



KUNENE REGIONAL COUNCIL

HEAD OFFICE



Tel: 065-273 950
Fax: 065-273 077

P/ Bag 502
Opuwo

**Request for Quotations
for Works**

Maintenance of Gravel Roads in Settlement Area

Procurement Reference No: W/RFQ/KRC-26/2019

Name of Bidder:

E-mail of Bidder:

Contact No. of Bidder:

Quotation Amount:

Brought forward from the Schedule of Quantities

Deadline: 28 October 2019





Tel: 065-273 950
Fax: 065-273 077

P/ Bag 502
Opuwo

Letter of Invitation

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

Procurement Reference No W/RFQ/KRC-26/2019

15 October 2019

Dear Sir/Madam,

Request for Quotations for Maintenance of Gravel Roads in Sesfontein Settlement area

Kunene regional Council invites you to submit your best quote for the items described in detail hereunder.

Any resulting contract shall be subject to the terms and conditions referred to in the document.

Queries, if any, should be addressed to our Head of the Procurement Management unit at the following email address: **pmu.kunenerc@gmail.com**.

Please prepare and submit your quotation in accordance with the instructions given or inform the undersigned if you will not be submitting a quotation.

Yours faithfully,



Mr. K. Sinvula

Acting Chief Regional Officer



SECTION I: INSTRUCTIONS TO BIDDERS

1. Rights of Kunene Regional Council

Kunene regional Council reserves the right:

- (a) to split the contract as per the lowest evaluated cost per lot; and
- (b) to accept or reject any quotation or to cancel the quotation process and reject all quotations at any time prior to contract award; and
- (c) to change the quantity of the quoted items.

2. Preparation of Quotations

You are requested to quote for the works mentioned in Section III, by completing, signing and returning:

- (a) the Quotation Letter in Section II
- (b) the Priced Activity Schedule in Section IV;
- (c) special Conditions of Contract in Section VI
- (d) any other attachment as deemed appropriate

You are advised to carefully read the complete Request for Quotations document, including the Special Conditions of Contract in Section VI, before preparing your Quotation. The standard forms in this document may be retyped for completion but the Bidder is responsible for their accurate reproduction.

3. Validity of Quotations

The quotation validity period shall be **90 days** from the date of bid submission deadline.

4. Eligibility Criteria

To be eligible to participate in this Quotation exercise, you should:

- (a) To be eligible to participate in this Quotation exercise, you should:
- (a) Have a valid certified copy of company Registration Certificate
- (b) Have valid original / certified copy of good Standing Tax Certificate;
- (c) Have valid original / certified copy of good Standing Social Security Certificate;
- (d) Have a valid certified copy of Affirmative Action Compliance Certificate, proof from Employment Equity Commissioner that bidder is not a relevant employer, or exemption issued in terms of Section 42 of the Affirmative Action Act, 1998;
- (e) Attach certified copy of certificate indicating 100% Namibian owned SME from Ministry of Industrialization, Trade and SME Development or an entity of which 51% or more equity is owned by Namibia citizen;
- (f) Attach proof of confirmation of account from a Namibian banking Institution
- (g) An undertaking on the part of the Bidder that the salaries and wages payable to its personnel in respect of this proposal are compliant to the relevant laws, Remuneration Order, and Award, where applicable and that it will abide to sub-clause 4.6 of the General conditions of Contract if it is awarded the contract or part thereof; and;

5. Bid Security/Bid Securing Declaration

Bidders are required to submit a Bid Security/subscribe to a Bid Securing Declaration for this procurement process.

6. Works Completion Period

The completion period for works shall be **60 calendar days** after acceptance and issue of Letter of Acceptance. Deviation in completion period shall only be considered if such deviation is reasonable.

7. Sealing and Marking of Quotations

Quotations should be sealed in a single envelope, clearly marked with the Procurement Reference Number: **W/RFQ/KRC-26/2019**, addressed to **Kunene Regional Council Offices, P/ Bag 502, Opuwo** with the Bidder's name at the back of the envelope.

8. Submission of Quotations

Quotations should be deposited in the Quotation/Bid Box located at **Kunene regional Council Offices, Mbumbiango Muharukua Street in Opuwo Town**, not later than **Monday, 28 October 2019 at 11h00**. Quotations by post or hand delivered should reach **Kunene regional Council Offices** by the same date and time at latest. Late quotations will be rejected.

Quotations received by e-mail will not be considered.

9. Opening of Quotations

Quotations will be opened internally by Kunene regional Council immediately after the closing time referred to in section 8 above. A record of the Quotation Opening stating the name of the bidders, the amount quoted, the presence or absence of a Bid Securing Declaration, will be posted on the notice board of Kunene regional Council and available to any bidder on request within three working days of the Opening.

10. Evaluation of Quotations

The Kunene Regional Council shall have the right to request for clarifications in writing during evaluation. Offers that are substantially responsive shall be compared on the basis of evaluated cost, to determine the lowest evaluated quotation.

11. Technical Compliance

Bidders can submit along with their quotations documents, catalogues and any other document to substantiate their experience in similar projects completed.

- | | |
|--|--|
| 1. Individual Bidders or Individual | 1.1 Annual amounts of construction works performed during the last 3 years in NAD. [attach] |
|--|--|

**Members of
Joint Ventures**

- 1.2 Number of works of a nature and amount similar to the Works performed as prime Contractor over the last 3 years. [Also list details of work under way or committed, including expected completion date(s).] [attach]

Project/Contract name and country	Name of client and contact person	Type of work performed and year of completion	Value of contract in NAD
(a)			
(b)			
(c)			

- 1.4 Major items of Contractor's Equipment proposed for carrying out the Works. [List all information requested below. Refer also to ITB Sub-Clause 6.3 (c).]

Item of equipment	Description, make, and age (years)	Condition (new, good, poor) and number available	Owned, leased (from whom?), or to be purchased (from whom?)
(a)			
(b)			
(c)			
(d)			
(e)			
(f)			

1.5 Qualifications and experience of key personnel proposed for administration and execution of the Contract. [Attach biographical data. Refer also to ITB Sub-Clause 6.3 (d).]

Position	Name	Years of experience (general)	Years of experience in proposed position
(a)			
(b)			

12. Prices and Currency of Payment

Prices for the execution of works shall be fixed in Namibian Dollars as quoted.

Quotations shall cover all costs of labour, materials, equipment, overheads, profits and all associated costs for performing the works, and shall include all duties. The whole cost of performing the works shall be included in the items stated, and the cost of any incidental works shall be deemed to be included in the prices quoted.

13. Award of Contract

The Bidder having submitted the lowest evaluated responsive quotation not more than 15% less of engineer's estimates and qualified to perform the works shall be selected for award of contract. **Award of contract shall be by issue of a Letter of Acceptance in accordance** with terms and conditions contained in Section V: Contract Agreement and General Conditions of Contract.

14. Notification of Award and Debriefing

Kunene regional Council shall after award of contract promptly inform all unsuccessful bidders in writing of the name and address of the successful bidder and the contract amount and post a notice of award on its website within seven days. Furthermore Kunene regional Council shall attend to all requests for debriefing made in writing within 7 days of the unsuccessful bidders being informed of the award.

15. Administrative compliance

Bidder's must ensure that they submit a dully completed bidding document with all pages signed were required expect.

SECTION II: QUOTATION LETTER**(to be completed by Bidders)**

Complete this form with all the requested details and submit it as the first page of your quotation with the Priced Activity Schedule and documents requested above. A signature and authorisation on this form will confirm that the terms and conditions of the RFQ prevail over any attachments.

If your quotation is not authorised, it will be rejected

Quotation addressed to:	Kunene Regional Council
Procurement Reference Number:	W/RFQ/KRC-26/2019
Subject matter of Procurement:	Maintenance of Gravel Roads in Sesfontein Settlement area

We offer to execute the Works detailed in the Statement of Requirements and Priced Schedule of Quantities as per the defined specifications, and in accordance with the terms and conditions stated in your Request for Sealed Quotations referenced above.

We confirm that we are eligible to participate in this Quotation exercise and meet the eligibility criteria specified in Section 1: Instructions to Bidders

We undertake to abide by the Conduct of Bidders and Suppliers as provided under the Public Procurement Act during the procurement process and the execution of any resulting contract.

We have read and understood the content of the Bid Security/Bid Securing Declaration (BSD) attached hereto and subscribe fully to the terms and conditions contained therein. We further understand that this subscription could lead [forfeiture of the security amount / disqualification on the grounds mentioned in the BDS]

The validity period of our Quotation is **90 days** from the date of the bid submission deadline.

We confirm that the prices quoted in the Priced Schedule of Quantity are fixed and firm and will not be subject to revision or variation, if we are awarded the contract **prior to the expiry** date of the quotation validity.

Works will commence within **Seven (7) calendar days** from date of issue of Letter of Acceptance.

Works will be completed within **Sixty (60) days** from date of issue of Letter of acceptance.

Quotation Authorised by:

Name of Bidder	
Contact Person	
Company's Address and seal	

Name of Person Authorising the Quotation:		Position:	Signature:
Date:	Phone /Fax No.:	Email address:	

Appendix to Quotation Letter

BID SECURING DECLARATION
(Section 45 of Act)
(Regulation 37(1) (b) and 37(5))

Date:**Procurement Ref No W/RFQ/KRC-26/2019****To: Kunene Regional Council****P bag 502****Opuwo**

I/We* understand that in terms of section 45 of the Act a public entity must include in the bidding document the requirement for a declaration as an alternative form of bid security.

I/We* accept that under section 45 of the Act, I/we* may be suspended or disqualified in the event of

- (a) a modification or withdrawal of a bid after the deadline for submission of bids during the period of validity;
- (b) refusal by a bidder to accept a correction of an error appearing on the face of a bid;
- (c) failure to sign a procurement contract in accordance with the terms and conditions set forth in the bidding document, should I/We* be successful bidder; or
- (d) failure to provide security for the performance of the procurement contract if required to do so by the bidding document.

I/We* understand this bid securing declaration ceases to be valid if I am/We are* not the successful Bidder

Signed:

.....
 [insert signature of person whose name and capacity are shown]

Capacity of:

[indicate legal capacity of person(s) signing the Bid Securing Declaration]

Name:

.....
 [insert complete name of person signing the Bid Securing Declaration]

Duly authorized to sign the bid for and on behalf of: [insert complete name of Bidder]

Dated on _____ day of _____
 [insert date of signing]

Corporate Seal (where appropriate)

[Note*: In case of a joint venture, the bid securing declaration must be in the name of all partners to the joint venture that submits the bid.]

SECTION III: STATEMENT OF REQUIREMENTS

A. SCOPE OF WORKS, SPECIFICATIONS AND PERFORMANCE REQUIREMENTS

SCOPE OF THE WORKS

The works to be carried out under this Contract comprises the maintenance of gravel road network in Sesfontein Settlement.

The major elements comprising this Contract are as follows:

- Establishment on site
- Setting out of the works.
- Clearing and grubbing
- Re-gravelling of gravel roads
- Light blading and heavy blading of gravel roads
- Installation of road signs
- Construction of speed humps
- Testing of materials and workmanship
- Removal of camp establishment and finishing off the site after completion
- The maintenance of the works and all other requirements of the Contractor's defects liability

A total length of approximately 700m (0.7km) of gravel roads (from a T-junction near the police station to the open market) will re-graveled with the following layer works:

Selected Subgrade (SSG): modified	150 mm thick natural G6 gravel compacted to 95% of AASHTO density, with minimum CBR = 25 at 95% of modified
	AASHTO density.
Roadbed Preparation:	150 mm thick rip and re-compact in-situ material compacted to 93% of modified AASHTO density, with minimum CBR = 25 at 95% of modified AASHTO density. (Provisional)

Heavy blading of 2.53 km of gravel road network with maximum Four (4) blades per road.

SOURCES OF MATERIALS

The Contractor shall be responsible for locating suitable borrow pits, obtaining the necessary permission for the use of the borrow pit material and shall neatly finish off all borrow areas after use if required for the construction of the Works.

OVERHAUL

All rates tendered for material or excavation shall allow for all hauling to and from the Site. **For this contract free haul shall therefore continue indefinitely and no overhaul shall be paid.**

APPLICABLE STANDARDISED AND PARTICULAR SPECIFICATIONS

For the purposes of this Contract the following Standardised Specifications shall apply. Notwithstanding the conditions of Subclause 2.2 of SABS 1200A, the editions issued on the dates as listed below, shall apply to this Contract.

Not bound into this volume:

SABS 1200 A -	1986	:	GENERAL
SABS 1200 AB -	1986:		ENGINEER'S OFFICE
SABS 1200 C -	1980	:	SITE CLEARANCE
SABS 1200 D -	1988	:	EARTHWORKS
SABS 1200 DB -	1989	:	EARTHWORKS (PIPE TRENCHES)
SABS 1200 DM -	1981	:	EARTHWORKS (ROADS, SUBGRADE)
SABS 1200 GA -	1982	:	CONCRETE (SMALL WORKS)
SABS 1200 LE -	1982	:	STORM WATER DRAINAGE
SABS 1200 M-	1981	:	ROADS (GENERAL)
SABS 1200 ME -	1981:		SUBBASE
SABS 1200 MF -	1981	:	BASE
SABS 1200 MG -	1996	:	BITUMENOUS SURFACE TREATMENT
SABS 1200 MJ -	1984	:	SEGMENTED PAVING
SABS 1200 MK -	1983	:	KERBING AND CHANNELING
SABS 1200 MM -	1984:		ANCILLARY ROADWORKS

B. DRAWINGS

The work shall be carried out in accordance with the following Drawings which form part of the Contract Documents:

Drawing Number	Title	Revision
P1988/KRC-CR-001	Road Layout Plan	A
P1988/ KRC -CR-002	Road Details	A
P1988/ KRC -CR-003	Road Sign Details	
P1988/ KRC -CR-004	Culvert Details	

C ROJECT SPECIFICATIONS

1. INTRODUCTION

1.1 SCOPE

THIS PROJECT SPECIFICATION COMPRISES OF TWO PORTIONS.

