
BC 2	56.884	-5527.329	2642644.418				
PI 2		-5544.822	2642645.960	500	4°01'23"	17.561	35.108
EC 2	91.992	-5562.164	2642648.725				
BC 3	181.580	-5650.634	2642662.831				
PI 3		-5665.889	2642665.263	500	3°32'21"	15.447	30.885
EC 3	212.464	-5681.265	2642666.749				
PI 4	293.450	-5761.875	2642674.539				

REVISION	DESCRIPTION	INITIALS	DATE	REF. No.	DESCRIPTION

CLIENT



BA-PHALABORWA MUNICIPALITY
 PRIVATE BAG 101020
 PHALABORWA, 1390
 TEL: (015) 780-6300 FAX: (015) 781-0726

CONSULTANT

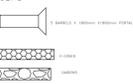


PHAMELE ENGINEERING SERVICES
 SUITE 02, RONDEBOSCH, 82 HANS VAN RENSBURG
 Polokwane, 0700
 Tel: 015 065 0585 Fax: 086 669 6824

CLIENT

DRAWN BY	DATE	APPROVED BY	DATE
VL RATSHIBVUMO			
DESIGNED BY	DATE		
AB MABUNDZA			
CHECKED BY	DATE		
FIDELIS BALOYI-Pr.ENG			
PROJECT MANAGER	DATE	SCALE	

LEGEND



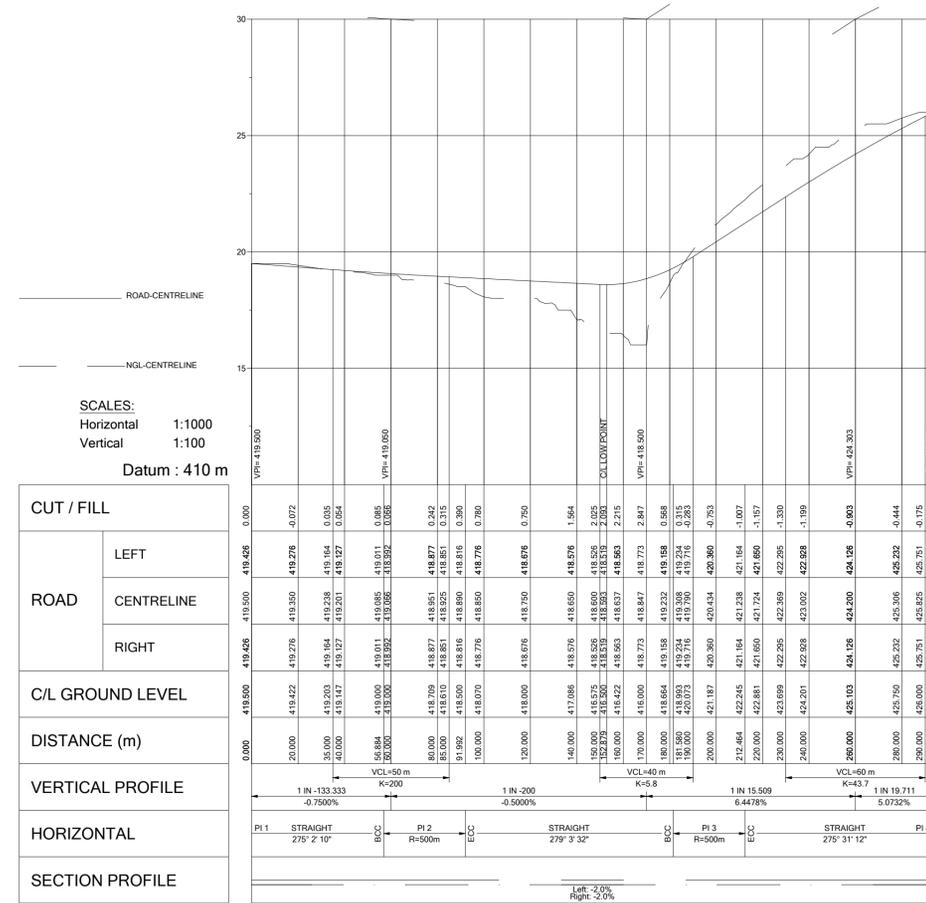
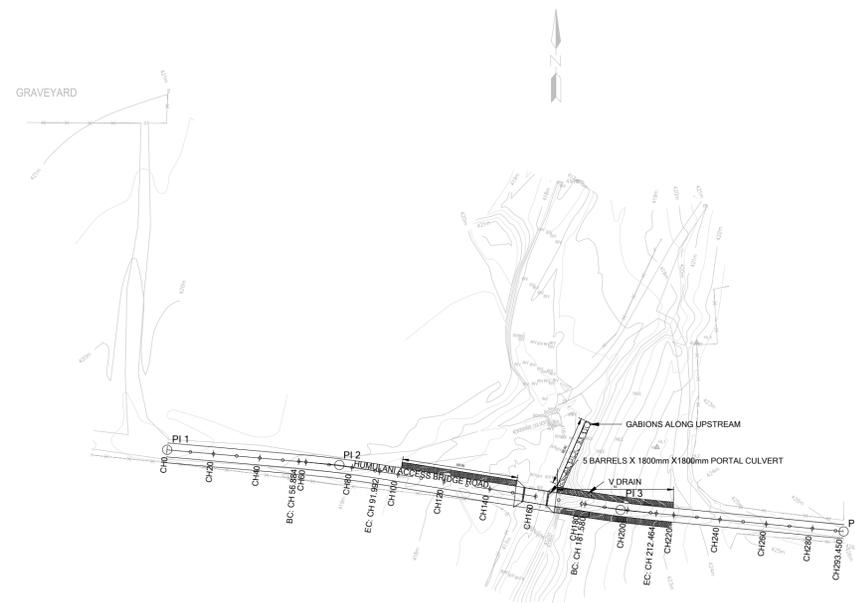
PROJECT

INSTALLATION OF STORM WATER CULVERT
 HUMULANI ACCESS BRIDGE TO CEMENTRIES WARD 16

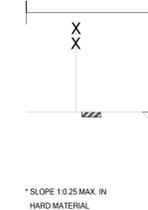
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SETTING OUT DATA

PROJECT No	DRAWING NO:	REVISION
9/4/1/39	BPM/07/2019/SD/001	0



HUMULANI ACCESS BRIDGE ROAD
DESIGN SPEED: 60



REVISION	DESCRIPTION	INITIALS	DATE	REF. No.	DESCRIPTION

CLIENT

BA-PHALABORWA MUNICIPALITY
PRIVATE BAG 101020
PHALABORWA, 1390
TEL: (015) 780-6300 FAX: (015) 781-0726

CONSULTANT

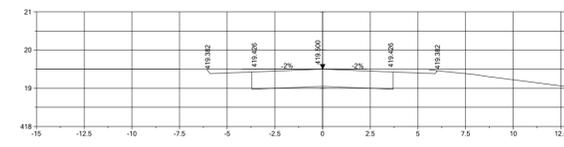
PHAMELE ENGINEERING SERVICES (PTY) LTD
SUITE 02, RONDEBOSCH, 82 HANS VAN RENSBURG
POLOKWANE, 0700
Tel: 015 065 0585 Fax: 086 669 6824

CLIENT	DATE	APPROVED BY	DATE
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DESIGNED BY AB MABUNDZA			
CHECKED BY FIDELIS BALOYI-Pr.ENG			
PROJECT MANAGER			

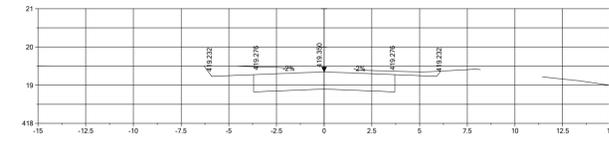
LEGEND

- 5 BARRELS X 1800mm X 1800mm PORTAL CULVERT
- ACCESS BRIDGE ROAD

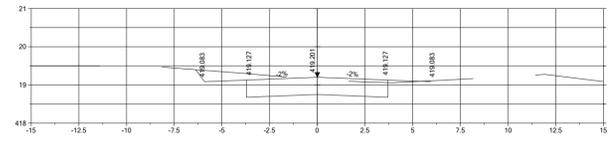
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DRAWING TITLE	LONG SECTION CH0+000-0+293.450
PROJECT No	9/4/1/39
DRAWING NO:	BPM/07/2019/LS/001
REVISION	0



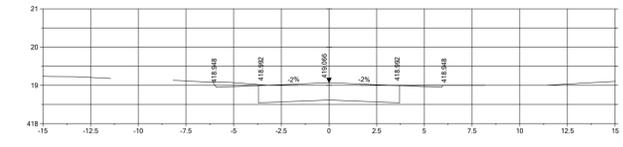
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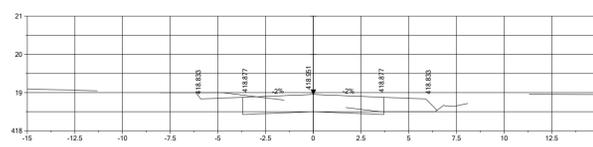
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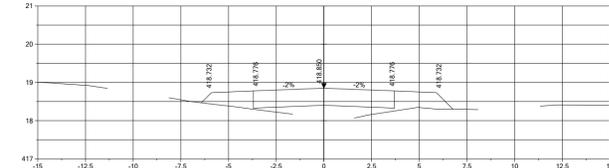
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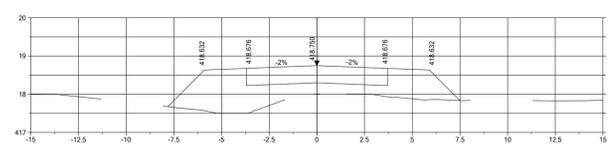
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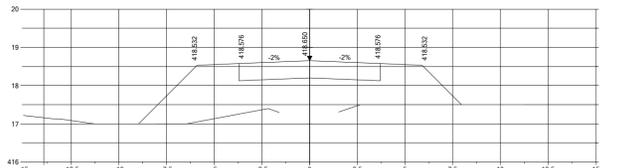
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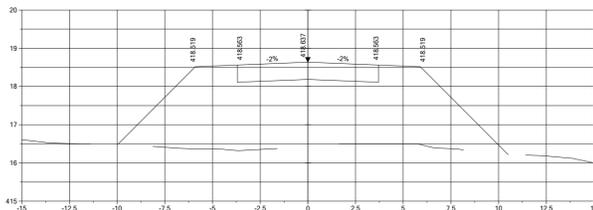
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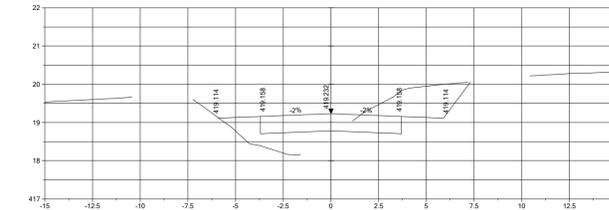
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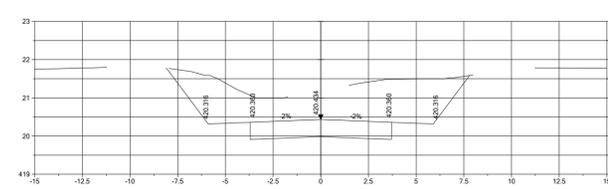
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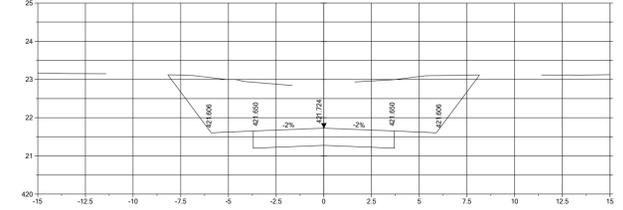
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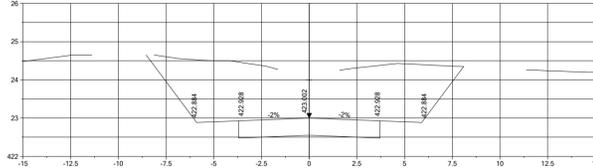
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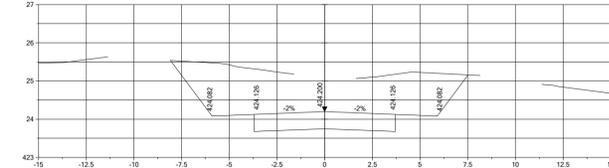
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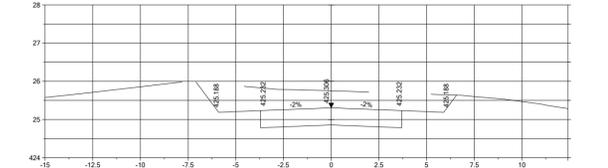
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CH 240