PORTION 1 CONTAINS A GENERAL DESCRIPTION OF THE WORKS, THE SITE, THE REQUIREMENTS TO BE MET AND THE STANDARDISED AND PARTICULAR SPECIFICATIONS APPLICABLE TO THIS CONTRACT.

PORTION 2 CONTAINS THE VARIATIONS AND ADDITIONS TO THE STANDARDISED AND PARTICULAR SPECIFICATIONS THAT ARE APPLICABLE TO THIS CONTRACT AND THAT ARE LISTED IN PORTION 1.

1.2 STATUS

PORTION 2 OF THE PROJECT SPECIFICATION SUPPLEMENTS THE STANDARDISED AND PARTICULAR SPECIFICATIONS AND FORMS AN INTEGRAL PART OF THE CONTRACT.

SHOULD ANY REQUIREMENT OF ANY PORTION OF THE PROJECT SPECIFICATION CONFLICT WITH ANY REQUIREMENT OF THE STANDARDISED OR PARTICULAR SPECIFICATIONS (LISTED IN PORTION 1 OF THE PROJECT SPECIFICATION), THE REQUIREMENT OF THE PROJECT SPECIFICATION SHALL PREVAIL.

2. PORTION 1: THE WORKS

PS-1 SCOPE OF THE WORKS

THE WORK TO BE CARRIED OUT UNDER THIS CONTRACT COMPRISE THE MAINTENANCE OF 1.54KM GRAVEL ROADS IN SESFONTEIN SETTLEMENT. THE GENERAL ITEMS OF WORKS TO BE EXECUTED UNDER THIS CONTRACT CONSIST OF, BUT NOT LIMITED TO THE FOLLOWING:

- ESTABLISHMENT OF CAMP ON SITE.
- SETTING OUT OF THE WORKS.
- CLEARING AND GRUBBING
- RE-GRAVELLING OF GRAVEL ROADS (0.5 KM)
- LIGHT BLADING AND HEAVY BLADING OF GRAVEL ROAD
- CONSTRUCTION OF STORM WATER DRAINAGE INFRASTRUCTURE (2X DRIFT AND 300M EARTH CHANNEL / V-DRAIN)
- TESTING OF MATERIALS AND WORKMANSHIP.
- REMOVAL OF CAMP ESTABLISHMENT AND FINISHING OFF THE SITE AFTER COMPLETION.

PS-2 DESCRIPTION OF SITE AND ACCESS

THE SITE FOR THE MAINTENANCE OF GRAVEL ROADS IS IN SESFONTEIN SETTLEMENT.

THE BOUNDARIES OF THE SITE CONSIST OF THE AREA ASSOCIATED WITH THE WORKS TO BE EXECUTED UNDER THIS CONTRACT AS PER LAYOUT DRAWINGS INCLUDING CONSTRUCTION CAMPS, ANY STORAGE AND WORK AREAS WHICH THE CONTRACTOR MAY REQUIRE AND WHICH ARE APPROVED BY THE ENGINEER AND THE CONTRACTOR'S BORROW AND STOCKPILE AREAS.

PS-3 NATURE OF GROUND AND SUBSOIL CONDITIONS

GENERALLY THE SOIL CAN BE DESCRIBED AS ROCKY MATERIAL. NO DETAILED SOIL INVESTIGATION WAS DONE FOR THE PROJECT AND THE CONTRACTOR IS ADVISED TO ACQUAINT HIMSELF WITH THE LOCAL SOIL CONDITIONS AND MATERIALS OF EXISTING INFRASTRUCTURES.

PS-4 DETAIL DESCRIPTION OF CONTRACT

THIS CLAUSE WILL PROVIDE A MORE DETAILED DESCRIPTION OF THE WORK REQUIRED UNDER THIS CONTRACT.

PS-4.1 RE-GRAVELLING OF ROADS

A TOTAL LENGTH OF APPROXIMATELY 0.5 KM OF GRAVEL ROADS WILL BE RE-GRAVELED WITH THE FOLLOWING

LAYER WORKS:

GRAVEL WEARING COURSE: 150 MM THICK NATURAL G5 GRAVEL COMPACTED TO 95% OF MODIFIED

98% OF

AASHTO DENSITY, WITH MINIMUM CBR = 80 AT

MODIFIED AASHTO DENSITY.

BASE COURSE: 150 MM THICK NATURAL G6 GRAVEL COMPACTED TO 95% OF MODIFIED

95% OF

AASHTO DENSITY, WITH MINIMUM CBR = 45 AT

MODIFIED AASHTO DENSITY.

SELECTED SUBGRADE (SSG): 150 MM THICK NATURAL GRAVEL COMPACTED TO 93% OF MODIFIED

95% OF

AASHTO DENSITY, WITH MINIMUM CBR = 25 AT

MODIFIED AASHTO DENSITY.

ROADBED PREPARATION: 150 MM THICK RIP AND RE-COMPACT IN-SITU MATERIAL TO
90% OF MODIFIED AASHTO DENSITY.

ANCILLARIES: PROVISION HAS TO BE MADE FOR KERBS, ROAD SIGNS, AND
CABLE DUCT
MARKER BLOCKS.

PS-4.2 STORM WATER DRAINAGE SYSTEM

THE STORM WATER DRAINAGE SYSTEM CONSISTS OF:

- EARTH STORM WATER CANALS WERE NECESSARY.
- 1 NO. OFF PRECAST BOX CULVERT WITH INLET AND OUTLET STRUCTURES.
- 2 NO. OFF CONCRETE DRIFTS

PS-5 CONSTRUCTION PROGRAMME

THE CONTRACT PERIOD WILL BE 90 DAYS (EXCLUDING BUILDERS' HOLIDAY) AND ANTICIPATED COMMENCEMENT DATE WILL BE EARLY SEPTEMBER 2019 WITH COMPLETION MID NOVEMBER 2019.

A CERTIFICATE OF COMPLETION WILL ONLY BE ISSUED WHEN ALL TESTING AND COMMISSIONING HAS BEEN SATISFACTORILY CARRIED OUT.

BIDDERS SHALL SUBMIT, TOGETHER WITH THEIR BIDS, A REALISTIC PROGRAMME IN THE FORM OF A GANTT BAR CHART SHOWING THE DATES FOR THE COMPLETION OF THE MAJOR ACTIVITIES OF THE WORKS. THIS PROGRAMME SHALL FORM THE BASIS OF THE DETAILED PROGRAMME REQUIRED OF THE CONTRACTOR IN TERMS OF CLAUSE 25.1 OF THE GENERAL CONDITIONS OF CONTRACT, WHICH SHALL BE SUBMITTED TO THE ENGINEER WITHIN THE TIME STATED IN THE SPECIAL CONDITIONS OF CONTRACT.

THIS PROGRAMME SHALL NOT BE IN THE FORM OF A BAR CHART ONLY, BUT SHALL CLEARLY SHOW THE ANTICIPATED QUANTITIES OF WORK TO BE PERFORMED EACH WEEK UNDER EACH OF THE MAJOR OPERATIONS.

IF, DURING THE PROGRESS OF THE WORK, THE QUANTITIES OF WORK PERFORMED PER WEEK FALL BELOW THAT ORIGINALLY PROGRAMMED, OR IF THE PROGRAMME IS DEVIATED FROM IN ANY OTHER WAY, THE CONTRACTOR SHALL, WITHIN ONE WEEK AFTER BEING NOTIFIED BY THE ENGINEER, SUBMIT A REVISED PROGRAMME AT HIS OWN COST.

SUCH A REVISED PROGRAMME SHALL BE BASED ON THE RATE OF PROGRESS OF THE WORKS ACHIEVED BY THE CONTRACTOR UP TO THE DATE OF REVISION. ANY PROPOSAL TO INCREASE THE RATE OF PROGRESS MUST BE ACCOMPANIED BY POSITIVE STEPS TO INCREASE PRODUCTION AND THE USE OF LABOUR AND PLANT IN A MORE EFFICIENT MANNER. SUCH A REVISED PROGRAMME WILL NOT

RELIEVE THE CONTRACTOR OF HIS OBLIGATIONS TO COMPLETE THE WORKS BY NOT LATER THAN THE CONTRACTUAL COMPLETION DATE.

CONTINUED FAILURE ON THE PART OF THE CONTRACTOR TO WORK ACCORDING TO THE PROGRAMME OR REVISED PROGRAMMES SHALL BE SUFFICIENT REASON FOR THE ENGINEER TO TAKE STEPS AS PROVIDED FOR IN THE GENERAL CONDITIONS OF CONTRACT.

PS-6: SITE FACILITIES AVAILABLE

PS-6.1 CONTRACTOR'S CAMP

THE CONTRACTOR WILL HAVE TO MAKE HIS OWN ARRANGEMENTS FOR HIS CONSTRUCTION YARD AND CAMP. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIND A SUITABLE SITE WHICH SHALL CARRY THE APPROVAL OF KUNENE REGIONAL COUNCIL. THE CONTRACTOR SHALL BE REQUIRED TO FENCE IN HIS CONSTRUCTION CAMP WITH A 2,4M HIGH SECURITY FENCE WITH A LOCKABLE DOUBLE LEAF GATE AND SHALL EMPLOY A FULL TIME WATCHMAN OR WATCHMEN TO GUARD HIS EQUIPMENT AND MATERIALS IN THE CAMP.

THE CONTRACTOR MAY NOT UNNECESSARILY REMOVE ANY LARGE TREES AND HE SHALL KEEP HIS CAMP AND YARD NEAT AND TIDY AT ALL TIMES AND ON COMPLETION OF THE WORKS, SHALL RESTORE SAME TO ITS ORIGINAL CONDITION AT HIS OWN EXPENSE AND TO THE ENGINEER'S SATISFACTION. NO POLLUTION OR LITTERING OF ANY KIND WILL BE TOLERATED AND THE CAMP TERRAIN SHALL BE TO THE APPROVAL OF THE HEALTH AUTHORITY.

PS-6.2 SERVICES

POTABLE WATER AND 220 VOLT POWER SUPPLY IS AVAILABLE CLOSE TO THE SITE, BUT IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO APPLY FOR CONNECTIONS TO THE EXISTING WATER SUPPLY NETWORK AND POWER RETICULATION WITH THE KUNENE REGIONAL COUNCIL, NORED OR ANY OTHER SUPPLY AUTHORITIES. HE SHALL FURTHERMORE, AFTER HAVING OBTAINED THE NECESSARY APPROVAL FROM THE RELEVANT AUTHORITIES, MAKE HIS OWN ARRANGEMENTS FOR LAYING ON WATER AND POWER TO HIS CAMP SITE AND SHALL BE RESPONSIBLE FOR THE COST OF LAYING ON THESE SERVICES AS WELL AS FOR PAYMENT OF WATER AND POWER CONSUMED. FOR THIS PURPOSE THE CONTRACTOR SHALL INSTALL APPROPRIATE LOCKABLE METERS AS REQUIRED BY THE SUPPLY AUTHORITIES.

THE CONTRACTOR SHALL MAKE HIS OWN ARRANGEMENTS FOR THE DISPOSAL OF WASTE WATER AND SEWERAGE EFFLUENT. HE SHALL BE REQUIRED TO CONSTRUCT SEPTIC TANKS AND FRENCH DRAINS OF AN APPROVED DESIGN AND SIZE IN POSITIONS TO BE APPROVED BY THE ENGINEER. UNDER NO CIRCUMSTANCES WILL THE DISCHARGE OF WASTE WATER TO THE SURFACE BE PERMITTED.

PS-6.3 SURVEY BEACONS, BENCH MARKS AND REFERENCE PEGS

THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND EXPOSING OF ANY EXISTING POWER AND WATER SUPPLY PIPELINES OR SERVICES THAT MAY OBSTRUCT ANY OF THE WORKS TO BE

CONSTRUCTED AND FOR THE SETTING OUT OF THE WORKS. NO SEPARATE PAYMENT WILL BE MADE FOR THIS. A SET OF SURVEY BEACONS AND BENCHMARKS WILL BE PROVIDED BY THE ENGINEER TO ENABLE THE CONTRACTOR TO SET OUT THE WORKS. IN ADDITION, ALL BLOCK CORNERS HAVE BEEN SET OUT BY A LAND SURVEYOR AND IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO MAKE ENQUIRIES WITH THE LAND SURVEYORS AS TO THE NATURE OF THE CORNER PEGS AND HOW THEY ARE MARKED IN THE FIELD AND TO FIND THEM. THE CONTRACTOR IS ALSO RESPONSIBLE FOR ENSURING THAT NO SURVEY BEACONS, BENCHMARKS OR ERF CORNER PEGS ARE COVERED OR DISTURBED. THE COST OF THE RE-ESTABLISHMENT OF ANY SURVEY BEACONS, BENCH MARKS, REFERENCE PEGS OR ERF CORNER PEGS, DISTURBED BY THE CONTRACTOR SHALL BE FOR THE CONTRACTOR'S ACCOUNT.

PS-7 SITE FACILITIES REQUIRED

PS-7.1 SITE OFFICES

THE CONTRACTOR SHALL BE REQUIRED TO ERECT SITE OFFICES FOR HIS OWN USE AS WELL AS FOR THE USE OF THE ENGINEER ON A TEMPORARY BASIS.

THE CONTRACTOR SHALL FURTHER PROVIDE ONE CONFERENCE TABLE CAPABLE OF SEATING 12 PERSONS TOGETHER WITH 12 CHAIRS WHERE SITE MEETINGS CAN BE HELD.

THE CONTRACTOR SHALL ENSURE THAT A COMPLETE SET OF ALL CONSTRUCTION DRAWINGS ARE KEPT IN THE OFFICE AT ALL TIMES. SEPARATE SETS OF DRAWINGS SHALL BE KEPT ON THE CONSTRUCTION SITE.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO KEEP THE OFFICE CLEAN AT ALL TIMES WITH FREE ACCESS BEING PROVIDED TO THE ENGINEER AND HIS STAFF.

ALL OFFICE EQUIPMENT SHALL REMAIN THE PROPERTY OF THE CONTRACTOR BUT HE SHALL BE RESPONSIBLE FOR THE PROPER MAINTENANCE AND CARE THEREOF DURING THE COURSE OF THE CONTRACT.

PS-7.2 LABORATORY FACILITIES

THE CONTRACTOR SHALL MAKE USE OF THE SERVICES OF A SUITABLY QUALIFIED LABORATORY CAPABLE OF CARRYING THE REQUIRED TESTS LISTED ABOVE FOR QUALITY ACCEPTANCE CONTROL PURPOSES FOR THE TESTS SUBMITTED TO THE ENGINEER.

THE LABORATORY SHALL BE EQUIPPED WITH THE EQUIPMENT REQUIRED TO CONDUCT THE FOLLOWING TESTS:

- SIEVE ANALYSIS OF GRAVEL, SAND AND SOIL SAMPLES.

- DETERMINATION OF ATTERBERG LIMITS (LIQUID LIMIT, PLASTIC LIMIT, PLASTICITY INDEX, LINEAR SHRINKAGE).
- DETERMINATION OF MAXIMUM DRY DENSITY AND OPTIMUM MOISTURE CONTENT OF GRAVEL, SOIL AND SAND.
- DETERMINATION OF THE IN-PLACE DRY DENSITY OF SOIL OR GRAVEL BY THE SAND REPLACEMENT METHOD.
- DETERMINATION OF THE IN-PLACE DENSITY AND MOISTURE CONTENT OF SOILS AND GRAVELS BY NUCLEAR METHODS.
- DETERMINATION OF THE CALIFORNIA BEARING RATIO (CBR)
- DETERMINATION OF THE FINENESS MODULUS OF FINE AGGREGATE.
- MAKING AND CURING AND COMPRESSIVE STRENGTH DETERMINATION OF CONCRETE TEST CUBES.
- DETERMINATION OF THE SLUMP OF FRESHLY MADE CONCRETE.

NOTWITHSTANDING THE EQUIPMENT REQUIREMENTS FOR THE ABOVE TESTS, THE CONTRACTOR SHALL ENSURE THAT THE FOLLOWING EQUIPMENT IS KEPT ON SITE:

- SUFFICIENT CONCRETE CUBE MOULDS (150MM X 150MM) TO COMPLY WITH THE MINIMUM FREQUENCY OF SAMPLING SPECIFIED IN CLAUSE 7.1.2 OF SABS 1220:G AND THE REQUIREMENTS OF THE NUMBER OF CUBES PER TEST AS SET OUT IN CLAUSE PSG 4.1 OF PORTION 2 OF THE PROJECT SPECIFICATIONS.
- CUBE CURING BATHS CAPABLE OF HOLDING THE NUMBER OF CUBES ACCUMULATED OVER 28 AND 56 DAYS.
- AN ADEQUATE NUMBER OF 50 KG SAMPLE BAGS

ONE COPY OF THE RESULTS OF ALL TESTS CARRIED OUT SHALL BE SEND TO THE ENGINEER AND ONE COPY SHALL BE KEPT ON SITE AT ALL TIMES.

PS-7.3 NAME BOARDS (PROVISIONAL)

ONE STANDARD NAME BOARD OF THE NAMIBIA ASSOCIATION OF CONSULTING ENGINEERS IS TO BE PROVIDED UNDER THIS CONTRACT. THE NAME BOARD SHALL BE ERECTED AT A POSITION AS ORDERED BY THE ENGINEER.

THE NAME BOARD SHALL BE ERECTED WITHIN THREE WEEKS OF THE AWARD OF THE CONTRACT. IT SHALL BE MAINTAINED IN GOOD ORDER FOR THE DURATION OF THE CONTRACT AND SHALL BE REMOVED ON COMPLETION THEREOF.

THE COST OF THE NAME BOARD SHALL BE INCLUDED IN THE RATES UNDER 1.1.2 OF SECTION 1 OF THE SCHEDULE OF QUANTITIES.

PS-7.4 TEMPORARY LATRINES

THE CONTRACTOR SHALL PROVIDE SUFFICIENT LATRINE FACILITIES ON SITE FOR THE USE OF HIS EMPLOYEES AND HE SHALL BE ENTIRELY RESPONSIBLE FOR MAINTAINING SUCH LATRINES IN A CLEAN, ORDERLY AND SANITARY CONDITION TO THE SATISFACTION OF THE ENGINEER AND HEALTH AUTHORITIES.

LATRINES SHALL PROVIDE PROTECTION AGAINST THE WEATHER, AND SHALL BE PROPERLY SCREENED FROM THE PUBLIC. LATRINES SHALL BE PROVIDED AT THE RATE OF ONE LATRINE FOR EVERY 10 PERSONS WORKING ON THE SITE.

PS-7.5 COMMUNICATION FACILITIES (ONLY APPLICABLE WHERE MOBILE PHONE RECEPTION IS NOT AVAILABLE)

THE CONTRACTOR IS REQUIRED TO PROVIDE A SITE TELEPHONE AND FAX MACHINE WHICH IS TO BE LOCATED IN THE SITE OFFICE. HE SHALL MAKE HIS OWN ARRANGEMENTS WITH TELECOM NAMIBIA FOR THE INSTALLATION OF THE TELEPHONE AND HE SHALL BE RESPONSIBLE FOR THE PAYMENT INSTALLATION, RENTAL CHARGES AND THE COSTS OF ANY CALLS MADE BY HIMSELF, HIS STAFF OR THE ENGINEER'S STAFF. NO SEPARATE PAYMENT WILL BE MADE FOR THE PROVISION OF THIS SERVICE AS THE COSTS THEREFORE WILL BE DEEMED TO BE INCLUDED IN HIS BID RATES.

PS-7.6 RAIN-GAUGE

RAINFALL DURING THE CONSTRUCTION PERIOD SHALL BE MEASURED ON SITE BY THE CONTRACTOR FROM A REPRESENTATIVE POINT. ALL EQUIPMENT NECESSARY IS TO BE SUPPLIED, INSTALLED, MAINTAINED AND REMOVED AT THE COMPLETION OF THE CONTRACT BY THE CONTRACTOR AT HIS OWN EXPENSE AND ACCESS TO SUCH A POINT MUST BE RESTRICTED.

IF THE RAIN GAUGE IS NOT INSTALLED AND REGULARLY MEASURED, NO RAIN DELAYS CLAIMS FROM THE CONTRACTOR WILL BE ENTERTAINED.

PS-7.7 SURVEY EQUIPMENT AND ASSISTANTS

THE CONTRACTOR IS REQUIRED TO HAVE ON SITE AT ALL TIMES A LEVEL WITH TRIPOD, A SINGLE SECOND TACHEOMETER WITH TRIPOD, TWO 4 METRE MEASURING STAFFS GRADUATED IN CENTIMETRES AND A 50M STEEL MEASURING TAPE WHICH EQUIPMENT SHALL BE SHARED WITH THE ENGINEER.

THE CONTRACTOR SHALL ALSO MAKE AVAILABLE TO THE ENGINEER AS AND WHEN REQUIRED 2 EXPERIENCED SURVEY ASSISTANTS.

PS-8 SECURITY

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTROL ACCESS TO THE SITE DURING THE EXECUTION OF THE CONTRACT TO PREVENT ANY UNAUTHORISED PERSONS FROM ENTERING THE SITE. THE DRAWINGS AND OTHER CONSTRUCTION DETAILS ARE CONFIDENTIAL AND SHALL NOT BE DISCLOSED TO ANY THIRD PARTY.

PS-9 SOURCES OF MATERIALS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING SUITABLE BORROW PITS, OBTAINING THE NECESSARY PERMISSION FOR THE USE OF THE BORROW PIT MATERIAL AND SHALL NEATLY FINISH OFF ALL BORROW AREAS AFTER USE IF REQUIRED FOR THE CONSTRUCTION OF THE WORKS.

PS-10 DISPOSAL OF SPOIL OR SURPLUS MATERIAL

THE CONTRACTOR SHALL DISPOSE OF ALL SPOIL AND/OR SURPLUS MATERIAL ON A SITE FOUND BY HIM AND APPROVED BY THE ENGINEER. THE SPOIL AND SURPLUS MATERIAL SHALL BE NEATLY FINISHED OFF TO THE SATISFACTION OF THE ENGINEER.

THE CONTRACTOR SHALL REPAIR AND CLEAN ALL ROADS USED AND SHALL REINSTATE ALL TEMPORARY ROADS TO AND FROM THE DUMP SITE.

ALL COSTS RELATED TO SUCH DISPOSAL SHALL BE DEEMED TO BE INCLUDED IN THE BID RATES AND NO ADDITIONAL CLAIMS IN THIS REGARD WILL BE CONSIDERED. NO OVERHAUL WILL BE PAID.

PS-11 OVERHAUL

ALL BID RATES FOR MATERIAL OR EXCAVATION SHALL ALLOW FOR ALL HAULING TO AND FROM THE SITE. FOR THIS CONTRACT FREE HAUL SHALL THEREFORE CONTINUE INDEFINITELY AND NO OVERHAUL SHALL BE PAID.

PS-12 ALTERNATIVE DESIGNS OR MATERIALS

PS-12.1 GENERAL

GENERALLY, OFFERS FOR MATERIALS, DESIGNS OR METHODS OTHER THAN SHOWN ON THE DRAWINGS, SPECIFIED OR MENTIONED IN THE SCHEDULE OF QUANTITIES WILL BE CONSIDERED. HOWEVER, ALTERNATIVES WILL BE CONSIDERED ONLY IF ALL ITEMS OF THE ORIGINAL SCHEDULE OF QUANTITIES HAVE BEEN PRICED TO THE ORIGINAL SPECIFICATION AND THE OTHER REQUIREMENTS OF THE BID DOCUMENTS BEEN MET.

PS-12.2 PARTICULARS

ANY SUCH ALTERNATIVES WILL ONLY BE CONSIDERED, IF DETAILED PARTICULARS ARE SUBMITTED AT THE TIME OF BIDDING AND PROVIDED THAT, IN THE OPINION OF THE ENGINEER, A DETAILED AND EFFICIENT DESIGN HAS BEEN MADE.

PS-12.3 RESPONSIBILITY

THE RESPONSIBILITY AND THE EXTENT OF THE WORK REQUIRED OF ANY BIDDER OFFERING AN ALTERNATIVE SHALL BE THE SAME AS IMPLIED IN THE SPECIFICATION OF THESE DOCUMENTS.

PS-12.4 SCHEDULE OF QUANTITIES

BIDDERS SHALL PREPARE ADDITIONAL BUT SEPARATE SCHEDULE OF QUANTITIES COVERING ESSENTIALLY THE SAME ITEMS AS IN THE SCHEDULE OF QUANTITIES INCLUDED IN THESE DOCUMENTS OR SUCH ADDITIONAL ITEMS THAT ARE A REQUIREMENT OF THE PARTICULAR ALTERNATIVE BID.

PS-12.5 DETAILS TO BE SUBMITTED

EACH BID FOR AN ALTERNATIVE SHALL BE ACCOMPANIED BY THE FOLLOWING:

- FULLY DETAILED DESIGN DESCRIPTION, CALCULATIONS AND DRAWINGS.
- IF STRUCTURAL DESIGN CALCULATIONS ARE REQUIRED, THOSE CALCULATIONS MUST HAVE BEEN CHECKED BY AN INDEPENDENT RECOGNISED INSTITUTION BEFORE THE SUBMISSION OF THE OFFER.
- SPECIFICATION AND REFERENCES TO ANY STANDARD SPECIFICATIONS
- DETAILED DESCRIPTION OF MANUFACTURING AND CONSTRUCTION PROCESSES
- STANDARD DIMENSIONS THAT CAN BE SUPPLIED AND TOLERANCE'S ON DIMENSIONAL REQUIREMENTS
- FACTORY TESTING AND QUALITY CONTROL METHODS
- METHODS OF HANDLING AND TRANSPORT
- ANY OTHER INFORMATION THAT THE BIDDER MAY REGARD AS RELEVANT AND IMPORTANT.

PS-12.6 As BUILT DRAWINGS

BIDDERS SUBMITTING OFFERS FOR ALTERNATIVES SHALL, ON COMPLETION OF THE WORKS, SUBMIT A COMPLETE SET OF "AS BUILT" DRAWINGS FOR THE PROJECT. THE DRAWINGS MUST BE IN A REPRODUCIBLE FORM AND ON A DURABLE MATERIAL OF AT LEAST A POLYESTER BASE WITH A MINIMUM THICKNESS OF 0.5MM. THE DRAWING SIZE SHALL BE A1 UNLESS OTHERWISE AGREED. THE DRAWINGS MUST BE NUMBERED AND TITLED AS DIRECTED BY THE ENGINEER AND TO THE SAME STANDARD AS THE DRAWINGS ISSUED WITH THE BID AND SHALL BE PREPARED USING AN APPROVED CAD SYSTEM. DXF FILES OF SUCH DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER. THE CERTIFICATE OF COMPLETION OF THE WORKS SHALL NOT BE ISSUED UNTIL THE "AS BUILT" DRAWINGS HAVE BEEN APPROVED BY THE ENGINEER.