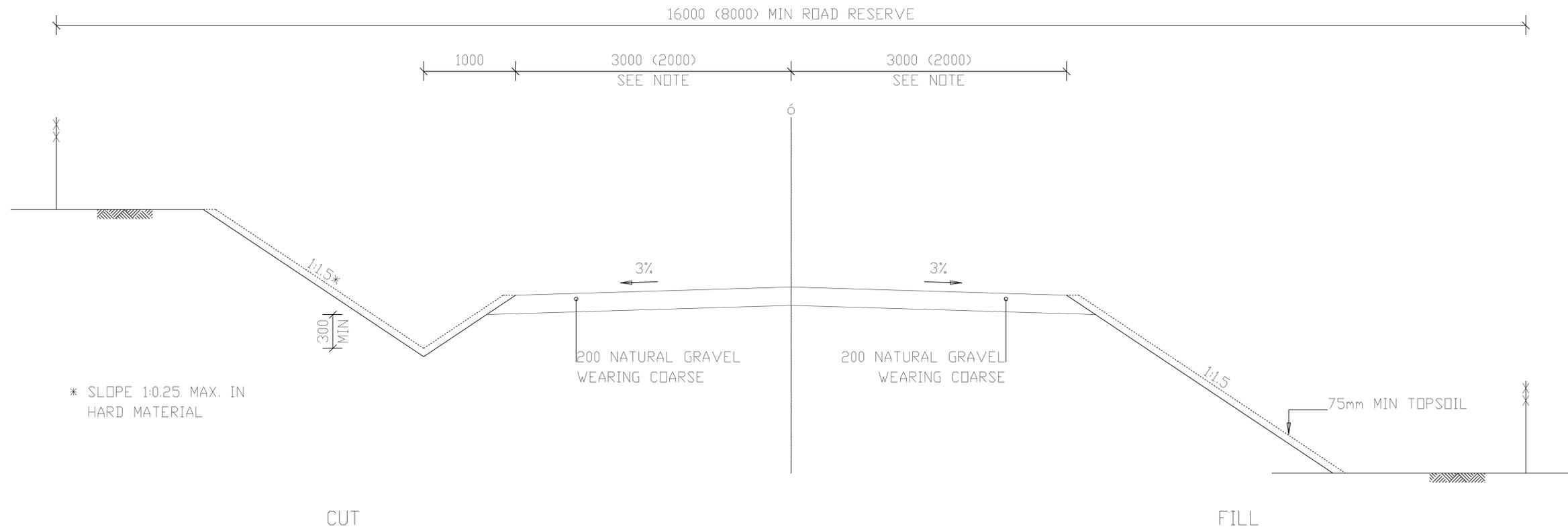
CH 260



CH 280

HUMULANI ACCESS BRIDGE ROAD
H-SCALE 1: 100
V-SCALE 1: 50

		CLIENT		CONSULTANT		CLIENT		PROJECT	
		 BA-PHALABORWA MUNICIPALITY PRIVATE BAG 101020 PHALABORWA, 1390 TEL: (015) 780-6300 FAX: (015) 781-0726		 PHAMELE ENGINEERING SERVICES SUITE 02, RONDEBOSCH, 82 HANS VAN RENSBURG JOHANNESBURG, 0700 Tel: 015 065 0585 Fax: 086 669 6824		DRAWN BY: VL RATSHIBVUMO DATE: _____ APPROVED BY: _____ DATE: _____ DESIGNED BY: AB MABUNDZA DATE: _____ CHECKED BY: FIDELIS BALOYI-Pr.ENG DATE: _____ PROJECT MANAGER: _____ DATE: _____ SCALE: _____		PROJECT: INSTALLATION OF STORM WATER CULVERT HUMULANI ACCESS BRIDGE TO CEMENTRIES WARD 16 DRAWING TITLE: X-SECTION CH0+000-0+280 PROJECT No: 9/4/1/39 DRAWING NO: BPM/07/2019/XS/001 REVISION: 0	
REVISION	DESCRIPTION	CHECKED	APPROVED	REF. No.	DESCRIPTION	REFERENCES			



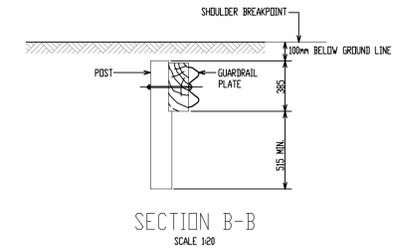
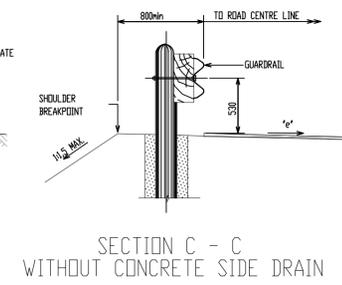
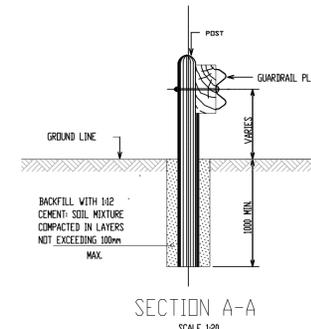
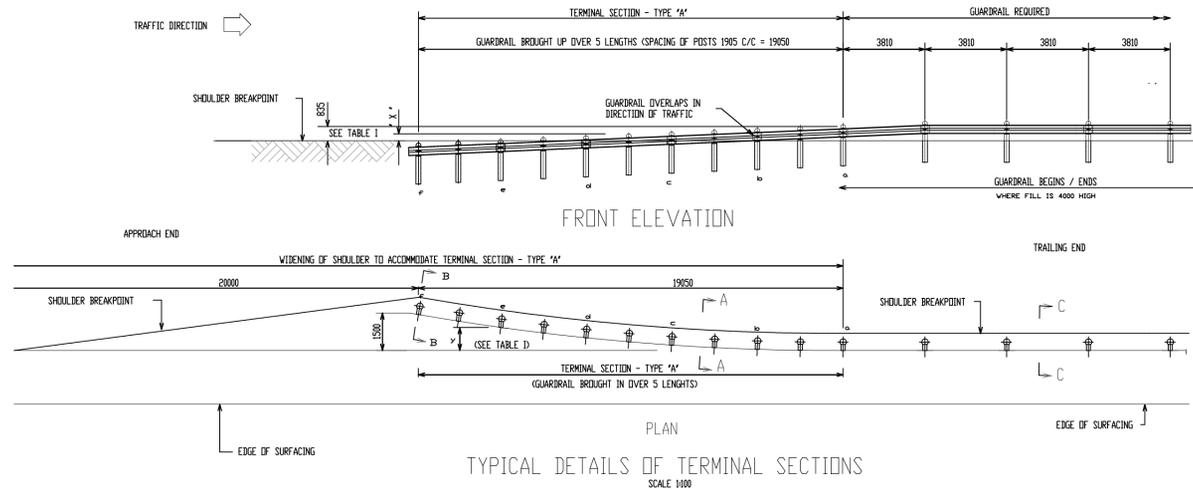
NOTE:

THE WIDTH OF THE GRAVEL ACCESS ROADS ARE:

(a) 6000 IN TOTAL (2 x 3000) FOR 16000 MIN ROAD RESERVE

(b) 4000 IN TOTAL (2 x 2000) FOR 8000 MIN ROAD RESERVE

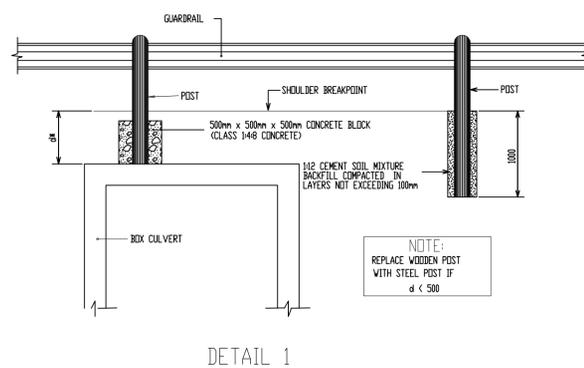
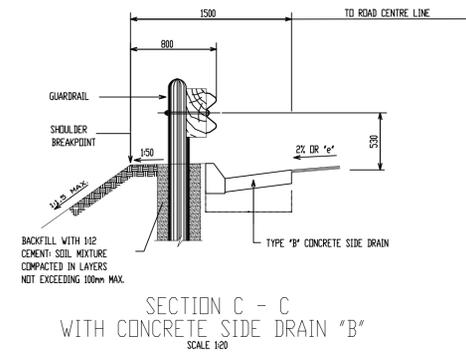
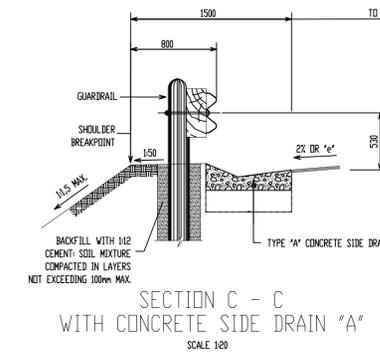
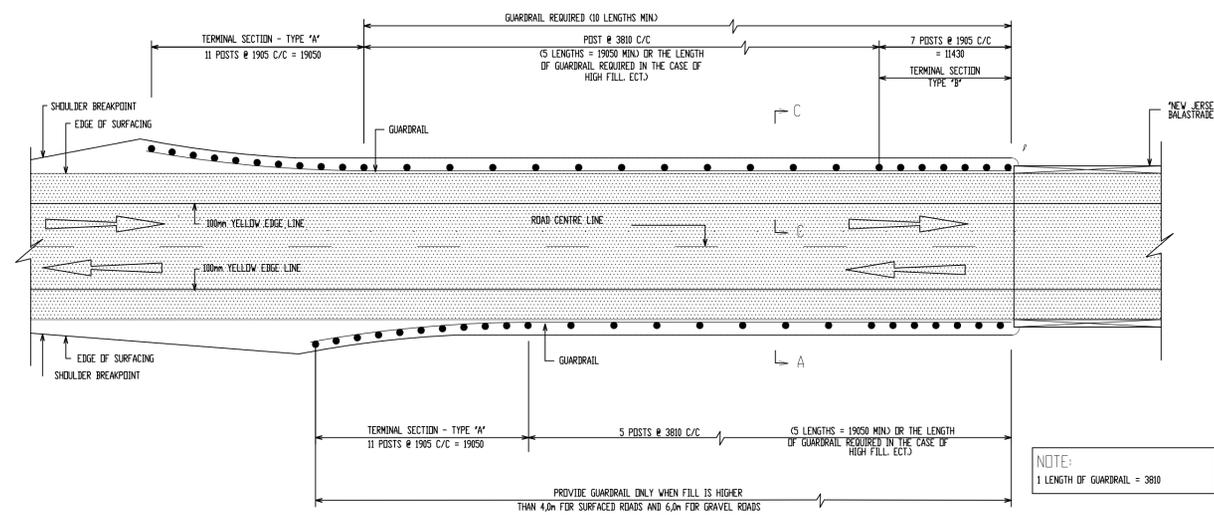
		CLIENT		CONSULTANT		CLIENT		PROJECT	
		 BA-PHALABORWA MUNICIPALITY PRIVATE BAG X01020 PHALABORWA, 1390 TEL: <015> 780-6300 FAX: <015> 781-0726		 PHAMELA ENGINEERING SERVICES SUITE 02, RONDEBOSCH, 82 HANS VAN RENSBURG Polokwane, 0700 Tel: 015 065 0585 Fax: 086 669 6824		DRAWN BY: VL RATSHIBVUMO DATE: _____ APPROVED BY: _____ DATE: _____ DESIGNED BY: AB MABUNZA DATE: _____ CHECKED BY: FIDELIS BALOYI-PR.ENG DATE: _____ PR. ENG. No: _____ PROJECT MANAGER: _____ DATE: _____ SCALE: _____		INSTALLATION OF STORM WATER CULVERT (MASHISHIMALE TO LEJORI WARD 10, MAKHUSHANE WARD 2, LULEKANI ACCESS BRIDGE TO CEMENTRIES WARD 15 AND HUMULANI ACCESS BRIDGE TO CEMENTRIES WARD 16) DRAWING TITLE: TYPICAL CROSS SECTION PROJECT No: 9/4/1/39 DRAWING NO: BPM/07/2019/SD/SD00 REVISION: 0	
REVISION	INITS	DATE	INITS	DATE	REF. No.	DESCRIPTION	REFERENCES		
	CHECKED	APPROVED							



NOTE:
1 LENGTH OF GUARDRAIL = 3810

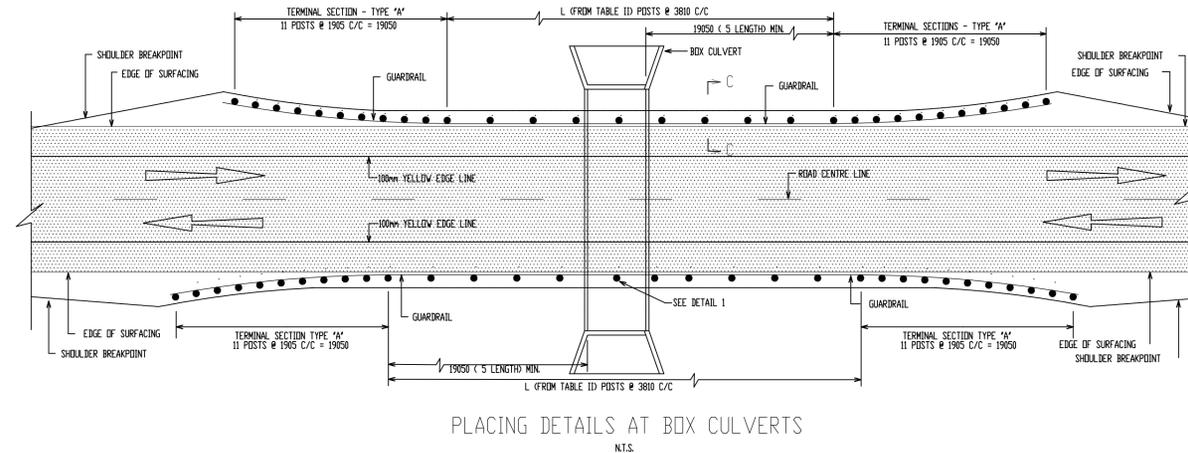
	HORIZONTAL OFF-SETS FOR PARABOLIC TERMINAL SECTIONS Y (mm)	VERTICAL OFF-SETS FOR PARABOLIC TERMINAL SECTION MEASURED FROM TOP OF POST X (mm)
a	60	0
b	70	33
c	80	133
d	90	299
e	100	531
f	110	835

DESIGN SPEED km/h	MIN LENGTH
60	12 LENGTHS (5,7)
70	14 LENGTHS (53,24)
80	16 LENGTHS (68,96)
90	20 LENGTHS (76,20)
100	23 LENGTHS (87,63)
110	27 LENGTHS (102,87)
120	29 LENGTHS (110,49)
130	32 LENGTHS (123,92)
140	35 LENGTHS (133,25)



- NOTES ON ERECTION DETAILS**
- THE HOLES FOR TIMBER POSTS SHALL BE OF SUFFICIENT SIZE TO PERMIT PROPER SETTING OF THE POSTS AND TO ALLOW SUFFICIENT ROOM FOR BACKFILLING.
 - AT LEAST 1,0m OF POST SHALL BE EMBEDDED IN THE GROUND.
 - HOLES FOR TIMBER POSTS SHALL BE SPACED TO SUITE THE STANDARD LENGTH OF GUARDRAIL SUPPLIED.
 - HOLES SHALL BE BACKFILLED WITH 1:2 SOIL + CEMENT MIXTURE AT OPTIMUM MOISTURE CONTENT IN COMPACTED LAYERS NOT EXCEEDING 100mm.