PS-13 FEATURES REQUIRING SPECIAL ATTENTION

PS-13.1 EXISTING SERVICES

THE CONTRACTOR WILL BE PROVIDED WITH INFORMATION REGARDING THE APPROXIMATE POSITION OF ALL EXISTING SERVICES AS COULD BE ESTABLISHED TO THE BEST KNOWLEDGE OF THE ENGINEER. BEFORE COMMENCEMENT OF CONSTRUCTION THE CONTRACTOR SHALL ACQUAINT HIMSELF WITH THE POSITION OF ALL EXISTING SERVICES BEFORE ANY EXCAVATION OR OTHER WORK LIKELY TO AFFECT THE EXISTING SERVICES IS COMMENCED. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR DAMAGE TO EXISTING SERVICES AND ANY DAMAGE CAUSED BY OR ARISING OUT OF THE CONTRACTOR'S OPERATIONS SHALL BE MADE GOOD AT HIS OWN EXPENSE.

THE PROVISION BY THE ENGINEER OF ANY DRAWINGS OR OTHER INFORMATION INDICATING THE POSITION OF ANY EXISTING SERVICES SHALL IN NO WAY RELIEVE THE CONTRACTOR OF HIS OBLIGATION HEREUNDER TO ACQUAINT HIMSELF WITH THE POSITION OF ALL THE EXISTING SERVICES NOR OF HIS LIABILITY FOR DAMAGE TO SUCH SERVICES.

PS-14 ROAD CROSSING AND ACCOMMODATION OF TRAFFIC

PS-14.1 Road Crossing

THE ROAD AUTHORITY SHALL BE CONSULTED SHOULD ANY OF THEIR ROAD BE AFFECTED.

PS-14-2 ACCOMMODATION OF TRAFFIC

WHERE THE CONTRACTORS CONSTRUCTION TRAFFIC CROSSES THE MAIN ROAD (ONLY ONE CROSSING SHALL BE PERMITTED) SUITABLE WARNING SIGNS WHICH COMPLY WITH THE ROAD TRAFFIC ORDINANCE SHALL BE ERECTED. STOP SIGNS SHALL BE ERECTED ON THE CONSTRUCTION ROAD AND ALL CONSTRUCTION TRAFFIC SHALL BE COMPELLED TO STOP AT THE CROSSING BEFORE PROCEEDING. THE COSTS FOR THE ACCOMMODATION OF TRAFFIC SHALL BE INCLUDED UNDER ITEM 1.2.8 OF SECTION 1: PRELIMINARY AND GENERAL OF THE SCHEDULE OF QUANTITIES.

PS-15 SITE AGENT

THE SUCCESSFUL BIDDER SHALL NOTIFY THE ENGINEER IN WRITING, WITHIN 14 DAYS AFTER RECEIPT OF THE LETTER OF AWARD, OF THE NAME, QUALIFICATIONS AND EXPERIENCE OF THE SITE AGENT HE PROPOSES TO APPOINT FOR THE PROJECT. THE INTENDED SITE AGENT SHALL BE LISTED ON FORM S.4.

PS-16 PENALTY

SHOULD THE CONTRACTOR FIND THAT IT WILL NOT BE POSSIBLE FOR HIM TO COMPLY WITH THE DELIVERY PERIOD OFFERED, HE SHALL INFORM THE ENGINEER IN WRITING OF THE ANTICIPATED DELAY, THE REASON THEREFORE AND THE NEW ANTICIPATED DELIVERY DATE, WHICH INFORMATION WILL BE USED TO ASSESS THE REASONABLENESS OF ANY CLAIMS FOR EXTENSION OF TIME IF AND WHEN THESE ARE SUBMITTED BY THE CONTRACTOR. IF THE CONTRACTOR FAILS TO SUBMIT THE WRITTEN INFORMATION DESCRIBED ABOVE, OR FAILS TO SUBMIT THIS WITHIN THE TIME PERIOD STIPULATED IN THE GENERAL CONDITIONS OF CONTRACT, OR IF THE REASONS FOR THE DELAY ARE NOT ACCEPTABLE, A PENALTY TO THE VALUE AS STATED IN THE SPECIAL CONDITIONS OF CONTRACT CLAUSE 46.1, PLUS A PRO-RATA PORTION OF THE SALARY OF THE ENGINEER'S RESIDENT SITE STAFF,

INCLUSIVE OF ADMINISTRATIVE OVERHEADS, WILL BE DEDUCTED FROM THE CONTRACT PAYMENTS DUE TO THE CONTRACTOR. APPLIED PENALTIES WILL BE BASED ON THE PROGRAMME AGREED UPON BETWEEN THE ENGINEER AND THE CONTRACTOR AND AS APPROVED BY THE CLIENT.

PS-17 SURPLUS PIPES AND MATERIALS

DUE TO THE UNCERTAIN NATURE OF CERTAIN ASPECTS OF THE WORKS AT THE BIDDING STAGE, THE CONTRACTOR SHALL MAKE ARRANGEMENTS WITH HIS SUPPLIERS TO RETURN SURPLUS MATERIAL AFTER COMPLETION OF THE CONTRACT. THE CONTRACTOR IS THEREFORE REQUIRED TO STORE HIS MATERIAL IN SUCH A MANNER THAT THIS WILL NOT BE DAMAGED WHILST IN STORAGE. NO PAYMENT WILL BE MADE FOR MATERIAL NOT USED IN THE WORKS AND THAT CANNOT BE RETURNED TO THE SUPPLIERS.

PS-18 QUALITY CONTROL

IT WILL BE THE FULL RESPONSIBILITY OF THE CONTRACTOR TO UNDERTAKE APPROPRIATE QUALITY CONTROL AND QUALITY ASSURANCE MEASURES ON SITE.

THE ENGINEER SHALL AUDIT THE CONTRACTOR'S QUALITY ASSURANCE SYSTEM ON A REGULAR BASIS TO ENSURE THAT ADEQUATE INDEPENDENT CHECKS AND TESTS ARE BEING CARRIED OUT AND TO ENSURE THAT THE CONTRACTOR'S OWN CONTROLS ARE SUFFICIENT TO IDENTIFY ANY POSSIBLE QUALITY PROBLEMS WHICH COULD CAUSE A DELAY ON THE PROGRAMME.

PS-19 APPLICABLE STANDARDISED AND PARTICULAR SPECIFICATIONS

PS-19.1 STANDARDISED SPECIFICATIONS

FOR THE PURPOSES OF THIS CONTRACT THE FOLLOWING STANDARDISED SPECIFICATIONS SHALL APPLY. NOTWITHSTANDING THE CONDITIONS OF SUBCLAUSE 2.2 OF SABS 1200A, THE EDITIONS ISSUED ON THE DATES AS LISTED BELOW, SHALL APPLY TO THIS CONTRACT.

NOT BOUND INTO THIS VOLUME:

SABS 1200 A	- 1986	:	GENERAL
SABS 1200 AB- 1986	:	ENGINEER'S OFFICE	
SABS 1200 C	-1980	:	SITE CLEARANCE
SABS 1200 D	- 1988	:	EARTHWORKS
SABS 1200 DB- 1989	:	EARTHWORKS (PIPE TRENCH)	
SABS 1200 G	- 1982	:	CONCRETE (STRUCTURAL)
	SABS 1200 GE- 1984	:	PRECAST CONCRETE (STRUCTURAL)
	SABS 1200 HA- 1990	:	STRUCTURAL STEELWORK (SUNDRY
ITEMS)			

SABS 1200 L - 1983 : MEDIUM PRESSURE PIPELINE
 SABS 1200 LB - 1983: BEDDING (PIPES)
 SABS 1200 LC- 1981 : CABLE DUCTS
 SABS 1200 LD- 1982 : SEWERS

PORTION 2 : AMENDMENTS TO THE REQUIREMENTS OF THE STANDARDISED SPECIFICATIONS

PSA GENERAL

PSA 1 MATERIALS

PSA 1.1 QUALITY AND SAMPLES (CLAUSE 3.1)

ALL MATERIALS THAT ARE REQUIRED TO COMPLY WITH A STANDARD SPECIFICATION OR CODE OF PRACTICE SHALL, WHERE APPLICABLE, BEAR THE OFFICIAL MARK OF THE APPROPRIATE STANDARD.

ALL MATERIALS PROPOSED BY THE CONTRACTOR SHALL BE TESTED. THE TESTS, AS WELL AS THE MATERIALS, SHALL BE APPROVED BY THE ENGINEER PRIOR TO ANY SUCH MATERIALS BEING BUILT INTO THE WORKS AND ALL COSTS INVOLVED SHALL BE DEEMED TO BE INCLUDED IN THE BID RATES.

PSA 2 PLANT

PSA 2.1 CONTRACTOR'S OFFICES AND SERVICES (CLAUSE 4.1)

THE EXTENT OF THE CONTRACTOR'S CAMP SHALL BE RESTRICTED TO THE AREA INDICATED BY THE ENGINEER.

NO HOUSING IS AVAILABLE FOR THE CONTRACTOR'S EMPLOYEES AND THE CONTRACTOR SHALL MAKE HIS OWN ARRANGEMENTS TO HOUSE HIS EMPLOYEES.

PSA 3 CONSTRUCTION

PSA 3.1 PROTECTION OF OVERHEAD AND UNDERGROUND SERVICES (CLAUSE 5.4)

BEFORE COMMENCEMENT OF CONSTRUCTION THE CONTRACTOR SHALL, IN CONJUNCTION WITH THE RELEVANT AUTHORITY, DETERMINE THE EXACT POSITIONS ON SITE OF ALL UNDERGROUND SERVICES.

ALL SUCH SERVICES SHALL BE DEEMED TO BE KNOWN SERVICES.

PSA 4 MEASUREMENT AND PAYMENT

PSA 4.1 PAYMENT

PSA 4.1.1 FIXED-CHARGE AND VALUE-RELATED ITEMS (CLAUSE 8.2.1)

REPLACE SUBCLAUSE 8.2.1 WITH THE FOLLOWING:

“PAYMENT OF THE FIXED CHARGE AND VALUE RELATED ITEMS WILL BE MADE IN THREE INSTALMENTS, AS FOLLOWS:

(1) THE FIRST INSTALMENT, 50% OF ALL ITEMS LISTED UNDER 8.3, IN THE SCHEDULE OF QUANTITIES, WILL BE PAID IN THE FIRST PAYMENT CERTIFICATE AFTER THE CONTRACTOR HAS MET ALL HIS OBLIGATIONS UNDER THESE ITEMS AND HAS MADE A SUBSTANTIAL START WITH CONSTRUCTION IN ACCORDANCE WITH THE APPROVED PROGRAMME.

(2) THE SECOND INSTALMENT, 35 % OF THE ITEMS STATED ABOVE, WILL BE PAID WHEN THE VALUE OF THE WORK DONE REACHES ONE HALF OF THE BID AMOUNT, EXCLUDING CONTINGENCIES.

(3) THE THIRD AND FINAL INSTALMENT, 15 % OF THE ITEMS STATED ABOVE, WILL BE PAID WHEN THE WORKS HAVE BEEN COMPLETED AND THE CONTRACTOR HAS FULFILLED ALL THE REQUIREMENTS OF THE CONTRACT

PSA 4.2 SCHEDULED FIXED-CHARGE AND VALUE-RELATED ITEMS (CLAUSE 8.3)

PSA 4.2.1 FACILITIES FOR CONTRACTOR (CLAUSE 8.3.2)

THE CONTRACTOR SHALL MAKE PROVISION FOR A ROOM TO ACCOMMODATE 12 PERSONS FURNISHED WITH A TABLE AND CHAIRS IN WHICH MONTHLY MEETINGS CAN BE CONDUCTED.

PSA 4.3 SCHEDULED TIME-RELATED ITEMS (CLAUSE 8.4)

PSA 4.3.1 FACILITIES FOR ENGINEER (CLAUSE 8.4.2)

THE BID RATES UNDER THIS ITEM WILL COVER ALL COSTS THE CONTRACTOR SHALL INCUR TO MAKE AVAILABLE TWO SUITABLE EXPERIENCED SURVEY ASSISTANTS WHEN PERIODICALLY REQUESTED BY THE ENGINEER.

PSA 4.4 SUMS STATED PROVISIONALLY BY THE ENGINEER (CLAUSE 8.5)

PSA 4.4.1 PROVISIONAL SUM FOR ADDITIONAL TESTS ORDERED BY THE ENGINEER

THIS PROVISIONAL SUM SHALL COVER THE COST OF ACCEPTANCE CONTROL TESTS SPECIFICALLY ORDERED BY THE ENGINEER AND EXECUTED BY AN APPROVED COMMERCIAL LABORATORY, AND WILL NOT INCLUDE ROUTINE INSPECTION AND TESTING.

PSAB ENGINEER'S OFFICE

PSAB 1 MATERIALS

PSAB 1.1 NAMEBOARDS (CLAUSE 3.1)

THE CONTRACTOR SHALL SUPPLY ONE NAME BOARD AS SPECIFIED AND WILL ERECT IT AT A POSITION TO BE INDICATED BY THE ENGINEER. A SKETCH OF THE TYPICAL NAME BOARD WILL BE PROVIDED BY THE ENGINEER.