- GUARDRAIL WARRANT**
- WHERE THE FILL IS HIGHER THAN 4,0m FOR SURFACED ROADS, AND 6,0m FOR GRAVEL ROADS.
 - WHERE WATER NEXT TO THE ROAD FORMATION IS DEEPER THAN 1,5m.
 - AT ALL BRIDGES WITH BALUSTRADES.
 - ON THE OUTSIDE OF CURVES WITH RADI LESS THAN 200m AND ONLY WHEN THE ROAD IS IN FILL.
 - WHERE OBSTRUCTIONS ARE LESS THAN 1,0m FROM THE SHOULDER BREAKPOINT.
 - WHERE AN OBSTRUCTION APPEARS TO BE MORE DANGEROUS THAN A GUARDRAIL WOULD BE.
 - THESE RULES ARE TO BE APPLIED WITH DISCRETION AND THE POSITION OF ALL GUARDRAILS MUST BE CONFIRMED ON SITE BY THE ENGINEER PRIOR TO THE ERECTION THEREOF.



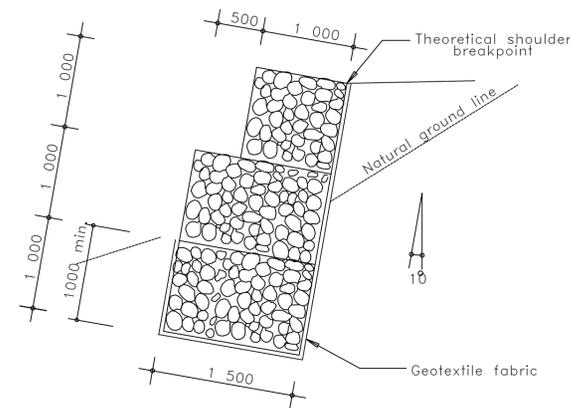
REVISION	INITIALS	DATE	DESCRIPTION
	CHECKED	APPROVED	

CLIENT
BA-PHALABORWA MUNICIPALITY
PRIVATE BAG X01020
PHALABORWA, 1390
TEL: (015) 780-6300 FAX: (015) 781-0726

CONSULTANT
PHAMELA ENGINEERING SERVICES (Pty) Ltd
SUITE 02, RONDEBOSCH, 82 HANS VAN RENSBURG
Pretoria, 0700
Tel: 015 065 0585 Fax: 086 669 6824

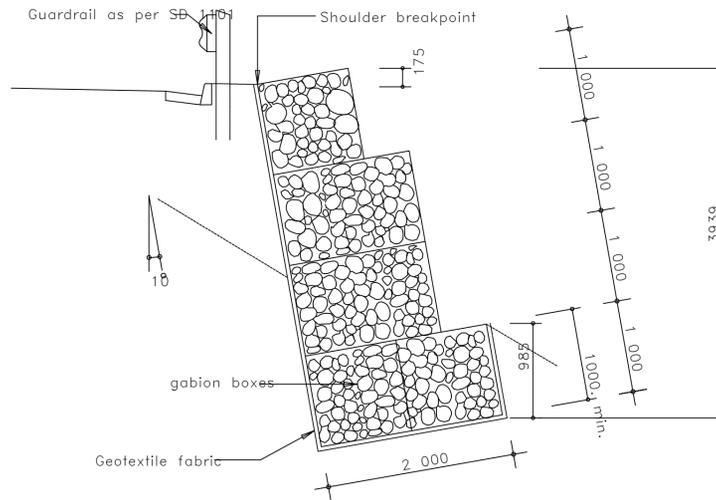
CLIENT	PROJECT
DRAWN BY VL RATSHIBVUMO	INSTALLATION OF STORM WATER CULVERT (MASHISHIMALE TO LEJORI WARD 10, MAKHUSHANE WARD 2, LULEKANI ACCESS BRIDGE TO CEMENTRIES WARD 15 AND HUMULANI ACCESS BRIDGE TO CEMENTRIES WARD 16)
DESIGNED BY AB MABUNDZA	DRAWING TITLE GUARDRAILS PLACING DETAILS
CHECKED BY FIDELIS BALOYI-PI-ENG	PROJECT No 9/4/1/39
PROJECT MANAGER	DRAWING NO. BPM/07/2019/GR/SD01

DATE	APPROVED BY	DATE	REVISION
			0



3m GABION RETAINING WALL

Scale 1 : 50



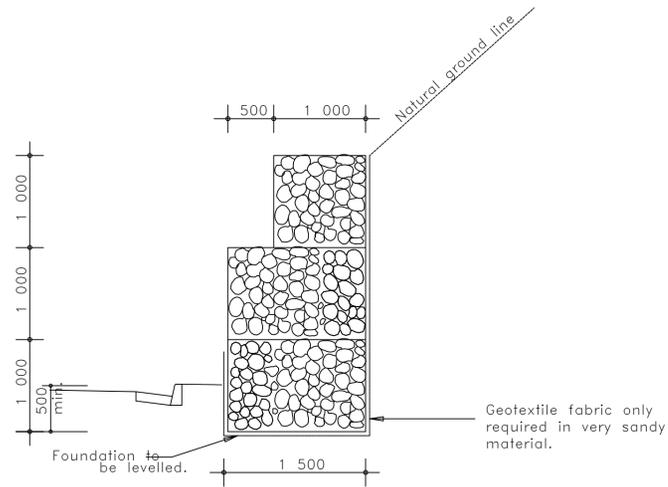
4m GABION RETAINING WALL

Scale 1 : 50

FILL CONDITION

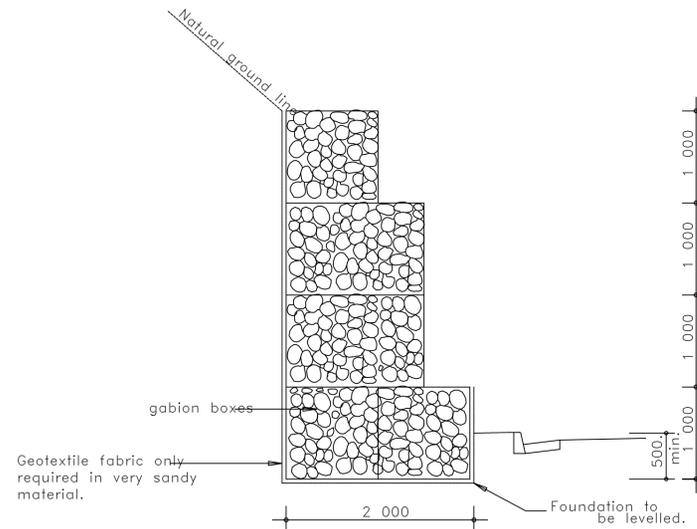
NOTES:

- The gabion design shown is typical. Each application of gabion boxes shall be designed by the planning or bridge Engineer to suit the specific conditions prevailing.
- Foundations to be stepped and prepared as instructed by the Engineer.
- Geotextile fabric to be grade C or similar as instructed by the Engineer.
- All wire used in the making of gabions shall be galvanised in accordance with the provisions S.A.B.S. 1580:1993 for Class A heavy galvanised mild-steel wire.
- The standard sizes of gabions are as follows :
Length : 1,0m , 2,0m , 3,0m & 4,0m
Width : 1,0m , 1,5m.
Depth : 0,5m & 1,0m
Diaphragm spacing : 1,0m
- Lacing and bracing to be done in accordance with manufactures recommendations.



3m GABION RETAINING WALL

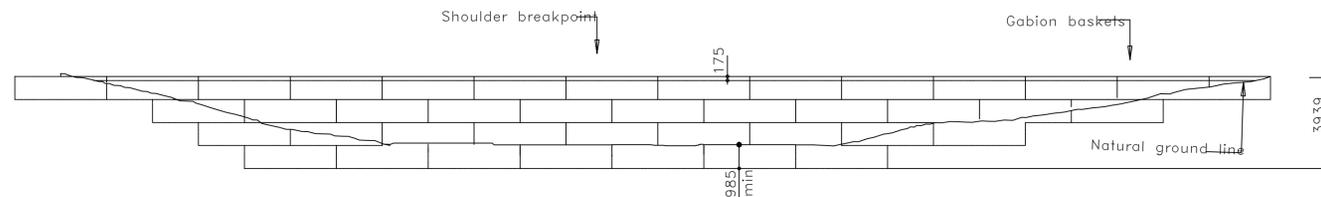
Scale 1 : 50



4m GABION RETAINING WALL

Scale 1 : 50

CUT CONDITION



TYPICAL SIDE ELEVATION IN FILL CONDITION (4,0m WALL)

Scale 1 : 200

Depth of gabion (m)	Nominal mesh dimensions (mm)		Nominal wire diameter (mm)		
	Exceeding	Not exceeding	Mesh wire	Selvedge	
-	0,3	80	100	2,5	3,0
0,3	1,0	80	100	2,7	3,4

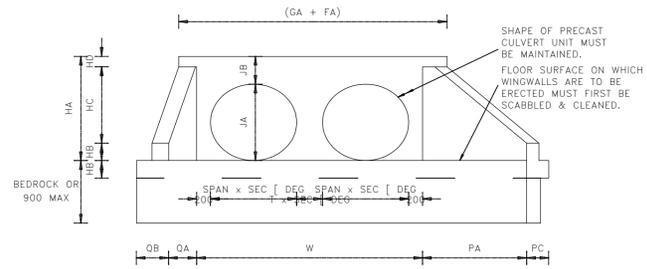
(As per SABS 1580 / 1993)

Depth of the largest dimension of rock cage (m)	Rock size according to	
	Minimum (mm)	Maximum (mm)
0,2	100	125
0,3	100	200
0,5	100	250
1,0	100	250

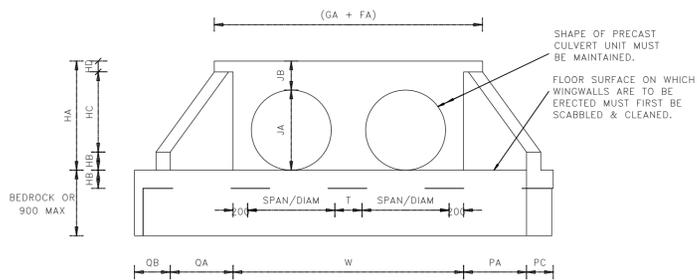
Nominal diameter of wire (mm)	Minimum mass of zinc coating per unit area (g/m ²)	
	Exceeding	Not exceeding
2,40	2,50	260
2,51	3,50	275
3,51	5,00	290

(As per SABS 1580 / 1993)

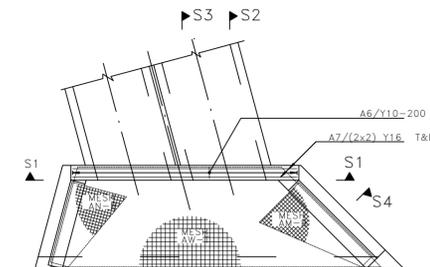
REVISION	INITS	DATE	INITS	DATE	REF. No.	DESCRIPTION	CLIENT	CONSULTANT	CLIENT	PROJECT	DRAWING TITLE	PROJECT No	DRAWING No:	REVISION
							 BA-PHALABORWA MUNICIPALITY PRIVATE BAG X01020 PHALABORWA, 1390 TEL: (015) 780-6300 FAX: (015) 781-0726	 PHAMELA ENGINEERING SERVICES SUITE 02, RONDEBOSCH, 82 HANS VAN RENSBURG Ficksburg, 0700 Tel: 015 065 0585 Fax: 086 689 6824	VL RATSHIBVUMO AB MABUNDZA FIDELIS BALOYI-Pr.ENG PROJECT MANAGER	INSTALLATION OF STORM WATER CULVERT (MASHISHALE TO LEJORI WARD 10, MAKHUSHANE WARD 2, LULEKANI ACCESS BRIDGE TO TO CEMENTRIES WARD 15 AND HUMULANI ACCESS BRIDGE TO TO CEMENTRIES WARD 16)	GABION DETAILS	9/4/1/39	BPM/07/2019/GD/SD02	0



TYPICAL ELEVATION OF INLET/OUTLET WINGWALLS – MAX [= 0 (SQUARE)

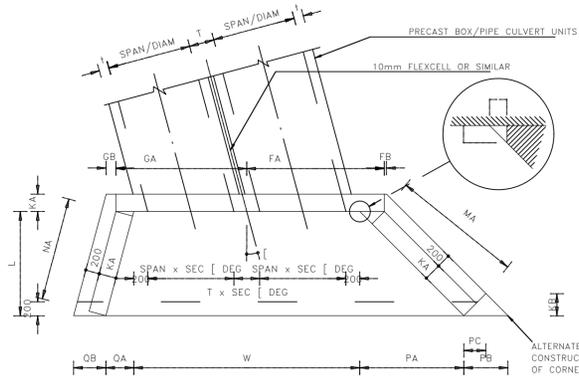


SCALE: SCHEMATIC

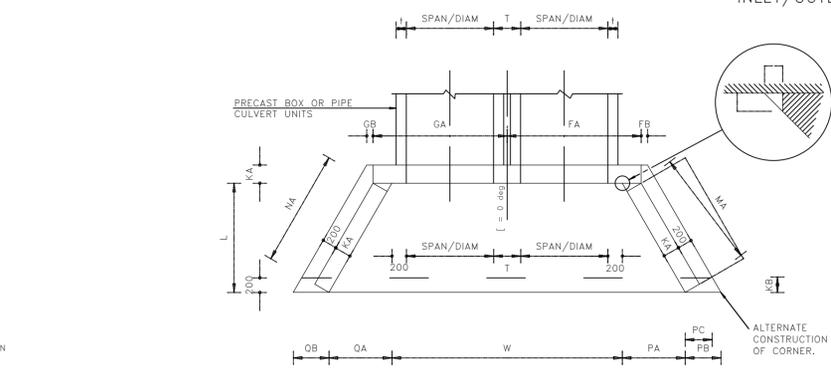


TYPICAL REINFORCEMENT PLAN OF INLET/OUTLET WINGWALLS – MAX [= 0 (SQUARE)

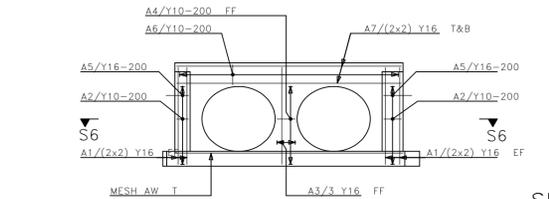
CULVERT DESCRIPTION	WINGWALL REFERENCE NUMBER		
	TYPE	BARRELS	
INLET/OUTLET WINGWALLS CONCRETE DIMENSIONS	SPAN/DIA		
	HEIGHT		
	PIPE & BED CLASS		
	SKWEW ANGLE		
	FA		
	FB		
	GA		
	GB		
	HA		
	HB		
	HC		
	JA		
	JB		
	JC		
	KA		
	KB		
	LA		
	MA		
NA			
PA			
PB			
PC			
QA			
QB			
R			
T			
W			
INLET/OUTLET WINGWALLS REINFORCEMENT	A1	BAR DIA	
	A1	QUANTITY	
	A2	BAR DIA	
	A2	QUANTITY	
	A3	CUT LENGTH	
	A3	QUANTITY	
	A4	BAR DIA	
	A4	QUANTITY	
	A5	CUT LENGTH	
	A5	QUANTITY	
	A6	BAR DIA	
	A6	QUANTITY	
	A7	CUT LENGTH	
	A7	QUANTITY	
	A8	BAR DIA	
	A8	QUANTITY	
	INLET/OUTLET WINGWALLS MESH REINFORCEMENT	SMF 617	TYPE
		SMF 617	MASS (kg)
SMF 311		TYPE	
SMF 311		MASS (kg)	
MASS (kg)			
MESH AN			



TYPICAL PLAN OF INLET/OUTLET WINGWALLS – MAX [= 30



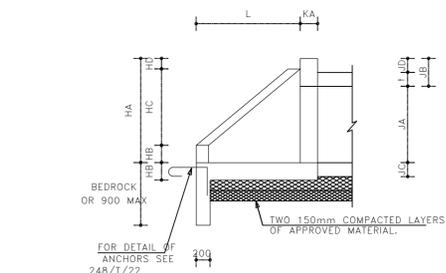
TYPICAL PLAN OF INLET/OUTLET WINGWALLS – [= 0 (SQUARE)



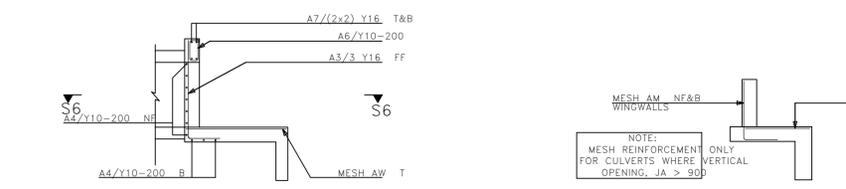
SECTION S1-S1 – INLET/OUTLET WINGWALLS HEADWALL & COLUMNS – REINFORCEMENT



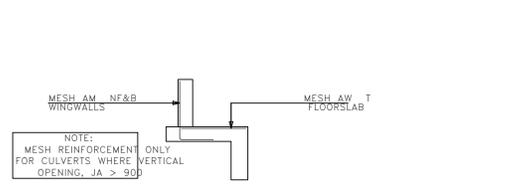
SECTION S2-S2 – INLET/OUTLET WINGWALLS HEADWALL & WINGWALLS – REINFORCEMENT



TYPICAL END-ELEVATION OF INLET/OUTLET WINGWALLS – MAX [= 30



SECTION S3-S3 – INLET/OUTLET WINGWALLS HEADWALL & COLUMNS – REINFORCEMENT



SECTION S4-S4 – INLET/OUTLET WINGWALLS WINGWALLS & FLOORSLAB – REINFORCEMENT

DATA SHEET AND FORMULAE				
VERTICAL HEIGHT OF CULVERT	HB	HD	KA	JB
JA < 900	150	100	225	300
JA > 900	250	150	250	400

INSITU FLOOR SLAB (JC) AND PRECAST UNIT WALL THICKNESS (I)	
SPAN	I
900mm SPAN	150mm
1200mm SPAN	160mm
1500mm SPAN	175mm
1800mm SPAN	190mm
2100mm SPAN	220mm

All dimensions in mm

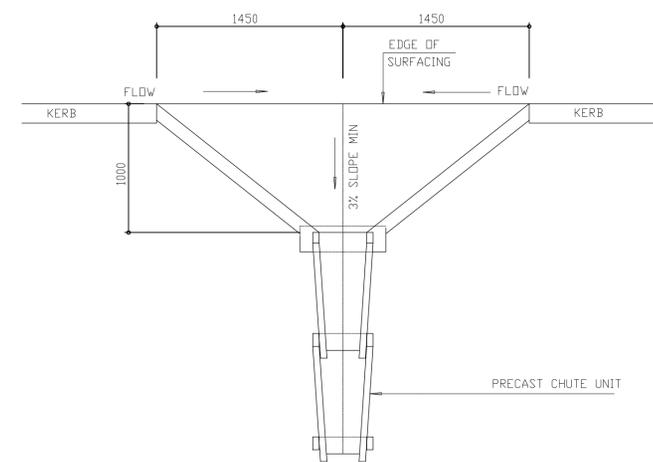
FORMULAE

L = HC x S (min.1500mm) S = BATTER SLOPE
 OA = L x TAN(-30) = CULVERT SKEW ANGLE
 PA = L x TAN(+30) I = PRECAST WALL THICKNESS
 NA = L x SEC(-30) - KA x TAN(-30)
 MA = L x SEC(+30) - KA x TAN(+30)
 T = t x 2 + 80
 OB = (KA + 200) x SEC(- 30)
 PB = (KA + 200) x SEC(+ 30)
 KB = (KA + 200) x SIN(+ 30)
 PC = (KA + 200) x COS(+ 30)
 GA = W/2 + KA x SEC(- 30)
 GB = [(200 x COSEC(- 30)) - KA] x TAN(- 30)
 FA = W/2 + KA x SEC(+ 30)
 FB = [(200 x COSEC(+ 30)) - KA] x TAN(+ 30)
 R = t + 100

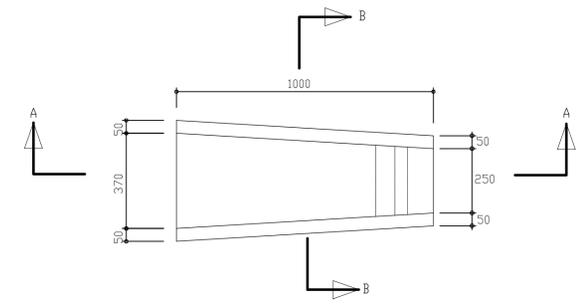
NOTES FOR INLET/OUTLET WINGWALLS		
1 DESIGN CRITERIA		
1.01	THE WINGWALLS ARE DESIGNED AS CANTILEVERS FIXED TO THE BASE AND SUPPORTED BY THE HEADWALL.	
1.02	THE WINGWALLS ARE DESIGNED FOR A SURCHARGE OF 750 mm AND A MAXIMUM SLOPE OF 1:1.5 FOR ANY FILL HEIGHT.	
1.03	THE DENSITY OF SOIL = 20 kN/m ³	
1.04	SOIL PRESSURES DETERMINED USING RANKINE'S THEORY.	
1.05	CONCRETE:	
	CHARACTERISTIC STRENGTH (MPa)	WINGWALLS 30 INSITU BARREL 30/19
1.06	REINFORCEMENT ACCORDING TO SABS 920 – LATEST REVISION.	
	CHARACTERISTIC STRENGTH OF HIGH TENSILE STEEL	= 450 MPa
1.07	CHARACTERISTIC STRENGTH OF HIGH TENSILE STEEL MESH	= 450 MPa
	A LINEAR SOIL PRESSURE DISTRIBUTION IS ASSUMED.	
2 GENERAL		
2.01	THE REQUIRED CLASS OF SURFACE FINISH IS F2 FOR ALL VISIBLE SURFACES.	
2.02	ALL VISIBLE CORNERS MUST HAVE A 25 x 25 mm CHAMFER.	
2.03	TWO 150 mm LAYERS OF APPROVED MATERIAL, COMPACTED TO 93% MODIFIED A.A.S.H.T.O. DENSITY, ARE REQUIRED UNDER THE INLETS AND OUTLETS.	
2.04	MINIMUM CONCRETE COVER TO REINFORCEMENT IS 40 mm.	
2.05	FURTHER INFORMATION REGARDING SPECIFIC CULVERTS APPEAR ON THE DRAINAGE SCHEDULES OF THE ROAD.	
2.06	THE INLET AND OUTLET UNITS ARE DESIGNED TO ACT AS INDEPENDENT UNITS WHEN USED TOGETHER WITH PIPES.	
2.07	THE HEADWALLS MUST BE ALIGNED PARALLEL TO THE ROAD SHOULDER.	