PSAB 1.4 ABLUTION UNITS (ADDITIONAL SUB-CLAUSE)

ABLUTION UNITS SHALL BE WELL VENTILATED AND THE FLOORS SHALL BE OF CONCRETE. LATRINES SHALL BE PROVIDED WITH VITREOUS ENAMEL W.C. PANS WITH PVC SEATS, COVERS AND FLUSHING CISTERNS. WASH BASINS SHALL BE IN VITREOUS ENAMEL OF MINIMUM SIZE, COMPLETE WITH TAPS AND DRAINS. THE ABLUTION UNIT SHALL BE PROVIDED WITH A LOCKABLE DOOR AND TWO KEYS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL SANITARY SERVICES NECESSARY TO KEEP LATRINES IN A CLEAN, NEAT AND HYGIENIC CONDITION. THE CONTRACTOR SHALL ALSO PROVIDE AND MAINTAIN THE NECESSARY SEPTIC TANK AND FRENCH DRAIN OR CONNECTION TO THE LOCAL SEWER NETWORK TO THE APPROVAL OF THE ENGINEER.

PSAB 2 PLANT

PSAB 2.1 SURVEY EQUIPMENT (ADDITIONAL SUB-CLAUSE)

THE CONTRACTOR SHALL MAKE AVAILABLE TWO SURVEY ASSISTANTS AS AND WHEN REQUIRED BY THE ENGINEER.

THE CONTRACTOR SHALL PROVIDE THE FOLLOWING SURVEY EQUIPMENT ON THE SITE FROM COMMENCEMENT TO COMPLETION OF THE WORKS:

- TACHEOMETER CAPABLE OF READING TO 20 SECONDS OF ARC.
- ENGINEER'S LEVEL AND LEVEL STAFF
- 2 TACHEOMETER STAFFS GRADUATED METRICALLY
- 1 STEEL TAPE OF LENGTH 100M.

THE TACHEOMETER, LEVEL AND STAFFS MAY BE SHARED BY ARRANGEMENT BETWEEN THE CONTRACTOR AND THE ENGINEER, BUT THE TAPE SHALL BE PROVIDED FOR THE EXCLUSIVE USE OF THE ENGINEER'S STAFF. THE CONTRACTOR SHALL KEEP THE EQUIPMENT CONTINUOUSLY INSURED

AGAINST ANY LOSS, DAMAGE OR BREAKAGE, AND HE SHALL INDEMNIFY THE ENGINEER AND THE EMPLOYER AGAINST ANY CLAIMS IN THIS REGARD. UPON COMPLETION OF THE WHOLE OF THE WORKS THE OWNERSHIP OF THE EQUIPMENT SHALL REVERT TO THE CONTRACTOR.

THE CONTRACTOR SHALL MAINTAIN THE EQUIPMENT IN GOOD ORDER AND KEEP IT CLEAN THROUGHOUT THE CONTRACT PERIOD.

PSC SITE CLEARANCE

PSC 1 MATERIALS

PSC 1.1 DISPOSAL OF MATERIAL (CLAUSE 3.1)

SURPLUS MATERIAL OBTAINED FROM CLEARING AND GRUBBING SHALL BE DISPOSED OF ON A SITE TO BE FOUND BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. THE SITE SHALL BE LEFT IN A CONDITION THAT MEETS WITH THE APPROVAL OF THE ENGINEER AND NO MATERIAL SHALL BE DISPOSED OF ON THE SITE OF THE WORKS.

PSC 2 CONSTRUCTION

PSC 2.1 AREAS TO BE CLEARED AND GRUBBED (CLAUSE 5.1)

ONLY THE MINIMUM AREA REQUIRED SHALL BE CLEARED AND GRUBBED AND THE CONTRACTOR SHALL TAKE CARE NOT TO UNNECESSARILY DAMAGE NATURAL VEGETATION.

PSC 2.2 CLEARING OF TREES

FRUIT BEARING TREES ARE WIDE SPREAD IN THE PROJECT AREA. THE CONTRACTOR SHALL THEREFORE TAKE CARE TO REMOVE ONLY THOSE TREES THAT LIE DIRECTLY IN THE PATH OF OPERATIONS. UNDER NO CIRCUMSTANCES SHALL ANY OTHER TREES BE REMOVED WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.

PSC 2.3 REMOVAL OF EXISTING FENCES

ANY EXISTING FENCES OBSTRUCTING THE NEW WORK SHALL BE REMOVED AND RE-ERECTED AS INSTRUCTED BY THE ENGINEER.

PSC 2.4 CONSERVATION OF TOPSOIL (CLAUSE 5.6)

STOCKPILING OF TOPSOIL SHALL NOT BE REQUIRED UNDER THIS CONTRACT.

PSC 3 MEASUREMENT AND PAYMENT

PSC 3.1 BASIC PRINCIPLES (CLAUSE 8.1)

THE FREE HAUL DISTANCE SHALL BE UNLIMITED.

PSC 3.2 SCHEDULED ITEMS

PSC 3.2.1 CLEAR AND GRUB (CLAUSE 8.2.1)

CLEAR AND GRUB AND REMOVE SPOIL TO DESIGNATED SPOIL SITES UNIT : HA

THE AREA DESIGNATED BY THE ENGINEER AND CLEARED AND GRUBBED WILL BE MEASURED TO THE NEAREST 0,1HA. THE RATE SHALL COVER THE COST OF LOADING, TRANSPORTING AND DUMPING SPOIL MATERIAL AT DESIGNATED SPOIL DUMPS.

CLEAR TREES OF GIRTH UP TO 2M AND REMOVE TO DESIGNATED SPOIL SITES UNIT : No

THE RATE SHALL COVER THE COST OF CUTTING THE TRUNK OF THE TREE INTO LENGTHS NOT EXCEEDING 1,5M, LOADING, TRANSPORTING AND OFFLOADING AT DESIGNATED STOCKPILE SITE, CUTTING OF BRANCHES INTO MANAGEABLE LENGTHS, REMOVAL OF ROOTS, LOADING, TRANSPORTING AND DUMPING IN DESIGNATED SPOIL DUMPS.

REMOVE AND RE-ERECT FENCES UNIT : M

THE RATE SHALL COVER THE COST OF TAKING DOWN THE FENCES OBSTRUCTING NEW WORK, COILING WIRE, STACKING FENCE POSTS AND OTHER FENCING MATERIAL AT A SECURE LOCATION AND THE COST OF LOADING, TRANSPORTING AND OFFLOADING SUCH MATERIAL AT THE PLACE OF STORAGE, AND THE RELOADING, TRANSPORTING AND OFFLOADING AND REINSTATING THE FENCE IN AT LEAST ITS ORIGINAL CONDITION AFTER THE NEW WORK AT THE SITE OF THE FENCE HAS BEEN COMPLETED.

PSD EARTHWORKS

PSD 1 MATERIALS

PSD 1.1 CLASSES OF EXCAVATION (CLAUSE 3.1.2)

ONLY "SOFT" OR "INTERMEDIATE" EXCAVATION SHALL BE APPLICABLE TO THIS CONTRACT.

PSD 2 METHODS AND PROCEDURES (CLAUSE 5.2)

PSD 2.1 EXCAVATED MATERIAL

ALL OVERBURDEN MATERIAL OR MATERIAL NOT APPROVED FOR USE IN THE CONSTRUCTION OF EMBANKMENTS AND ROAD PRISMS SHALL BE DISPOSED OF IN APPROVED SPOIL DUMPS. MATERIAL DESIGNATED FOR USE IN THE CONSTRUCTION OF EMBANKMENTS SHALL BE STOCKPILED ADJACENT TO THE SITE OF THE EMBANKMENTS. BEFORE ANY MATERIAL ORIGINATING FROM THE POND EXCAVATIONS IS USED FOR EMBANKMENT CONSTRUCTION APPROVAL MUST BE OBTAINED FROM THE ENGINEER.

PSD 2.2 EXCAVATION FOR ROADWORKS

THE TOP SOIL UNDER THE ROAD PRISM OF THE ACCESS ROAD SHALL BE EXCAVATED TO A DEPTH OF 200MM, OR SUCH OTHER DEPTH ORDERED BY THE ENGINEER AND REMOVED TO APPROVED SPOIL DUMPS.

PSD 2.3 DISPOSAL (CLAUSE 5.2.2.3)

ALL EXCESS MATERIAL NOT DESIGNATED FOR RE-USE SHALL BE DISPOSED OF AT APPROVED SPOIL SITES.

PSD 2.4 TRANSPORT FOR EARTHWORKS (CLAUSE 5.2.5)

PSD 2.4.1 FREE HAUL (CLAUSE 5.2.5.1)

THE FREE HAUL DISTANCE FOR ALL EARTHWORKS ON THIS CONTRACT SHALL BE UNLIMITED.

PSD 3 TOLERANCES

PSD 3.1 POSITION, DIMENSIONS, LEVELS, ETC (CLAUSE 6.1)

DEGREE OF ACCURACY II SHALL APPLY FOR ALL EARTHWORKS EXCEPT AS SPECIFIED OTHERWISE.

PSD 3.2 MOISTURE CONTENT AND DENSITY (CLAUSE 6.2)

DEGREE OF ACCURACY II SHALL APPLY.

PSD 4 TESTING (CLAUSE 7)

PSD 4.1 TAKING AND TESTING OF SAMPLES (CLAUSE 7.2)

THE CONTRACTOR SHALL CARRY OUT SUFFICIENT TESTS TO SATISFY HIMSELF ABOUT THE CONSISTENCY OF MATERIALS TO BE USED FOR BULK EARTH AND ROADWORKS.

PSD 5 MEASUREMENT AND PAYMENT

PSD 5.1 RESTRICTED EXCAVATION (CLAUSE 8.3.3)

BORROW TO FILL

UNIT : M³

THE RATE FOR IMPORTING MATERIAL FOR THE USE IN PERMANENT WORKS FROM DESIGNATED BORROW PITS SHALL COVER THE COST OF ROYALTIES, EXCAVATION, SELECTION OF SUITABLE MATERIAL, LOADING, TRANSPORTING, OFFLOADING AT POINT OF PLACING AND REMOVAL OF EXCESS.

EXCAVATE FOR RESTRICTED EXCAVATIONS

UNIT : M³

THE RATE FOR RESTRICTED EXCAVATIONS FOR FOUNDATIONS SHALL INCLUDE CLEANING AND LEVELLING OF THE FINAL EXCAVATED LEVEL BEFORE CONCRETING.

PSDB EARTHWORKS (PIPE TRENCHES)

PSDB 1 MATERIALS

PSDB 1.1 CLASSES OF EXCAVATION (CLAUSE 3.1)

THE PROVISION OF CLAUSE PSD 1.1 SHALL ALSO APPLY TO THIS CLAUSE.

PSDB 1.2 BACKFILL MATERIALS (CLAUSE 3.5)

MATERIAL EXCAVATED FROM TRENCHES MAY BE USED AS MAIN FILL. HOWEVER, WHERE HARD EXCAVATION IS ENCOUNTERED, SUCH MATERIAL SHALL BE KEPT SEPARATE FROM OTHER EXCAVATED MATERIAL AND MAY NOT BE USED IN THE FIRST 300 MM OF MAIN FILL ABOVE THE SELECTED FILL BLANKET. THE FIRST 300 MM OF FILL ABOVE THE SELECTED FILL BLANKET SHALL MEET THE REQUIREMENTS OF CLAUSE 3.5(A) OF SABS 1200DB.

PSDB 2 CONSTRUCTION

PSDB 2.1 GENERAL (CLAUSE 5.1.1)

THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAFEGUARDING ALL OPEN TRENCHES AND SHALL INDEMNIFY THE ENGINEER AND THE CLIENT AGAINST ANY LOSS OR DAMAGE SUFFERED BY ANY PERSONS RESULTING FROM THE PRESENCE OF OPEN TRENCHES AND OTHER EXCAVATIONS.

PSDB 2.2 FREE WATER (CLAUSE 5.1.2)

TRENCHES MAY BE INUNDATED DURING THE RAINY SEASON. NO PROVISION HAS BEEN MADE FOR SEPARATE PAYMENT FOR DEALING WITH WATER IN TRENCH EXCAVATIONS AND THIS COST SHALL BE INCLUDED IN THE UNIT RATE FOR EXCAVATION.

PSDB 2.3 EXCAVATION (CLAUSE 5.4)

THE TRENCH EXCAVATIONS SHALL BE CARRIED OUT TO THE GRADES AND LEVELS INDICATED ON THE DRAWINGS.

TRENCH EXCAVATION SHALL PROCEED PROGRESSIVELY AND SHALL NOT BE CARRIED OUT FURTHER AHEAD OF PIPE LAYING THAN IS REQUIRED FOR EFFICIENT WORKING.

PSDB 2.4 TRENCH BOTTOM (CLAUSE 5.5)

TRENCHES SHALL BE EXCAVATED AND TRIMMED TO A DEPTH OF NOT LESS THAN 100 MM BELOW THE BEDDING LEVEL OF PIPES AS INDICATED ON THE PIPELINE LONGITUDINAL SECTIONS. THESE DEPTHS SHALL BE MAINTAINED FOR THE FULL WIDTH AND LENGTH OF THE TRENCH AND ALL STONES, ROCKS OR OTHER PROJECTIONS TRIMMED ACCORDINGLY.

PSDB 2.5 BACKFILLING (CLAUSES 5.6.1 AND 5.6.2)

THE FIRST 300 MM OF MAIN FILL ABOVE THE SELECTED FILL BLANKET SHALL MEET THE REQUIREMENTS OF CLAUSE 3.5(A) OF SABS 1200DB. ABOVE THIS LEVEL THE MAIN FILL MAY COMPRISE HARD MATERIAL EXCAVATED FROM THE TRENCH. HOWEVER, THE FINAL MAIN FILL LAYER MAY NOT INCLUDE BOULDERS GREATER THAN 250MM.

THE MINIMUM TOTAL COVER OVER THE TOP OF THE PIPES SHALL BE 600MM BEFORE ANY TRAFFIC AND/OR CONSTRUCTION EQUIPMENT SHALL BE ALLOWED TO PASS OVER THEM.

PSDB 2.6 DISPOSAL OF EXCAVATED MATERIAL (CLAUSE 5.6.3 AND 5.6.4)

SURPLUS MATERIAL FROM THE TRENCH EXCAVATION SHALL BE NEATLY MOUNDED OVER THE CENTRE LINE OF THE PIPELINE. THE MOUND SHALL NOT EXCEED 300MM IN HEIGHT. ADDITIONAL SURPLUS MATERIAL MAY BE SPREAD AND FINISHED OFF. ALL HARD MATERIAL THAT CANNOT BE NEATLY SPREAD AND FINISHED OFF SHALL BE DISPOSED OF AT DESIGNATED SITES.

PSDB 2.7 DEFICIENCY OF BACKFILL MATERIAL (CLAUSE 5.6.5)

THE FREEHAUL DISTANCE SHALL BE UNLIMITED.

PSDB 2.8 COMPLETION OF BACKFILLING (CLAUSE 5.6.6)

PRECAUTIONS SHALL BE TAKEN TO ENSURE THAT THE NATURAL DRAINAGE OF THE GROUND IS NOT INTERFERED WITH. CARE SHALL BE TAKEN TO PREVENT EROSION OF BACKFILL BY CONSTRUCTION OF THE NECESSARY BANKS AND DRAINS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR SETTLEMENT OF BACKFILL AND EROSION OF THE SITE UP TO THE TIME THE CONTRACT MAINTENANCE PERIOD HAS EXPIRED AND HE SHALL FILL AND LEVEL ANY SETTLEMENT AND/OR EROSION FROM TIME TO TIME, AS REQUIRED BY THE ENGINEER AND AT THE CONTRACTOR'S EXPENSE.

THE FINISHING-OFF OF THE PIPELINE SURFACE SHALL BE INCLUDED IN THE PRICE FOR EXCAVATION AND BACKFILL.

PSDB 3 TESTING (CLAUSE 7)

THE COST OF ALL TESTS SHALL BE BORNE BY THE CONTRACTOR.

PSDB 4 MEASUREMENT AND PAYMENT

PSDB 4.1 BASIC PRINCIPLES (CLAUSE 8.1)

THE FREEHAUL DISTANCE SHALL BE UNLIMITED.

PSDB 4.2 SCHEDULED ITEMS (CLAUSE 8.3)

PSDB 4.2.1 EXCAVATE IN SOFT MATERIAL FOR PIPE TRENCHES, BACKFILL, COMPACT AND DISPOSE OF SURPLUS/UNSUITABLE MATERIAL TO SPOIL UNIT : M

THE RATES SHALL COVER THE COST OF COMPLYING WITH THE REQUIREMENTS OF CLAUSE 5.1, EXCAVATION, BACKFILLING, COMPACTING AND DISPOSING OF SURPLUS AND/OR UNSUITABLE MATERIAL TO DESIGNATED SPOIL DUMPS. THE LENGTH MEASURED FOR PAYMENT OF PIPE TRENCHES WILL INCLUDE FOR MANHOLES AND NO SEPARATE PAYMENT WILL BE MADE FOR EXCAVATION FOR MANHOLES.

PSG CONCRETE (STRUCTURAL)

PSG 1 MATERIAL

PSG 1.1 CEMENT (CLAUSE 3.2)

PSG 1.1.1 ORDINARY PORTLAND CEMENT COMPLIANT WITH THE REQUIREMENTS OF SABS 471 SHALL BE USED FOR ALL STRUCTURES IN THIS CONTRACT. NO OTHER TYPES OF CEMENT (EG. RAPID HARDENING CEMENT, PORTLAND BLASTFURNACE CEMENT OR SLAGMENT) MAY BE USED.

PSG 1.2 AGGREGATES (CLAUSE 3.4)

AGGREGATES TO BE USED IN THIS CONTRACT SHALL BE TESTED IN ACCORDANCE WITH SUBSECTION C-15 OF SABS 1083 TO DETERMINE WHETHER THEY ARE POTENTIALLY ALKALI-REACTIVE. IF THEY ARE ALKALI-REACTIVE THEY SHALL EITHER BE REPLACED WITH AGGREGATES THAT ARE NON-REACTIVE OR THE REQUIREMENTS OF PSG 1.1.1 IN RESPECT OF ALKALI-REACTIVENESS SHALL APPLY.

AT TENDER STAGE THE CONTRACTOR SHALL ASSURE HIMSELF BY MEANS OF TESTS AND TEST MIXES BY AN ACCREDITED LABORATORY THAT THE FINE AND COARSE AGGREGATES THAT HE INTENDS TO USE COMPLY WITH THE SPECIFICATION. THE TENDERED RATES SHALL THEREFORE BE DEEMED TO ALLOW FOR THE IMPORTATION OF AGGREGATES THAT DO COMPLY WITH THE SPECIFICATION.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING THE SOURCES OF ALL AGGREGATES.

PSG 1.3 ADMIXTURES (CLAUSE 3.5)

PSG 1.3.1 APPROVAL OF ADMIXTURES (CLAUSE 3.5.1)

THE CONTRACTOR SHALL, BY WAY OF THE INFORMATION REQUIRED IN SUBCLAUSE 3.5.1, PROVE TO THE SATISFACTION OF THE ENGINEER THAT PROPOSED ADMIXTURES AND CURING COMPOUNDS ARE BENEFICIAL AND NOT DETRIMENTAL TO THE DURABILITY OF THE CONCRETE.

PSG 1.3.2 AIR-ENTRAINING AGENTS (SUBCLAUSE 3.5.2)

AIR-ENTRAINING AGENTS SHALL NOT BE USED.

PSG 2 PLANT

PSG 2.1 FORMWORK (CLAUSE 4.5)

PSG 2.1.1 TIES (CLAUSE 4.5.3)

FORMWORK TIES IN WATER-RETAINING STRUCTURES SHALL BE OF THE 12 MM EXTENDED COIL TIE WITH WATER-BAR-TYPE OF FORM-SCAFF. NO FERRULES OR FERRULE PIPES MAY BE USED IN STRUCTURAL ELEMENTS OF WATER-RETAINING STRUCTURES. THE CONTRACTOR SHALL ALLOW IN HIS RATES FOR THE SPECIFIED FORMWORK TIES AND ENSURE THAT HIS FORMWORK IS COMPATIBLE WITH THESE TIES.

AFTER REMOVAL OF PLASTIC CONES FROM CONCRETE, THE OPENINGS IN THE CONCRETE SHALL BE MADE ROUGH WITH A MECHANICAL WIRE BRUSH. THEREAFTER THE OPENINGS SHALL BE PAINTED WITH CEMENT MORTAR AND FILLED WITH A SHRINKAGE-FREE GROUT SUCH AS "M BED STANDARD" FROM STERNSON OR A SIMILAR APPROVED NON-TOXIC PRODUCT COMPATIBLE WITH THE CHEMICALS

USED IN THE WATER. THE GROUT FILLING SHALL BE APPLIED IN SUCH A WAY AS TO PROTECT THE TIES AGAINST CORROSION.

THE COST OF COMPLYING WITH THE ABOVE SHALL BE INCLUDED IN THE RATE FOR FORMWORK.

PSG 3 CONSTRUCTION (CLAUSE 5)

PSG 3.1 REINFORCEMENT (CLAUSE 5.1)

PSG 3.1.1 COVER (CLAUSE 8.1.3)

THE MINIMUM CONCRETE COVER FOR WATER-RETAINING STRUCTURES ARE 40 MM AND NON-WATER-RETAINING STRUCTURES 30 MM.

THE COVER BLOCKS SHALL BE MADE OF 35 MPA/13 MM CONCRETE USING OPC. THE SIZE OF THE COVER BLOCKS SHALL BE 60 MM X 60 MM, WITH A THICKNESS EQUAL TO THE SPECIFIED COVER. WIRES SHALL BE CAST INTO THE BLOCKS TO ENABLE THEM TO BE FIXED TO THE REINFORCEMENT. THE CONCRETE SHALL BE THOROUGHLY COMPACTED AND THE BLOCKS SHALL BE PROTECTED AGAINST EARLY DRYING AND SHRINKAGE DUE TO SUN AND WIND, BY FREQUENT WETTING WHILE STILL IN THE MOULD. AFTER THE BLOCKS HAVE BEEN REMOVED FROM THE MOULD THEY SHALL BE KEPT IN WATER UNTIL USED.

PSG 3.1.2 SPLICING (CLAUSE 5.1.4)

SPLICE LENGTHS FOR REINFORCING IN WATER-RETAINING STRUCTURES SHALL NOT BE LESS THAN 60 DIAMETERS AND IN OTHER NON-WATER-RETAINING STRUCTURES NOT LESS THAN 40 DIAMETERS. WHERE APPLICABLE, SPLICES SHALL BE STAGGERED SO THAT THEY ARE EVENLY SPREAD THROUGHOUT THE STRUCTURE.

PSG 3.2 FORMWORK (CLAUSE 5.2)

PSG 3.2.1 CLASSIFICATION OF FINISHES (CLAUSE 5.2.1)

A SMOOTH FINISH IS APPLICABLE TO ALL VISIBLE CONCRETE.

A) VISIBLE CORNERS

ALL VISIBLE CORNERS SHALL HAVE A 25 MM X 25 MM CHAMFER.

PSG 3.3 CONCRETE (CLAUSE 5.5)

PSG 3.3.1 WORKABILITY (SUBCLAUSE 5.5.1.3)

BEFORE CONSTRUCTION WORK COMMENCES THE CONTRACTOR SHALL INDICATE HIS PROPOSAL FOR POSITIONING CONSTRUCTION JOINTS ON THE DRAWINGS AND SUBMIT THESE TO THE ENGINEER FOR HIS COMMENT AND APPROVAL.

PSG 3.3.5.2 ADD THE FOLLOWING TO CLAUSE 5.5.7.3:

A) CONSTRUCTION JOINTS GENERALLY:

THE SURFACE OF THE CONCRETE SHALL BE BRUSHED WITH A STEEL WIRE BRUSH OR CHIPPED WITH A LIGHT HAMMER OR BUSH HAMMER WITHIN 24 HOURS OF CASTING TO REMOVE ALL LAITANCE AND FINE PARTICLES TO A DEPTH OF AT LEAST 10 MM AND TO EXPOSE THE COARSE AGGREGATE EMBEDDED IN SOUND CONCRETE. WHICHEVER METHOD IS USED TO EXPOSE THE COARSE AGGREGATE THE CONTRACTOR SHALL ENSURE THAT THE GREEN CONCRETE IS NOT DAMAGED OR DISTURBED DURING THE PREPARATION OF THE JOINT AND THAT WATERSTOPS ARE NOT DAMAGED.

AFTER THE REINFORCEMENT FOR THE NEXT POUR HAS BEEN FIXED AND THE FORMWORK ERECTED, THE CONSTRUCTION JOINT SHALL BE CLEANED THOROUGHLY WITH A PRESSURISED WATER JET. THE JOINT SHALL THEN BE WETTED CONTINUOUSLY WITH WATER FOR 24 HOURS TO COMPLETELY SATURATE THE CONCRETE IMMEDIATELY BEFORE NEW CONCRETE IS CAST. BEFORE THE NEW CONCRETE IS CAST ALL EXCESS WATER SHALL BE REMOVED FROM THE CONSTRUCTION JOINT AND THE NEW CONCRETE SHALL BE CAST DIRECTLY ONTO THE PREPARED SURFACE.

PSG 3.3.6 CURING AND PROTECTION (CLAUSE 5.5.8)

REPLACE CLAUSE (A) TO (E) AND REPLACE WITH THE FOLLOWING:

A) VERTICAL SURFACES (WALLS)

FORMWORK FOR VERTICAL SURFACES, SUCH AS WALLS AND COLUMNS, SHALL BE PROTECTED FROM THE DIRECT SUN AND IMMEDIATELY AFTER STRIPPING OF FORMWORK, THOROUGHLY SPRAYED WITH WATER. IMMEDIATELY AFTER THIS THE CONCRETE SHALL BE COVERED WITH APPROVED PLASTIC SHEETS. THESE SHALL BE REMOVED ON A REGULAR BASIS TO ALLOW THE APPLICATION OF MORE WATER TO THE CONCRETE TO ENSURE THAT IT IS KEPT MOIST CONTINUOUSLY. PLASTIC SHEETS SHALL BE REINSTALLED AFTER EACH WETTING OF THE CONCRETE. CURING BY MEANS OF THIS METHOD SHALL CONTINUE UNINTERRUPTED FOR AT LEAST 10 DAYS.

ALTERNATIVELY, AND IF APPROVED BY THE ENGINEER, MEMBRANE CURING OR SEALING BY MEANS OF LIQUID AND DYED OR PIGMENTED CURING COMPOUNDS MAY BE USED IN THE CASE OF STRUCTURES.

SUCH COMPOUNDS SHALL BE APPLIED AS SOON AS THE CONCRETE HAS TAKEN ITS INITIAL SET. COVERAGE SHALL NOT EXCEED 5M² PER LITRE OF COMPOUND. THIS METHOD OF CURING WILL NOT BE ALLOWED IN THE CASE OF THE CANAL LINING.

PLASTIC SHEETS USED FOR CURING SHALL BE WATERPROOF AND MAY NOT BE TORN OR OTHERWISE DISCONTINUOUS. SHEETS SHALL BE WHITE OR LIGHTLY COLOURED. BLACK OR OTHER DARK COLOURED PLASTIC SHEETS SHALL UNDER NO CIRCUMSTANCES BE ALLOWED. SHEETS SHALL BE HELD DOWN OR FIXED SECURELY TO THE ELEMENTS BEING CURED AND JOINTS IN SHEETS SHALL BE TAPED TO PREVENT LOSS OF MOISTURE FROM THE CONCRETE. CARE SHALL BE EXERCISED TO PREVENT STAINING OF EXPOSED CONCRETE.