<p>BA-PHALABORWA MUNICIPALITY PRIVATE BAG X01020 PHALABORWA, 1390 TEL: (015) 780-6300 FAX: (015) 781-0726</p>				<p>PHAMELA ENGINEERING SERVICES (PTY) LTD SUITE 02, RONDEBOSCH, 82 HANS VAN RENSBURG POLOKWANE, 0700 Tel: 015 065 0585 Fax: 086 669 6824</p>				<p>CLIENT: BA-PHALABORWA MUNICIPALITY</p> <p>CONSULTANT: PHAMELA ENGINEERING SERVICES (PTY) LTD</p>				<p>PROJECT: INSTALLATION OF STORM WATER CULVERT (MASHISHIMALE TO LEJORI WARD 10, MAKHUSHANE WARD 2, LULEKANI ACCESS BRIDGE TO CEMENTRIES WARD 15 AND HUMULANI ACCESS BRIDGE TO CEMENTRIES WARD 16)</p> <p>DRAWING TITLE: TYPICAL PIPE CULVERT INLET AND OUTLET STRUCTURES</p> <p>PROJECT No: 9/4/1/39 DRAWING NO: BPM/07/2019/IOS/SD03 REVISION: 0</p>							
REVISION	INITIALS	DATE	INITIALS	DATE	REF. No.	DESCRIPTION	REFERENCES	DRAWN BY: VL RATSHIBVUMO	DATE	APPROVED BY:	DATE	DESIGNED BY: AB MABUNDZA	DATE	CHECKED BY: FIDELIS BALOYI-Pr.ENG	DATE	PR. ENG. No.	PROJECT MANAGER	DATE	SCALE

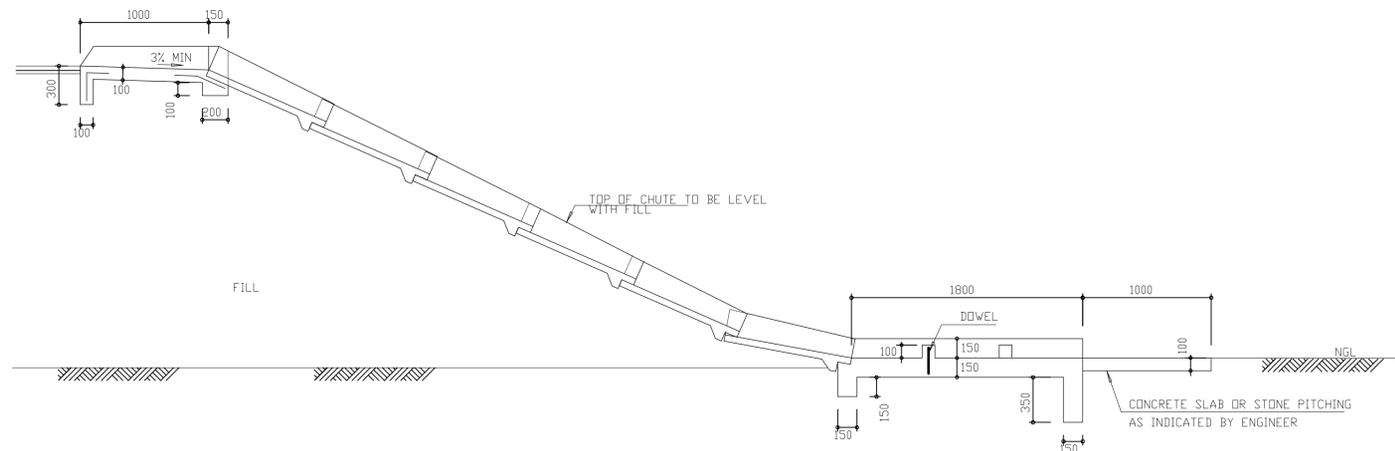
- NOTES:
- 1 AL IN-SITU CONCRETE TO BE CLASS 20/19
 - 2 2 x 20mm DOWELS 200mm LONG FOR EACH ENERGY BREAKER
 - 3 AL VISIBLE CORNERS TO BE CHAMFERED 15mm
 - 4 HIGH TENSILE WELDED WIRE MESH SHALL COMPLY WITH THE REQUIREMENTS OF SABS 1024
 - 5 POSITION OF CHUTES SHOWN ON LAYOUT PLANS OR AS INDICATED BY ENGINEER ON SITE



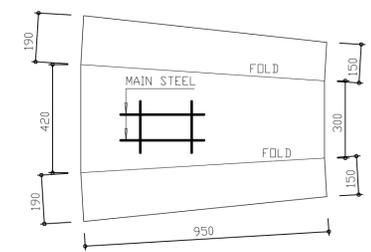
CHUTE INLET AT LOW POINTS OF ROAD



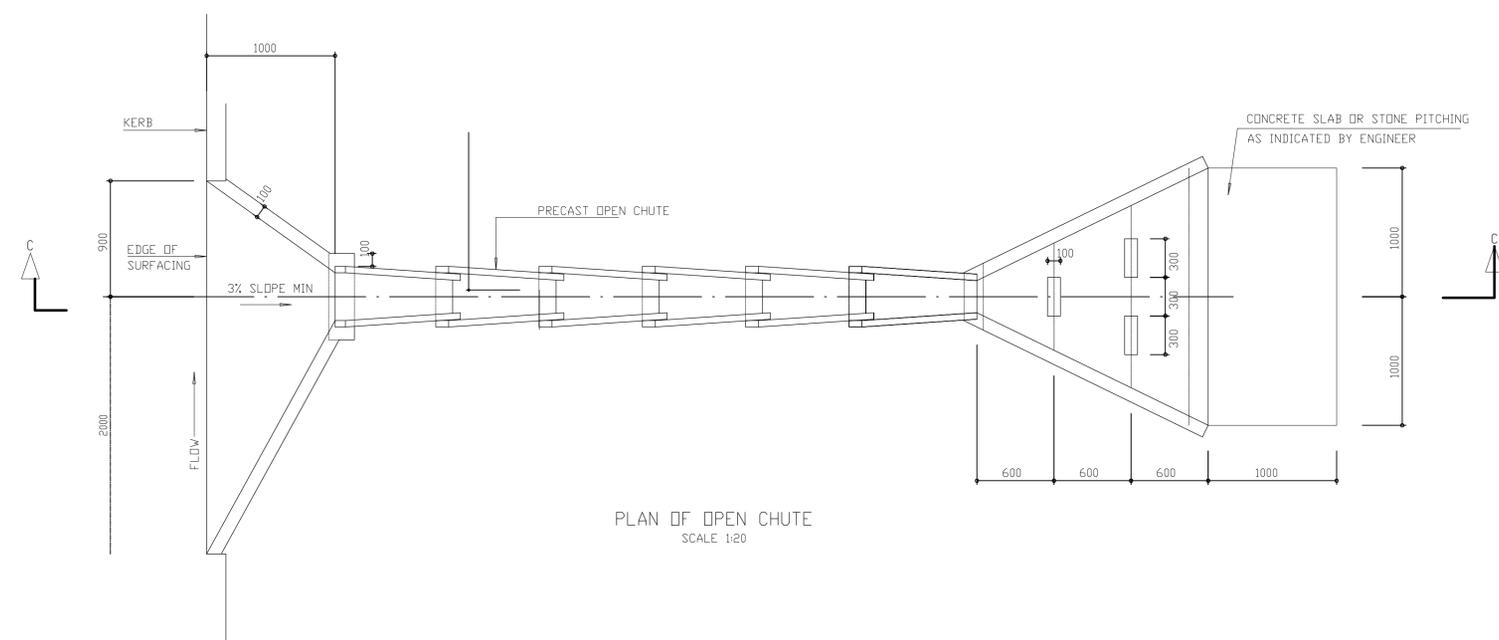
PLAN
SKAAL 1:10



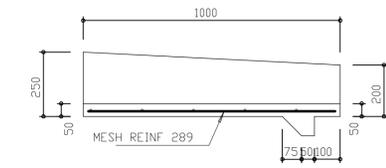
SECTION C-C
SCALE 1:20



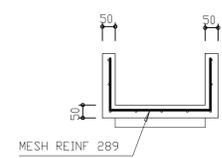
EXPANDED VIEW OF MESH
SCALE 1:10



PLAN OF OPEN CHUTE
SCALE 1:20



SECTION A-A
SCALE 1:10



SECTION B-B
SCALE 1:10

REVISION	INITIALS	DATE	DESCRIPTION

CLIENT



BA-PHALABORWA MUNICIPALITY
PRIVATE BAG X01020
PHALABORWA, 1390

TEL: (015) 780-6300 FAX: (015) 781-0726

CONSULTANT

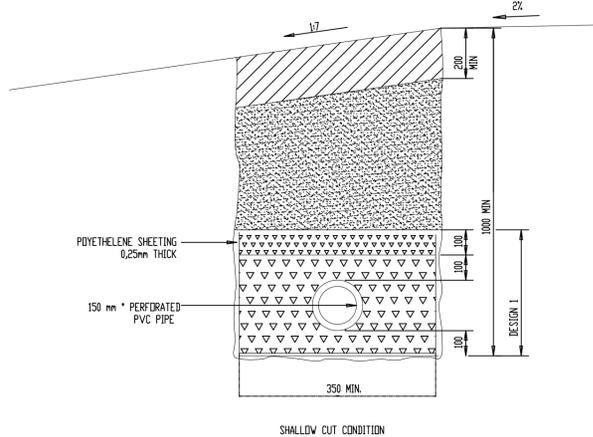


PHAMELA ENGINEERING SERVICES
SUITE 02, RONDEBOSCH, 82 HANS VAN RENSBURG
Pretoria, 0700

Tel: 015 065 0585 Fax: 086 689 8824

DRAWN BY		DATE	APPROVED BY		DATE
VL RATSHIBVUMO			FIDELIS BALOYI-PI.ENG		
DESIGNED BY		DATE	PR. ENG. No.		DATE
AB MABUNDZA					
CHECKED BY		DATE	PROJECT MANAGER		DATE
FIDELIS BALOYI-PI.ENG					

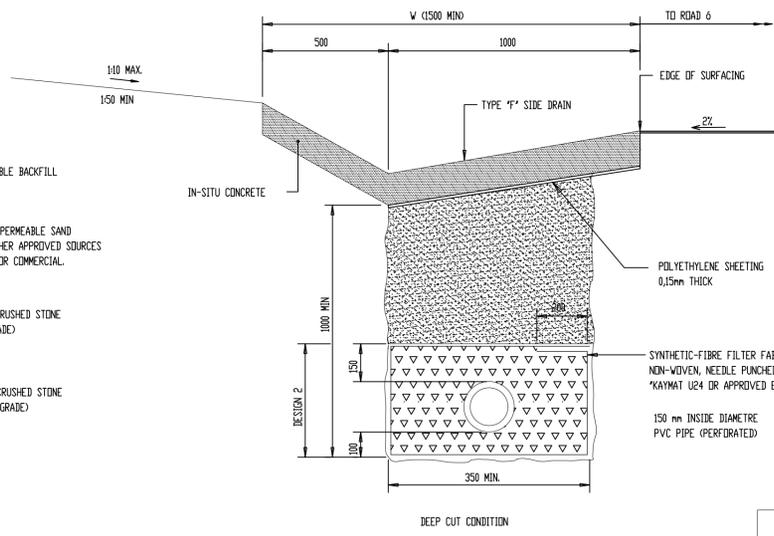
PROJECT	INSTALLATION OF STORM WATER CULVERT (MASHISHIMALE TO LEJORI WARD 10, MAKHUSHANE WARD 2, LULEKANI ACCESS BRIDGE TO CEMENTRIES WARD 15 AND HUMULANI ACCESS BRIDGE TO CEMENTRIES WARD 16)		
DRAWING TITLE	TYPICAL DETAILS FOR OPEN CHUTES		
PROJECT No	9/4/1/39	DRAWING NO:	BPM/07/2019/OC/SD04
REVISION	0		



SHALLOW CUT CONDITION
TYPE "A" SUBSURFACE DRAIN
N.T.S.

- LEGEND
- IMPERMEABLE BACKFILL
 - NATURAL PERMEABLE SAND FROM EITHER APPROVED SOURCES ON SITE OR COMMERCIAL.
 - GRADED CRUSHED STONE (FINE GRADE)
 - GRADED CRUSHED STONE (COARSE GRADE)

NOTE:
DESIGNS 1 AND 2 CAN BE EXCHANGED WHEN INSTRUCTED BY THE ENGINEER



DEEP CUT CONDITION
TYPE "B" SUBSURFACE DRAIN
N.T.S.

GRADING REQUIREMENTS OF CRUSHED STONE

CRUSHED STONE SHALL BE GRADED CRUSHED STONE, WHICH CONFORMS TO THE FOLLOWING REQUIREMENTS:

PERCENTAGE PASSING THROUGH A -

125,0mm SIEVE 100
75,0mm SIEVE 60-85

FINE GRADE STONE:

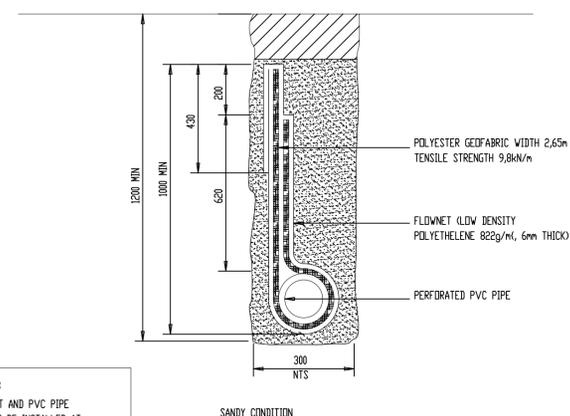
A MINIMUM OF 15% PASSING THROUGH A 3,35mm SIEVE.
A MAXIMUM OF 15% PASSING THROUGH A 1,18mm SIEVE.

COARSE GRADE STONE:

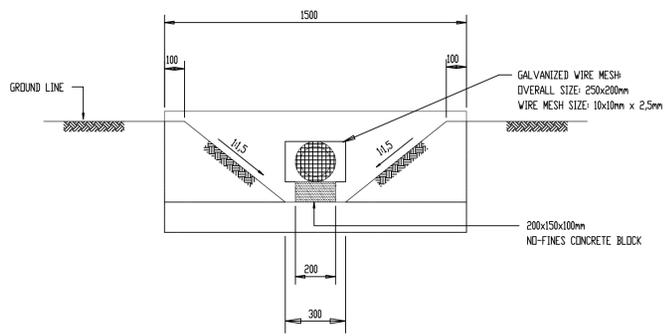
A MINIMUM OF 15% PASSING THROUGH A 6,70mm SIEVE.
A MAXIMUM OF 15% PASSING THROUGH A 2,36mm SIEVE.

IN THE CASE OF ANY CRUSHED STONE NOT MORE THAN 5% OF THE MATERIAL SHALL PASS THROUGH THE 0,075mm SIEVE.