NOTWITHSTANDING THE PRECEDING SPECIFICATIONS, THE CONTRACTOR SHALL ALSO ENSURE THAT THE CONCRETE SHALL NOT BE EXPOSED TO THERMAL SHOCKS DURING THE FIRST 28 DAYS AFTER CASTING AND HE SHALL TAKE THE NECESSARY, ADDITIONAL PRECAUTIONS TO SHIELD THE CONCRETE WITH PLASTIC SHEETS OR HESSIAN DURING EXTREME WARM, COLD OR WINDY WEATHER. HESSIAN SHALL BE WETTED SHOULD THE CONDITIONS NECESSITATE THIS. CURING METHODS SHALL BE SUCH THAT SATURATION AND SUBSEQUENT DAMAGE TO SOIL FOUNDATIONS IS PREVENTED. THE CONTRACTOR SHALL MAKE ALLOWANCE IN HIS RATES FOR THE ABOVE MENTIONED CURING METHODS.

PSG 3.3.7 CONCRETE SURFACES (CLAUSE 5.5.10)

PSG 3.3.7.1 ADD THE FOLLOWING TO SUBCLAUSE 5.5.10.2:

(1) WOOD-FLOATED FINISH

WHEN A WOOD-FLOATED FINISH IS SPECIFIED, THE SURFACE SHALL FIRST BE TREATED AS SPECIFIED IN SUBCLAUSE 5.5.10.1, AND AFTER THE CONCRETE HAS HARDENED SUFFICIENTLY, IT SHALL BE FLOATED TO A UNIFORM SURFACE FREE FROM TROWEL MARKS. THE LEVELLED SURFACE SHALL BE WOOD FLOATED EITHER BY HAND OR BY MACHINE ONLY, TO REMOVE TROWEL MARKS.

(2) STEEL-FLOATED FINISH

WHEN A STEEL-FLOATED FINISH IS SPECIFIED, THE SURFACE SHALL BE TREATED AS SPECIFIED FOR A WOOD-FLOATED FINISH ABOVE, EXCEPT THAT WHEN THE BLEED WATER HAS DISAPPEARED AND THE CONCRETE HAS HARDENED SUFFICIENTLY TO PREVENT THE MIGRATION OF CONCRETE FOAM TO THE SURFACE, THE LEVELLED SURFACE SHALL BE FLOATED WITH A STEEL TROWEL ON WHICH A FIRM UNIFORM PRESSURE SHALL BE APPLIED TO PROVIDE A DENSE, SMOOTH, UNIFORM SURFACE FREE FROM TROWEL MARKS.

(3) POWER-FLOATED FINISH

WHEN A POWER-FLOATED FINISH IS SPECIFIED, THE SURFACE SHALL BE TREATED AS SPECIFIED FOR A WOOD-FLOATED FINISH ABOVE, EXCEPT THAT THE LEVELLED CONCRETE SURFACE SHALL BE POWER FLOATED TO PROVIDE A DENSE, SMOOTH, UNIFORM SURFACE OF HIGH QUALITY FREE FROM TROWEL MARKS.

PSG 3.3.8 DEFECTS (CLAUSE 5.5.14)

ADD THE FOLLOWING SUBCLAUSE 5.5.14.1:

THE METHOD OF REPAIR OF DEFECTS IN THE CONCRETE SHALL BE BY APPROVED EPOXY PRIMER, EPOXY AND FILLER APPLIED STRICTLY ACCORDING TO THE MANUFACTURER'S SPECIFICATION OR SUCH OTHER METHODS ACCEPTABLE TO THE ENGINEER. CEMENTITIOUS MORTAR MAY NOT BE USED FOR SUCH REMEDIAL WORKS. ALL REPAIR MATERIALS SHALL BE OF AN EQUIVALENT THERMAL AND STRUCTURAL ELASTICITY TO CONCRETE.

PSG 3.4 GROUTING (CLAUSE 5.5.13)

PSG 3.4.1 MATERIALS

PSG 3.4.1.1 WATER

WATER FOR GROUT SHALL COMPLY WITH THE REQUIREMENTS GIVEN IN SUBCLAUSE 3.3 OF SABS 1200 G.

PSG 3.4.1.2 CEMENT

CEMENT SHALL BE ORDINARY PORTLAND CEMENT COMPLYING WITH THE REQUIREMENTS OF SABS 471.

PSG 3.4.1.3 ADMIXTURES

ADMIXTURES SHALL COMPLY WITH THE REQUIREMENTS OF SUBCLAUSE 3.5 OF SABS 1200 G AND SHALL HAVE A PROVEN RECORD OF SATISFACTORY PERFORMANCE UNDER CONDITIONS ENCOUNTERED IN THE REPUBLIC OF NAMIBIA AND SHALL BE APPROVED BY THE ENGINEER PRIOR TO ITS USE.

PSG 3.4.1.4 PROPRIETARY GROUTING MATERIALS

UNLESS OTHERWISE APPROVED BY THE ENGINEER, PROPRIETARY GROUTING MATERIALS SHALL BE OBTAINED READY MIXED IN SEALED POCKETS AS SUPPLIED BY THE MANUFACTURERS.

PSG 3.4.2 PREPARATION AND PROCEDURES

PSG 3.4.2.1 BEFORE A MACHINE OR STRUCTURAL BEDPLATE IS PLACED ON THE CONCRETE THE FOLLOWING STEPS SHALL BE TAKEN:

A) ALL DEFECTIVE CONCRETE, LAITANCE, DIRT, OIL, GREASE, AND LOOSE MATERIAL SHALL BE REMOVED FROM THE CONCRETE FOUNDATION BY BUSH-HAMMERING, CHIPPING, OR OTHER MEANS UNTIL SOUND CLEAN CONCRETE IS OBTAINED. THE SURFACE OF THE FOUNDATION SHALL BE SCABBLED, BUT SHALL NOT BE SO ROUGH AS TO INTERFERE WITH PROPER PLACING OF THE

GROUT. ALL FOUNDATION BOLT SLEEVES SHALL BE CUT OUT, OR CUT OFF FLUSH IF THE SLEEVES CANNOT BE REMOVED. THE TOP OF THE FOUNDATION SHALL BE RE-SHAPED IF NECESSARY.

B) THE UNDERSIDE OF EACH STEEL BASE, PARTICULARLY IN THE BEARING AREAS, SHALL BE CLEANED AND ANY BURRS AND RAGGED EDGES REMOVED BEFORE THE BASE IS PLACED IN ITS FINAL LOCATION.

C) ALL HOLDING-DOWN BOLT SLEEVES SHALL BE THOROUGHLY CLEANED OF ANY MATERIALS THAT MAY PREVENT THE GROUT FROM FLOWING FREELY TO THE BOTTOM OF THE BOLT SOCKETS.

PSG 3.4.2.2 THE BASE SHALL BE PROPERLY ALIGNED AND LEVELLED AND SHALL BE MAINTAINED IN THAT POSITION DURING GROUTING.

PSG 3.4.2.3 AFTER THE MACHINE OR STRUCTURAL BEDPLATE HAS BEEN PLACED THE FOLLOWING PRECAUTIONS SHALL BE OBSERVED:

A) SHIMMING SHALL BE KEPT TO A MINIMUM. STEEL PLATES SHALL BE USED FOR PACKING AND SHALL BE GROUND TO THE REQUIRED THICKNESS, WHERE NECESSARY.

B) BEFORE GROUTING IS STARTED ALL LOOSE DIRT, OIL, GREASE, AND OTHER FOREIGN MATTER ON THE SURFACE OF THE FOUNDATION, THE UNDERSIDES OF BEDPLATES, AND IN THE BOLT HOLES SHALL BE REMOVED BY MEANS OF COMPRESSED AIR OR OTHER APPROVED MEANS. THE SURFACE OF THE FOUNDATION SLAB SHALL BE THOROUGHLY SATURATED WITH CLEAN WATER, AND ALL FREE WATER SHALL BE REMOVED FROM THE SURFACE AND THE BOLT HOLES JUST BEFORE THE GROUT IS PLACED.

C) GROUTING SHALL NOT BE CARRIED OUT UNTIL THE ALIGNMENT OF ALL UNITS TO BE GROUTED HAS BEEN CHECKED AND APPROVED BY THE ENGINEER.

D) SPECIAL CARE SHALL BE TAKEN WITH GROUTING IN HOT OR COLD WEATHER TO ENSURE PROPER SETTING AND GAIN OF STRENGTH AND, IN THE CASE OF PROPRIETARY GROUTING MATERIALS, BY HAVING ICE OR HOT WATER AVAILABLE, AS THE CASE MAY BE, IN ACCORDANCE WITH THE INSTRUCTIONS OF THE MANUFACTURER. ENCLOSURES SHALL BE PROVIDED FOR THE GROUT SUCH THAT, UNTIL IT HAS SET, ITS TEMPERATURE WILL BE IN THE RANGE 15-27°C. SHIELDS TO PROTECT THE GROUT FROM THE SUN AND FROM HOT WINDS SHALL BE PROVIDED BY THE CONTRACTOR WHEN SO ORDERED.

PSG 3.4.3 FORMWORK

FORMWORK FOR GROUTING SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF SUBCLAUSE 5.2 OF SABS 1200G. FORMS SHALL BE CAULKED WHERE NECESSARY. ADEQUATE CLEARANCE

BETWEEN FORMS AND BEDPLATES SHALL BE PROVIDED TO ENABLE THE GROUT TO BE WORKED INTO PLACE.

PSG 3.4.4 MIXING (ALL FREE-FLOWING GROUTS EXCEPT EPOXY GROUTS)

THE GROUT SHALL BE MIXED TO A HOMOGENEOUS UNIFORM MIXTURE AND DELIVERED READY FOR PLACING AT A TEMPERATURE BETWEEN 15 °C AND 25 °C.

THE MATERIALS AND WATER SHALL BE MIXED IN A MORTAR MIXER FOR AT LEAST 3 MINUTES OR, IN THE CASE OF SMALL JOBS ONLY, SHALL BE THOROUGHLY MIXED BY HAND, THE ENTIRE MASS BEING TURNED OVER ENOUGH TIMES TO ENSURE EVEN DISTRIBUTION OF THESE COMPONENTS.

THE MIXING SHALL BE DONE AS CLOSE AS POSSIBLE TO THE PLACE(S) WHERE THE GROUT IS PLACED. NO MORE GROUT SHALL BE MIXED AT ANY ONE TIME THAN CAN BE PLACED IN A PERIOD OF 20 MINUTES. AFTER THE GROUT HAS BEEN MIXED IT SHALL NOT BE RE-TEMPERED BY THE ADDITION OF WATER.

PSG 3.4.5 GROUTING

PSG 3.4.5.1 FREE-FLOWING GROUTS EXCEPT EPOXY GROUTS

THE GROUT SHALL BE PLACED QUICKLY AND CONTINUOUSLY TO AVOID THE UNDESIRABLE EFFECTS OF OVER-WORKING. (THESE EFFECTS ARE SEGREGATION, BLEEDING, AND BREAKING-DOWN OF INITIAL SET). THE METHOD OF PLACEMENT SHALL BE SUBJECT TO APPROVAL. THE MEANS OF PLACING THE GROUT SHALL BE SUCH THAT THE GROUT WILL COMPLETELY FILL THE SPACE TO BE GROUTED, WILL BE THOROUGHLY COMPACTED AND WILL HAVE EVENLY DISTRIBUTED CONTACT OVER AN AREA IN EXCESS OF 80 % OR, IN THE CASE OF EXPANDING GROUT, 95 % OF THE BEARING AREA OF THE ITEM TO BE SUPPORTED.

WHEREVER PRACTICABLE, GROUT SHALL BE PLACED FROM ONE SIDE ONLY AND WHERE THIS IS NOT PRACTICABLE, CARE SHALL BE TAKEN TO ENSURE THAT ANY ENTRAPPED AIR IS RELEASED.

AFTER THE GROUT HAS TAKEN ITS INITIAL SET,

- A) THE FORMS SHALL BE REMOVED;
- B) EXCESS GROUT SHALL BE SO CUT AWAY AS TO LEAVE A SMOOTH AND NEATLY FINISHED JOB;
- C) EXCEPT WHERE THE GROUT IS INTENDED TO PROVIDE RESISTANCE TO SIDE THRUST, ALL EDGES SHALL BE TRIMMED AT 45° TO THE VERTICAL, FROM THE BOTTOM EDGE OF THE BEDPLATE; AND

D) ALL EXCESS GROUT ON OR ABOUT THE BEDPLATES SHALL BE REMOVED.

DAMAGE TO PAINTWORK, IF ANY, SHALL BE REPAIRED WITHIN 24 HOURS. PACKING PLATES, SHIMS, AND OTHER LEVELLING DEVICES SHALL REMAIN IN POSITION.

PSG 3.4.5.2 DRY-PACKED GROUT (STANDARD DRY SAND AND CEMENT GROUT)

DRY-PACKED GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 20 MPa. THE QUANTITY OF WATER ADDED AFTER PLACING SHALL BE KEPT TO A MINIMUM CONSISTENT WITH PLACING CONDITIONS, AND THE CEMENT, SAND AND, WHERE APPLICABLE, PEA GRAVEL PROPORTIONS BY MASS SHALL BE AS FOLLOWS:

- A) WHERE THE CLEARANCE BETWEEN BEDPLATE AND FOUNDATION IS 25 MM OR LESS: 1 PART OF PORTLAND CEMENT, AND 2 PARTS OF SAND;
- B) WHERE THE CLEARANCE EXCEEDS 25 MM: 1 PART OF PORTLAND CEMENT, 1 PART OF SAND, AND 1 PART OF PEA GRAVEL.