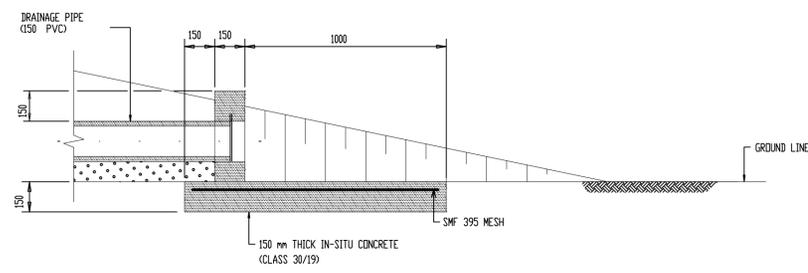
NOTE:
FLOWNET AND PVC PIPE ONLY TO BE INSTALLED AT THE ENGINEER'S REQUEST



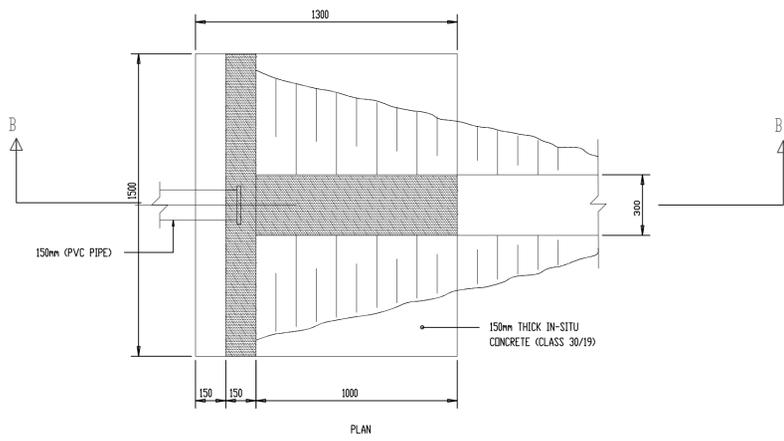
SANDY CONDITION
TYPE "C" SUBSURFACE DRAIN
SCALE 1:10



FRONT ELEVATION

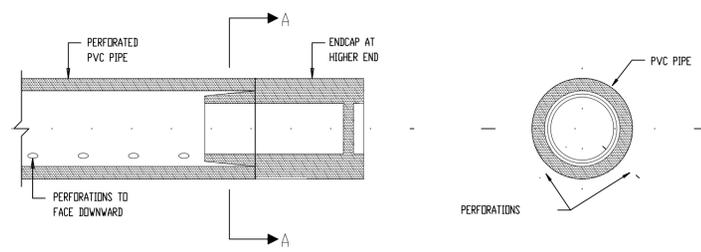


SECTION B-B



PLAN

DETAIL OF OUTLET STRUCTURE



SECTION THROUGH PIPE CENTRE LINE

SECTION A-A

ENDCAP DETAIL
SCALE 1:5

REVISION	INITS	DATE	INITS	DATE	REF. No.	DESCRIPTION
	CHECKED		APPROVED			REFERENCES

CLIENT

BA-PHALABORWA MUNICIPALITY
PRIVATE BAG X01020
PHALABORWA, 1390

TEL: <015> 780-6300 FAX: <015> 781-0726

CONSULTANT

PHAMELA ENGINEERING SERVICES
SUITE 02, RONDEBOSCH, 82 HANS VAN RENSBURG
Pretoria, 0700
Tel: 015 065 0585 Fax: 086 669 6824

CLIENT

DRAWN BY VL RATSIBVUMO	DATE	APPROVED BY	DATE
DESIGNED BY AB MABUNDA			DATE
CHECKED BY FIDELIS BALOYI-PI-ENG			PR. ENG. No.
PROJECT MANAGER	DATE	SCALE	

PROJECT

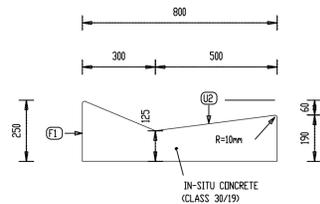
INSTALLATION OF STORM WATER CULVERT (MASHISHIMALE TO LEJORI WARD 10, MAKHUSHANE WARD 2, LULEKANI ACCESS BRIDGE TO CEMENTRIES WARD 15 AND HUMULANI ACCESS BRIDGE TO CEMENTRIES WARD 16)

DRAWING TITLE
SUBSOIL DRAINAGE DETAILS

PROJECT No
9/4/1/39

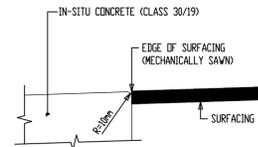
DRAWING NO
BPM/07/2019/SD/SD05

REVISION
0

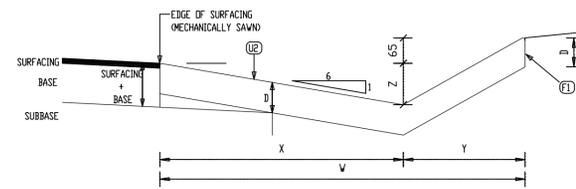


CROSS SECTION OF TYPE 'A' CONCRETE SIDE DRAIN
SCALE 1:10

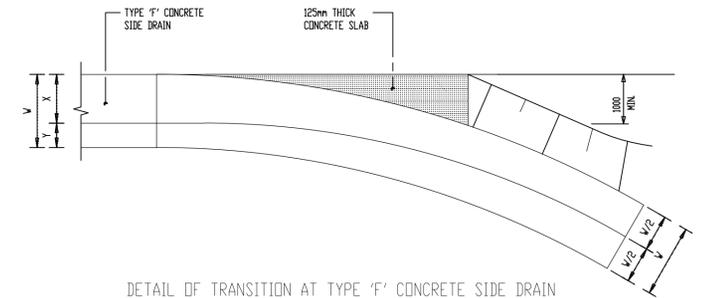
TYPE 'A' CONCRETE SIDE DRAIN



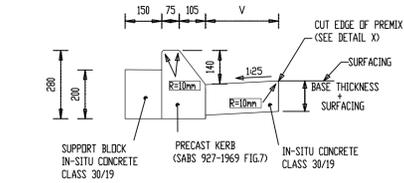
DETAIL X
SCALE 1:5



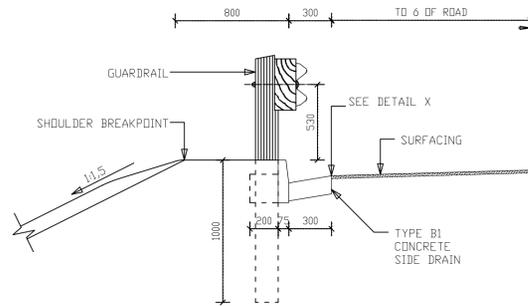
CROSS SECTION OF TYPE 'F' CONCRETE SIDE DRAIN IN CUTTINGS
SCALE: SCHEMATIC



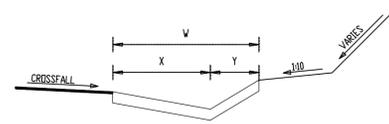
DETAIL OF TRANSITION AT TYPE 'F' CONCRETE SIDE DRAIN
SCALE: SCHEMATIC



CROSS SECTION OF TYPE 'B' SEMI MOUNTABLE KERB AT INTERSECTIONS
SCALE 1:10



POSITION OF TYPE 'B1' CONCRETE SIDE DRAIN
SCALE 1:25

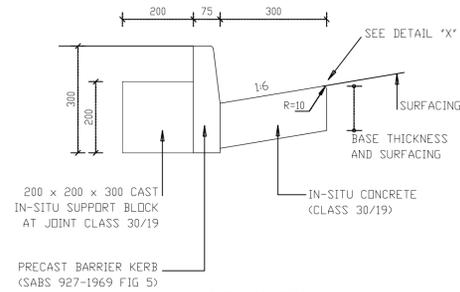


POSITION OF TYPE 'F' CONCRETE SIDE DRAIN
SCALE: SCHEMATIC

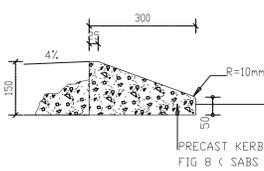
CASE(n)	W	X	Y	Z	D	VOLUME $\frac{m^3}{m}$
1	1000	670	330	110	125	0,1250
2	1500	1000	500	170	125	0,1875
3	2000	1330	670	220	150	0,3000
4	2500	1670	830	280	150	0,3750

DIMENSIONS OF TYPE F CONCRETE CHANNELS

TYPE 'F' CONCRETE SIDE DRAIN

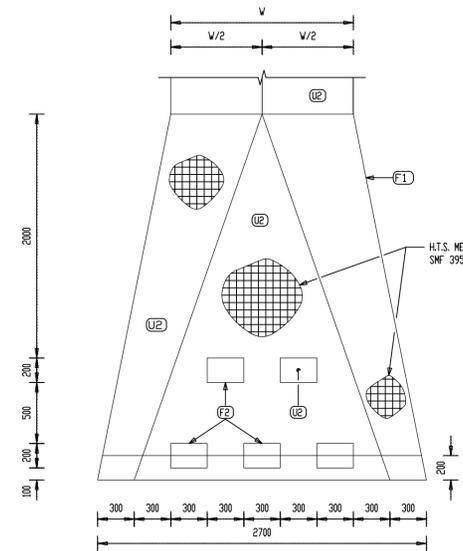


SECTION THROUGH BARRIER KERB (FIG 5)
SCALE 1:10

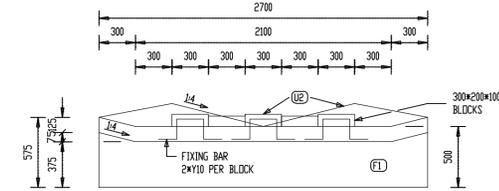


TYPE 'B2' KERB
(1:10)

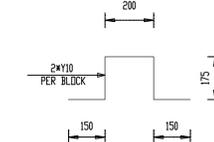
TYPE 'B' CONCRETE SIDE DRAIN



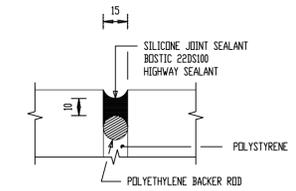
PLAN OF ENERGY BREAKER
SCALE 1:20



FRONT ELEVATION OF ENERGY BREAKER
SCALE 1:20



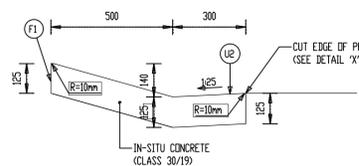
FIXING BAR
SCALE 1:10



EXPANSION JOINT
SCALE: SCHEMATIC

NOTE: EXPANSION JOINT EVERY 5th PANEL (10m)

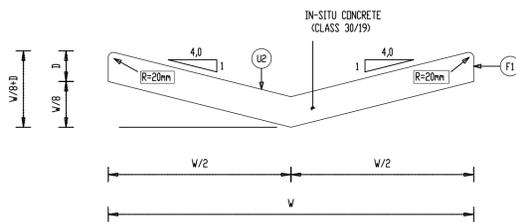
DETAIL OF ENERGY BREAKER SYSTEM AT DISCHARGE POINT OF TYPE 'F' CONCRETE SIDE DRAIN



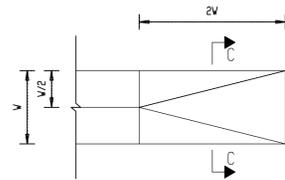
CROSS SECTION OF TYPE 'C' MOUNTABLE KERB AT RURAL INTERSECTIONS
SCALE 1:10

TYPE 'C' CONCRETE SIDE DRAIN

- NOTES
- ALL CONCRETE CHANNELS AND OTHER DRAINAGE STRUCTURES ON THIS PLAN TO BE CAST USING CLASS 30/19 CONCRETE
 - TYPES 'E' AND 'F' CONCRETE MUST BE CAST IN ALTERNATIVE LENGTHS OF 20 m MAXIMUM WITH EXPANSION JOINTS EVERY 5th PANEL (10 m)
 - ALL EXPOSED CORNERS MUST BE ROUNDED OFF TO A RADIUS OF 10 mm
 - THE CLASS OF SURFACE FINISH IS INDICATED AS 'F1' OR 'F2'
 - V MIN = 150mm (PREFERRED = 300mm)

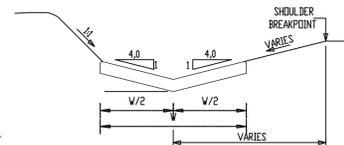


CROSS SECTION OF TYPE 'E' CONCRETE CHANNEL IN OPEN DRAINS
SCALE: SCHEMATIC



BEGINNING OF TYPE 'E' CONCRETE DRAIN
SCALE: SCHEMATIC

TYPE 'E' CONCRETE SIDE DRAIN



POSITION OF TYPE 'E' CONCRETE DRAIN IN SHALLOW CUT
SCALE: SCHEMATIC

CASE(n)	W	W/2	W/8	D	V/8+D	VOLUME $\frac{m^3}{m}$
1	1000	500	125	125	250	0,1250
2	1500	750	188	125	313	0,1875
3	2000	1000	250	150	400	0,3000
4	2500	1250	313	150	463	0,3750

DIMENSIONS OF TYPE E CONCRETE CHANNELS

REVISION	INITIALS	DATE	DESCRIPTION
	CHECKED	APPROVED	REFERENCES

CLIENT

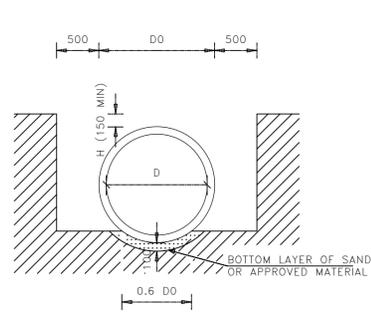
BA-PHALABORWA MUNICIPALITY
PRIVATE BAG X01020
PHALABORWA, 1390
TEL: (015) 780-6300 FAX: (015) 781-0726

CONSULTANT

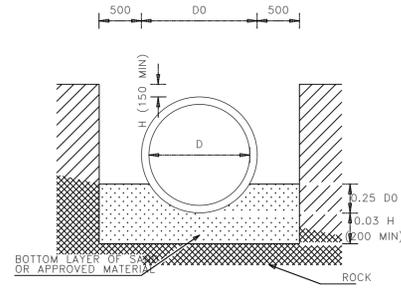
PHAMELA ENGINEERING SERVICES
SUITE 02, RONDEBOSCH, 82 HANS VAN RENSBURG
P.O. BOX 1000, 0700
Tel: 015 065 0585 Fax: 086 669 6824

DRAWN BY	DATE	APPROVED BY	DATE
DESIGNED BY <td></td> <td></td> <td></td>			
CHECKED BY <td></td> <td></td> <td></td>			
PROJECT MANAGER <td></td> <td></td> <td></td>			

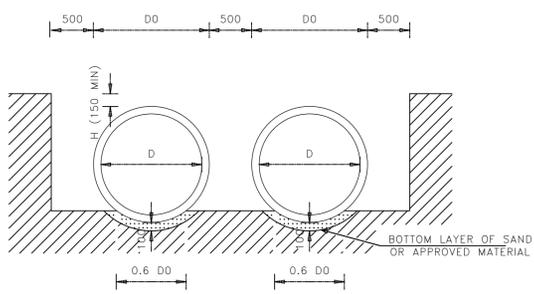
PROJECT	DRAWING TITLE	PROJECT No	DRAWING No	REVISION
INSTALLATION OF STORM WATER CULVERT (MASHISHIMALE TO LEJORI WARD 10, MAKHUSHANE WARD 2, LULEKANI ACCESS BRIDGE TO TO CEMENTRIES WARD 15 AND HUMULANI ACCESS BRIDGE TO TO CEMENTRIES WARD 16)	CONCRETE SIDE DRAINS, KERBS AND ENERGY BRAKERS	9/4/1/39	BPM/07/2019/CK/SD06	0



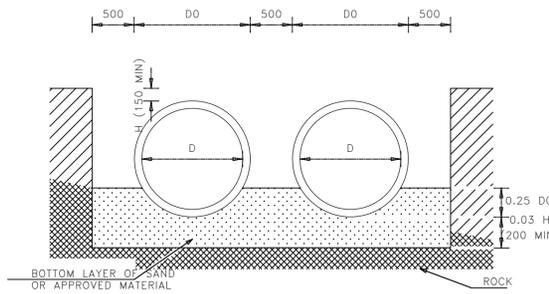
CLASS B BEDDING ON SOFT MATERIAL (SINGLE PIPE)
SCALE : SCHEMATIC



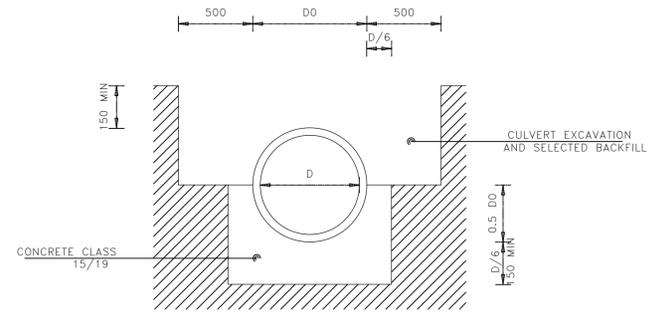
CLASS B BEDDING ON ROCK (SINGLE PIPE)
SCALE : SCHEMATIC



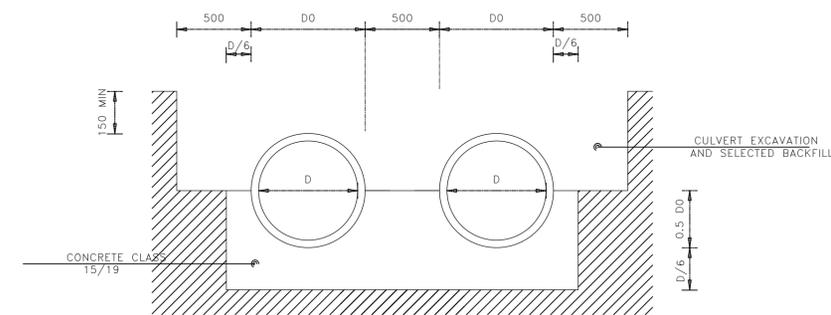
CLASS B BEDDING ON SOFT MATERIAL
SCALE : SCHEMATIC



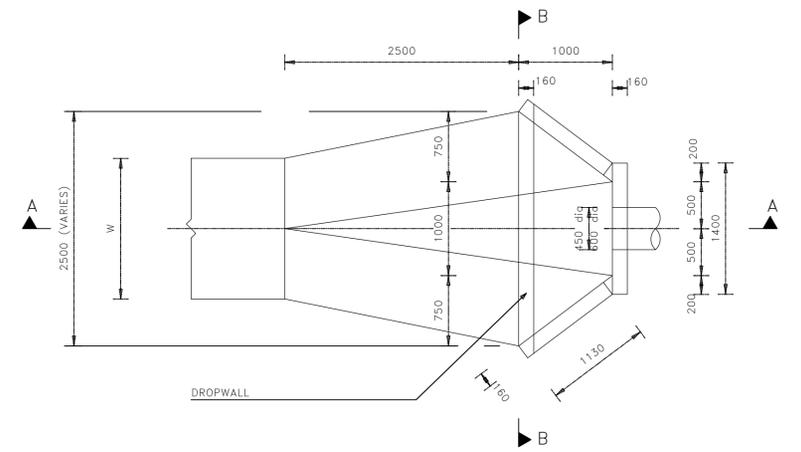
CLASS B BEDDING ON ROCK
SCALE : SCHEMATIC



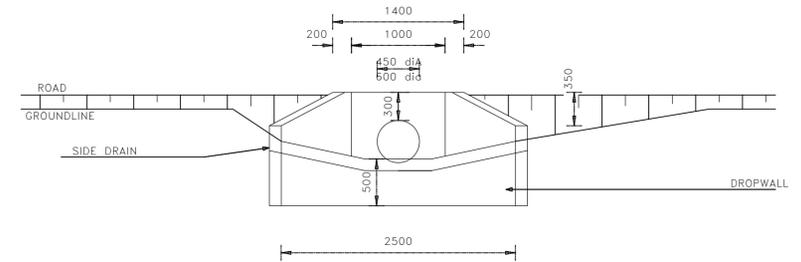
CLASS A BEDDING
SCALE 1:25



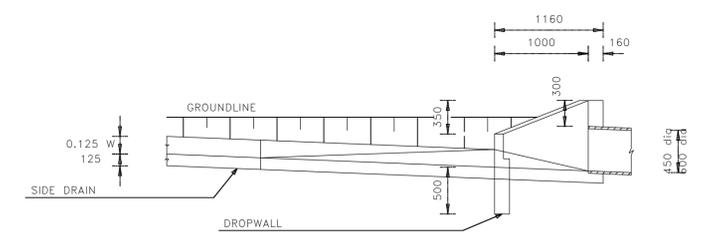
CLASS A BEDDING
SCALE 1:25



PLAN OF DRAINAGE UNDER FARM ACCESS ROADS
SCALE 1:25



ELEVATION B-B (DRAINAGE UNDER FARM ACCESS ROADS)
SCALE 1:25



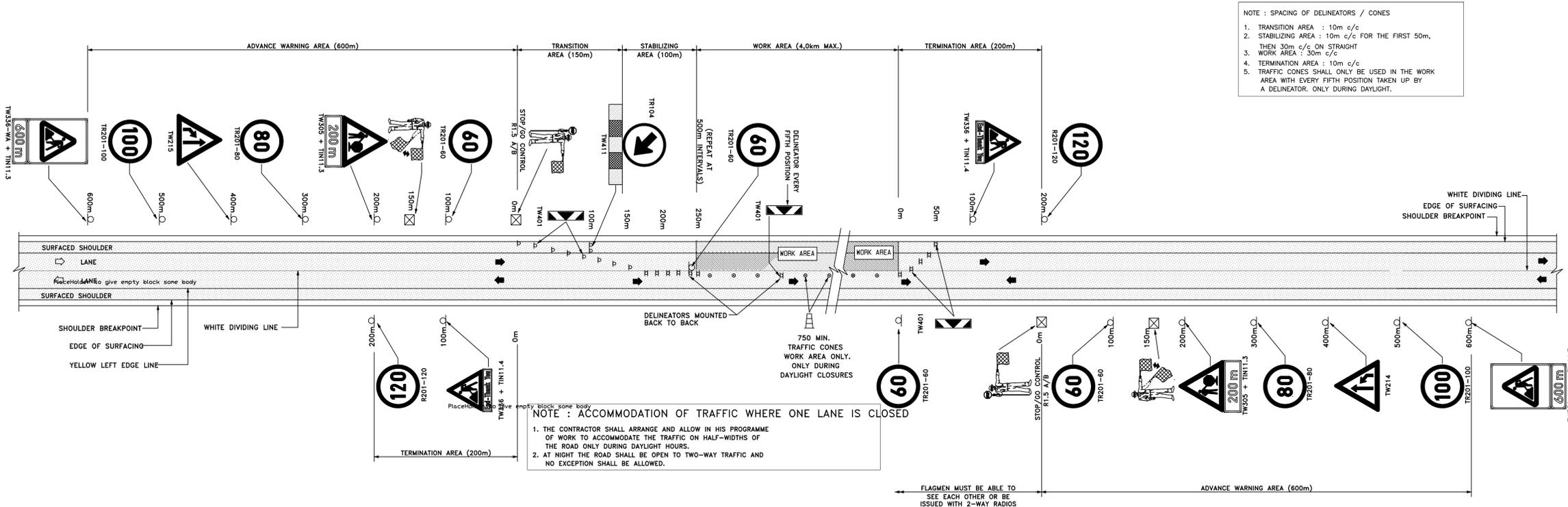
SECTION A-A (DRAINAGE UNDER FARM ACCESS ROADS)
SCALE 1:25

NOTES

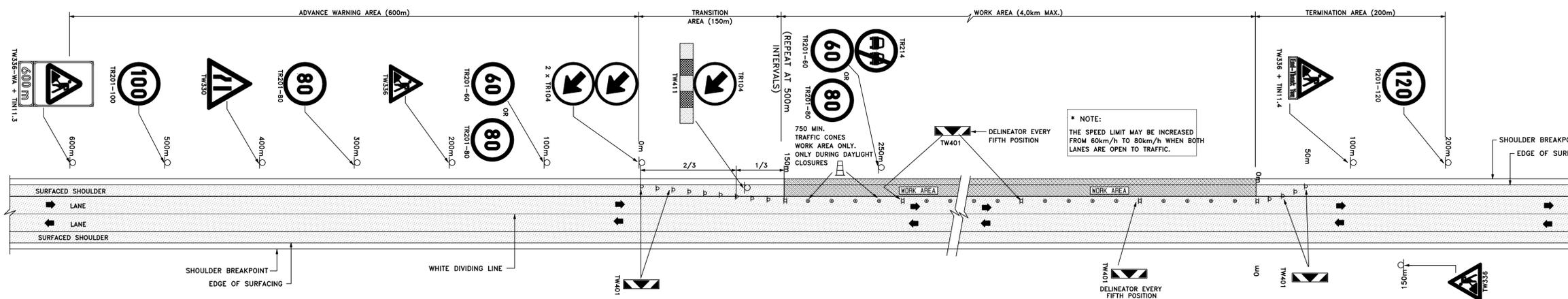
- 1 .01 ALL CONCRETE PIPE CULVERTS SHALL COMPLY WITH THE REQUIREMENTS OF S.A.B.S 677.
- 1 .02 THE PIPE CLASS MUST BE DETERMINED FROM THE WEIGHT OF THE PRISM OF FILL ABOVE THE CULVERT PLUS THE SNABC LOADINGS IN ACCORDANCE WITH TMH 7 (PARTS 1&2) "CODE OF PRACTICE FOR THE DESIGN OF HIGHWAY BRIDGES AND CULVERTS IN SOUTH AFRICA" AND STATED IN THE DRAINAGE SCHEDULE.
- 1 .03 THE MAXIMUM WHEEL LOAD ALLOWED ON THE PIPE IS 90KN WITH A MINIMUM FILL OF 150mm ON TOP OF THE PIPE FOR BOTH BEDDING CONDITIONS AND ALL PIPE DIAMETERS AS SHOWN.
- 1 .04 ALL INFORMATION REGARDING A SPECIFIC PIPE CULVERT APPEARS ON THE DRAINAGE SCHEDULE OF THE ROAD.
- 1 .05 CONCRETE BACKFILL CLASS 15/19.

<p>BA-PHALABORWA MUNICIPALITY PRIVATE BAG X01020 PHALABORWA, 1390 TEL: (015) 780-6300 FAX: (015) 781-0726</p>				<p>PHAMELA ENGINEERING SERVICES SUITE 02, RONDEBOSCH, 82 HANS VAN RENSBURG Pretoria, 0700 Tel: 015 065 0585 Fax: 086 669 6824</p>				<p>CLIENT</p> <p>PROJECT: INSTALLATION OF STORM WATER CULVERT (MASHISHIMALE TO LEJORI WARD 10, MAKHUSHANE WARD 2, LULEKANI ACCESS BRIDGE TO TO CEMENTRIES WARD 15 AND HUMULANI ACCESS BRIDGE TO TO CEMENTRIES WARD 16)</p> <p>DRAWING TITLE: PIPE CULVERTS DETAILS</p> <p>PROJECT No: 9/4/1/39 DRAWING No: BPM/07/2019/PC/SD07 REVISION: 0</p>																																											
<p>REVISION</p> <table border="1"> <thead> <tr> <th>INITS</th> <th>DATE</th> <th>INITS</th> <th>DATE</th> <th>REF. No.</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>CHECKED</td> <td></td> <td>APPROVED</td> <td></td> <td></td> <td>REFERENCES</td> </tr> </tbody> </table>				INITS	DATE	INITS	DATE	REF. No.	DESCRIPTION	CHECKED		APPROVED			REFERENCES	<table border="1"> <thead> <tr> <th>DRAWN BY</th> <th>DATE</th> <th>APPROVED BY</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>VL RATHSHIVUMO</td> <td></td> <td></td> <td></td> </tr> <tr> <th>DESIGNED BY</th> <th>DATE</th> <th>PR. ENG. No.</th> <th></th> </tr> <tr> <td>AB MABUNDZA</td> <td></td> <td></td> <td></td> </tr> <tr> <th>CHECKED BY</th> <th>DATE</th> <th>SCALE</th> <th></th> </tr> <tr> <td>FIDELIS BALOYI-PIENG</td> <td></td> <td></td> <td></td> </tr> <tr> <th>PROJECT MANAGER</th> <th>DATE</th> <th>SCALE</th> <th></th> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>				DRAWN BY	DATE	APPROVED BY	DATE	VL RATHSHIVUMO				DESIGNED BY	DATE	PR. ENG. No.		AB MABUNDZA				CHECKED BY	DATE	SCALE		FIDELIS BALOYI-PIENG				PROJECT MANAGER	DATE	SCALE					
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TEMPORARY ROAD TRAFFIC MANAGEMENT FOR 2-LANE SINGLE CARRIAGEWAY ROADS
STOP / GO OPERATION & SHOULDER CONSTRUCTION : DAYLIGHT AND NIGHT-TIME CLOSURES



SIGN SEQUENCE FOR STOP / GO OPERATION FOR LANE AND SHOULDER CLOSURE ON SINGLE CARRIAGEWAY ROADS



SIGN SEQUENCE FOR WORK ON SHOULDERS ON SINGLE CARRIAGEWAY ROADS

MAXIMUM SPEED LIMITS
THE MAXIMUM SPEED LIMIT SHALL BE CONSISTENT WITH THE PREVAILING CONDITIONS OF THE DEVIATION IN TERMS OF ROAD SAFETY REQUIREMENTS

REVISIONS

No	DATE	INIT	DESCRIPTION

PROJECT
INSTALLATION OF STORM WATER CULVERTS (MASHISHIMALE TO LEJORI WARD 10, MAKHU SHANE WARD 2, LULEKANI ACCESS BRIDGE TO CEMENTRIES WARD 15 AND HUMULANI ACCESS BRIDGE TO CEMENTRIES WARD 16)

TITLE
TRAFFIC MANAGEMENT

CLIENT:

BA-PHALABORWA MUNICIPALITY
PRIVATE BAG 201020, PHALABORWA, 1300
Tel: 015 790 6300 Fax: 015 781 0728

CONSULTANT:

PHAMELA ENGINEERING SERVICES
SUITE 02, RONDERBOSCH, 82 HANS VAN RENSBURG
Polokwane, 0700
Tel: 015 065 0585 Fax: 086 669 6824

SCALE ON REDUCED DRAWING
80mm SCALE ON ORIGINAL DRAWING

DESIGNED F.BALOYI-Pr.ENG	CHECKED F.BALOYI-Pr.ENG
DRAWN VL.RATSHIBVUMO	APPROVED
DATE JULY 2019	SCALE AS SHOWN

BPM/07/2019/-TM/SD 08





NOTE 1
SITING AND ERECTION METHODS BY CONTRACTOR, ONE NAME BOARD IN ENGLISH, SHALL BE ERECTED, POSITIONS TO BE DETERMINED BY ENGINEER ON SITE.

NOTE 2
BACKGROUND:
a. TOP SECTION: SEMI-MATT WHITE
b. LEFT BOTTOM SECTION: SEMI-MATT WHITE
c. RIGHT BOTTOM SECTION: SEMI-MATT LIGHT GREY

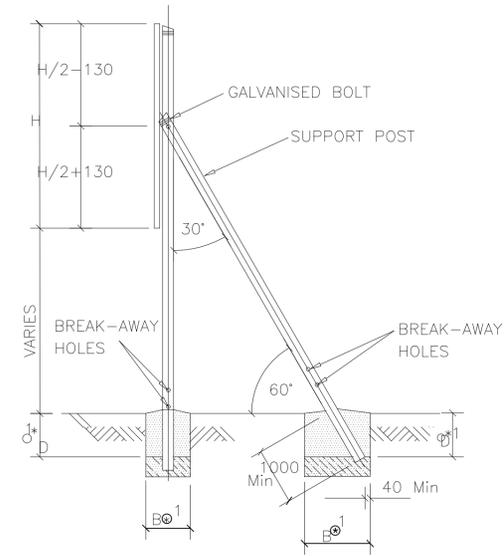
NOTE 3
CONTRACT PERIOD/ CONTRACTOR TEL. - LETTER HEIGHT 102mm

NOTE 4
NAME OF CONTRACTOR - LETTER HEIGHT 152mm

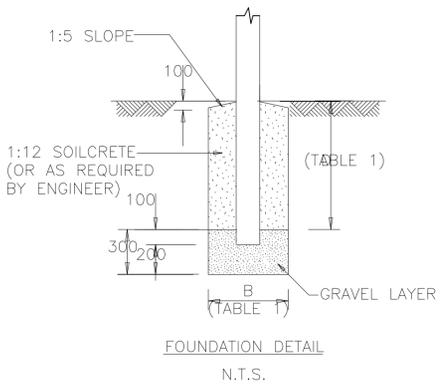
LETTERS
SERIES C, DARK BLUE

BORDER
GREEN NON-REFLECTIVE

EMBLEMS
MAY ONLY BE USED BY MEMBERS AND DISPLAYED IN FULL COLOUR

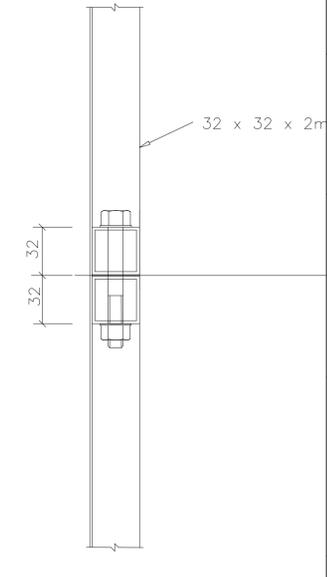
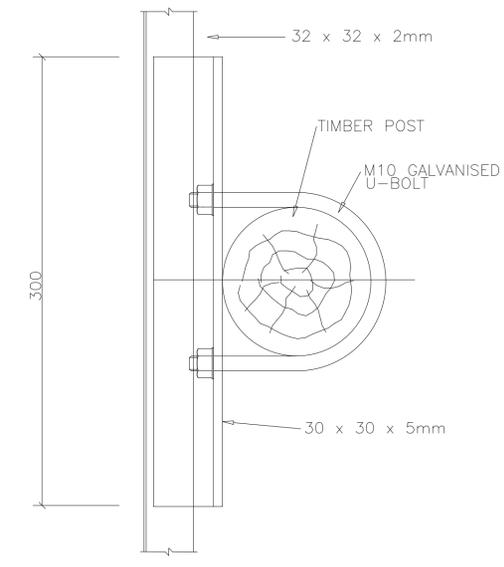
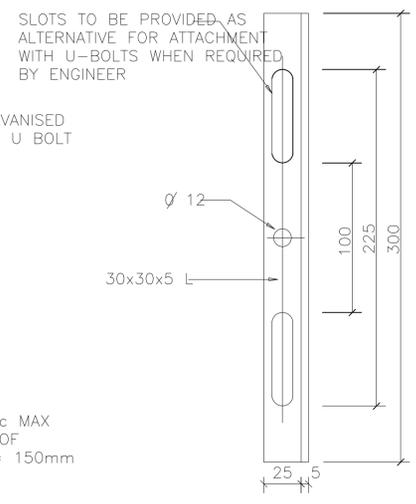
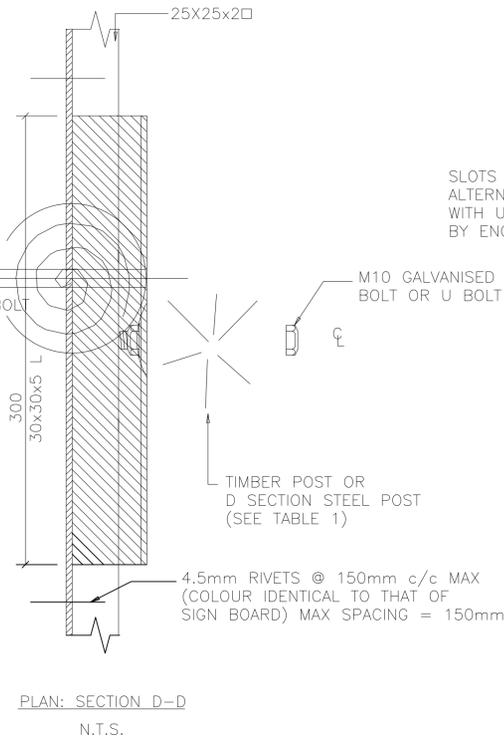
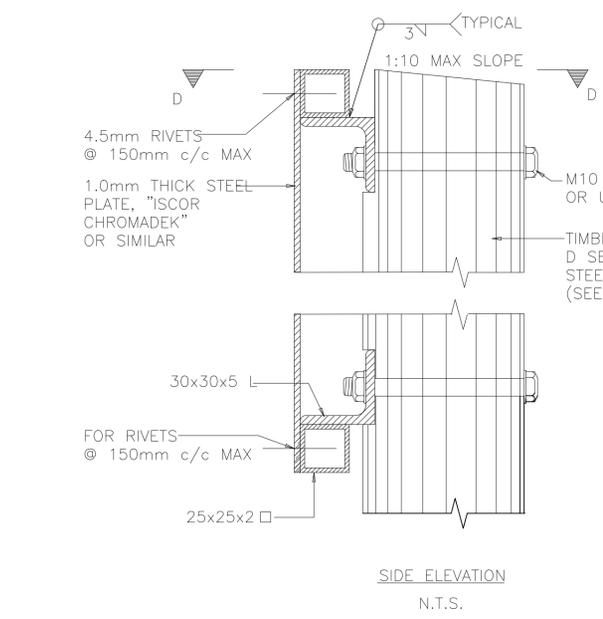


SIDE ELEVATION OF CONSTRUCTION SIGN BOARD
N.T.S.



FRONT ELEVATION
SCALE 1:20

TABLE 1				
ERECTION DETAILS				
TYPE POST	UPRIGHT	STAY	D	B
TIMBER POST AND STAY	100mm	80mm	600mm	850mm
TIMBER POST	180mm	-	1000mm	1450mm
D SECTION STEEL POST	100mm x 4mm	-	1000mm	1450mm



REVISIONS		
DATE	INIT	DESCRIPTION

PROJECT
INSTALLATION OF STORM WATER CULVERTS

1/4/1/39

SIGN BOARD

CLIENT:

 BA-PHALABORWA MUNICIPALITY
 PRIVATE BAG X01020 ,PHALABORWA, 1390
 Tel: 015 780 6300 Fax: 015 781 0726

CONSULTANT:

 PHAMELA ENGINEERING SERVICES (PTY) LTD
 SERVICES
 SUITE 02, RONDERBOSCH, 82 HANS VAN RENSBURG
 Polokwane, 0700
 Tel: 015 065 0585 Fax: 086 669 6824

SCALE ON REDUCED DRAWING
 80mm SCALE ON ORIGINAL DRAWING

DESIGNED F.BALOYI-Pr.ENG	CHECKED F.BALOYI-Pr.ENG
DRAWN VL.RATSHIBVUMO	APPROVED F.BALOYI-Pr.ENG
DATE JULY 2019	SCALE AS SHOWN

BPM/07/2019/SB/SD-09

REVISION