DRY-PACKED GROUT SHALL BE RAMMED BY MEANS OF TAMPING RODS AGAINST FORMWORK PLACED ALONG THREE SIDES OF THE BEDPLATE.

PSG 3.4.5.3 NON-SHRINK GROUT WITH METALLIC AGGREGATE

THE MANUFACTURER'S INSTRUCTIONS SHALL BE OBSERVED WHEN NON-SHRINK GROUT WITH METALLIC AGGREGATE IS USED.

WHERE THE CLEARANCE BETWEEN THE BEDPLATE AND THE FOUNDATION IS LESS THAN 50 MM A SAND-BASED MIX SHALL BE USED. WHERE THE CLEARANCE EXCEEDS 50 MM THE ENGINEER MAY ORDER A MIX WITH A BASE OF SAND PLUS PEA GRAVEL TO BE USED.

PSG 3.4.5.4 EXPANDING GROUT WITH POWDERED ALUMINIUM ADDITIVE

THE MANUFACTURER'S INSTRUCTIONS SHALL BE OBSERVED WHEN AN EXPANDING GROUT WITH POWDERED ALUMINIUM ADDITIVE IS USED.

WHERE THE CLEARANCE BETWEEN THE BEDPLATE AND THE FOUNDATION IS LESS THAN 25 MM, A SAND-BASED MIX SHALL BE USED.

WHERE THE CLEARANCE EXCEEDS 25 MM THE ENGINEER MAY ORDER THAT A MIX WITH A BASE OF SAND PLUS PEA GRAVEL BE USED.

EACH BATCH SHALL BE MIXED FOR AT LEAST 6 MINUTES AFTER THE POWDERED ALUMINIUM HAS BEEN ADDED. WHERE A READY-MIXED GROUT IS USED, THE POWDERED ALUMINIUM SHALL BE ADDED AT THE PLACING SITE AND THE BATCH MIXED AS SPECIFIED IN PSG 3.4.4. GROUT SHALL BE PLACED WITHIN 45 MINUTES AFTER THE ADDITION OF THE POWDERED ALUMINIUM.

THE CONTRACTOR SHALL NOT USE POWDERED ALUMINIUM ADDITIVE WHEN THE AMBIENT TEMPERATURE IS BELOW 5 °C.

PSG 3.4.5.5 EPOXY GROUT (EPOXY MORTAR TYPE ONLY)

THE MANUFACTURER'S INSTRUCTION SHALL BE OBSERVED WHEN AN EPOXY GROUT IS USED.

PSG 3.4.6 TESTING

THE CONTRACTOR SHALL, WHERE SO ORDERED, CARRY OUT A SITE TEST FOR EACH GROUTING PROCEDURE AND EACH GROUTING GANG TO BE USED. THE TESTS SHALL BE CARRIED OUT ON A DUMMY BEDPLATE SIMILAR IN CONFIGURATION TO THAT WHICH IS TO BE GROUTED, BUT NOT EXCEEDING 1 M² IN AREA UNLESS OTHERWISE ORDERED. WHEN THE DUMMY BEDPLATE IS DISMANTLED, THE UNDERSIDE SHALL SHOW A MINIMUM GROUT CONTACT AREA OF 80 % WITH REASONABLY EVEN DISTRIBUTION OF THE GROUT OVER THE SURFACE GROUTED EXCEPT THAT, IN THE CASE OF EXPANDING GROUT, THE MINIMUM GROUT CONTACT AREA SHALL BE 95 %. THE TEST SHALL SHOW EVIDENCE OF GOOD WORKMANSHIP AND MATERIALS AND THE RESULTS SHALL BE TO THE SATISFACTION OF THE ENGINEER.

THE CONTRACTOR, SHALL, WHEN SO ORDERED, MAKE STANDARD TEST CUBES FROM VARIOUS GROUT MIXTURES AND SUBJECT THEM TO COMPRESSION TESTS TO DETERMINE WHETHER THE SPECIFIED STRENGTH HAS BEEN ACHIEVED. TEST PROCEDURES SHALL COMPLY WITH THE RELEVANT REQUIREMENTS OF SUBCLASSES 7.2.1 - 7.2.3 OF SABS 1200 G.

PSG 4 TESTS (CLAUSE 7)

PSG 4.1 FREQUENCY OF TESTING

THE STRUCTURAL CONCRETE SHALL BE DESIGNED TO MEET ITS SPECIFIED STRENGTH AT 28 DAYS AFTER CASTING. A SET OF 6 CUBES SHALL BE TAKEN FROM EACH DAY'S CASTING FOR EACH PARTICULAR GRADE OF CONCRETE AND FROM AT LEAST EVERY 50M³ OF PLACED CONCRETE, OF WHICH 3 ARE TO BE TESTED AT 7 DAYS AND 3 AT 28 DAYS.

PSG 4.2 TESTING (CLAUSE 7.2)

PSG 4.2.1 GENERAL (CLAUSE 7.2.1)

ADD THE FOLLOWING:

THE CONTRACTOR SHALL ALLOW FOR ALL THE COSTS FOR TESTING IN HIS RATES.

PSG 5 MEASUREMENT AND PAYMENT (CLAUSE 8)

PSG 5.1 MEASUREMENT AND RATES (CLAUSE 8.1)

PSG 5.1.1 REINFORCEMENT (CLAUSE 8.1.2)

DELETE SUBCLAUSES 8.1.2.2 AND 8.1.2.3 AND REPLACE WITH THE FOLLOWING:

MILD STEEL AND HIGH TENSILE STEEL WILL BE MEASURED SEPARATELY. WELDED MESH WILL BE SCHEDULED SEPARATELY FOR EACH TYPE AND MASS PER SQUARE METRE OF MESH.

THE RATE SHALL COVER THE COST OF SUPPLY, CUTTING, BENDING, PLACING IN POSITION, AND FIXING OF THE REINFORCING AND SUPPORTING STEEL SCHEDULED, AND THE PROVISION OF ALL SPACER DEVICES AND BINDING WIRE, AS WELL AS THE COST OF TESTS IN TERMS OF SABS 920. THE RATE FOR WELDED MESH SHALL COVER THE SUPPLY, CUTTING AND PLACING OF MESH, AS WELL AS THE COST OF ALL WASTE DUE TO LAPS.

PSG 5.1.2 CONCRETE (CLAUSE 8.1.3)

THE UNIT RATES FOR STRENGTH CONCRETE SHALL BE INCLUSIVE OF ALL CUBE SAMPLING, TESTING AND OF CURING.

PSG 5.1.3 BLINDING LAYER (CLAUSE 8.4.2) UNIT: M2

THE UNIT RATE WILL INCLUDE THE COST OF ALL FORM WORK NEEDED TO CAST THE BLINDING LAYER IN THE PRESCRIBED SECTIONS.

PSG 5.1.4 CASTING IN OF PIPES AND SPECIALS (NEW CLAUSE)

NO SEPARATE ITEMS WILL BE SCHEDULED FOR ITEMS SUPPLIED UNDER THIS CONTRACT AND TO BE BUILT IN.

THE RELEVANT RATES FOR SUPPLY AND INSTALLATION SHALL ALSO COVER THE COST FOR CASTING IN THE ITEMS SUPPLIED UNDER THIS CONTRACT WHETHER THE ITEMS ARE POSITIONED BEFORE CONSTRUCTION OR IN BLOCKED-OUT HOLES.

PVZ CLEANING AND FINISHING

PVZ 1 SCOPE

THIS SECTION COVERS THE FINAL FINISHING AND CLEANING UP OF THE WORKS AND SITE, AND THE DISPOSAL OF EXCESS MATERIAL AT PLACES APPROVED BY THE ENGINEER.

THIS SECTION DOES NOT COVER THE DISPOSAL OF UNSUITABLE EXCAVATED MATERIAL, THE FINISHING OF QUARRIES OR BORROW PITS, THE FINISHING OF ANY BACKFILL, THE CLEANING AND FINISHING OF CONCRETE AND OTHER FINISHES DESCRIBED ELSEWHERE IN THE SPECIFICATION OR FOR WHICH SEPARATE PAYMENT CLAUSES EXIST.

PVZ 2 INTERPRETATIONS

NOT APPLICABLE TO THIS SPECIFICATION.

PVZ 3 MATERIALS

NOT APPLICABLE TO THIS SPECIFICATION.

PVZ 4 PLANT

NOT APPLICABLE TO THIS SPECIFICATION.

PVZ 5 CONSTRUCTION

PVZ 5.1 PRECAUTIONS

PVZ 5.1.1 SAFETY

THE REQUIREMENTS OF SUBCLAUSE 5.1.1 OF SABS 1200D OR SABS 1200DA (AS APPLICABLE) SHALL APPLY.

PVZ 5.2 METHODS AND PROCEDURES

PVZ 5.2.1 GENERAL

AFTER COMPLETION OF THE WORK WHICH IS TO BE EXECUTED UNDER THIS CONTRACT, THE WORKS AND THE SITE SHALL BE FINALLY AND NEATLY CLEANED AND FINISHED OFF BY MEANS OF SUITABLE MACHINES AND EQUIPMENT AND HAND LABOUR WHERE REQUIRED UNTIL A NEAT AND CLEAN APPEARANCE IS OBTAINED. THE CONTRACTOR SHALL ENSURE THAT COMPLETED AND APPROVED WORK IS NOT DAMAGED DURING THE CLEANING UP OPERATIONS. IF ANY PART IS DAMAGED, IT SHALL IMMEDIATELY BE RECTIFIED TO COMPLY WITH THE REQUIRED SPECIFICATION FOR THE PARTICULAR PART OF THE WORKS. CAMPING SITES SHALL BE NEATLY CLEANED AND ALL RUBBISH SHALL BE DISPOSED AT PLACES APPROVED BY THE ENGINEER.

PVZ 5.2.2 CLEANING

LOOSE STONES, FELLED TREES, ROOTS AND ALL OTHER RUBBISH ON FILL OR ON THE SIDES OF STREAMS SHALL BE REMOVED TO GIVE THE SITE A NEAT APPEARANCE. STORM WATER DRAINS SHALL BE CLEANED OF DEBRIS, SOIL, SILT AND OTHER MATERIAL.

CONCRETE FLOOR PANELS FROM TEMPORARY BUILDINGS AND ANY EXCESS CONCRETE DUMPED ON THE SITE SHALL BE BROKEN UP AND DISPOSED OF IN AREAS APPROVED BY THE ENGINEER AND COVERED OVER TO THE SATISFACTION OF THE ENGINEER.

PVZ 5.2.3 FINISHING

PERMANENT ACCESS ROADS REQUIRED FOR FUTURE USE BY THE EMPLOYER AND OTHER PERMANENT ROADS IN THE GENERAL WORKS AREA SHALL BE GRADED SO AS TO REMOVE ALL CORRUGATIONS AND ALL IMPERFECTIONS MADE GOOD IN SUCH A WAY THAT THE SPECIFIED SHAPE IS MAINTAINED AND THE SURFACE IS NOT LOOSENEED. DRAGGING, PUSHING OR SCRAPING WASTE MATERIAL ALONG ACROSS THESE ROADS WILL NOT BE PERMITTED.

CARE SHALL BE TAKEN NOT TO DAMAGE CULVERT HEADWALLS AND DRAINS WHEN DOING THIS WORK. ALL CUTTING, FILLS AND DRAINS SHALL BE TRIMMED AND FINISHED TO THE ORIGINAL LINES AND GRADES OR AS REQUIRED BY THE ENGINEER. ALL INTERSECTING SLOPES SHALL BE NEATLY ROUNDED. EXCESS DEBRIS OR OTHER WASTE MATERIAL ADJACENT TO CULVERTS AND DRAINAGE STRUCTURES SHALL BE REMOVED AND TRIMMED AS DIRECTED BY THE ENGINEER.

PVZ 6 TOLERANCES

PVZ 6.1 AFTER THE COMPLETION OF CLEANING AND FINISHING AS DESCRIBED IN THIS SPECIFICATION, ALL WORK SHALL BE WITHIN THE TOLERANCES REQUIRED BY THE RELEVANT SPECIFICATION FOR EACH PORTION OF THE WORK.

PVZ 7 TESTING

NOT APPLICABLE TO THIS SPECIFICATION.

PVZ 8 MEASUREMENT AND PAYMENT

PVZ 8.1 CLEANING AND FINISHING UNIT: LUMP SUM

PAYMENT SHALL BE A LUMP SUM TO PROVIDE FOR ALL EXPENSES IN CONNECTION WITH THIS WORK. THE BID LUMP SUM SHALL BE A FIXED AMOUNT AND SHALL NOT BE SUBJECT TO ANY VARIATION AS FAR AS QUANTITY IS CONCERNED.

SECTION IV: PRICED ACTIVITY SCHEDULE

Procurement Reference Number: **W/RFQ/KRC-26/2019**

[Complete the unit and total prices for each item listed below. Authorise the prices quoted in the signature block below.]

The quantities shown below are approximate and not subject to re-measurement for payment purposes.

PART A: FULL INCLUSIVE PRICE

The schedule comprises items covering the Contractor's profit and costs of general liabilities and of the construction of temporary and permanent works.

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. Such prices shall cover all costs and expenses that may be required in and for the construction of the work described, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the documents on which the tender is based.

SUMMARY OF SCHEDULE OF QUANTITIES

SCHEDULE	DESCRIPTION	AMOUNT N\$
SECTION 1:	PRELIMINARY AND GENERAL	N\$
SECTION 2:	BLADING & RESHAPING	N\$
SECTION 3:	EARTHWORKS (ROADS, SUBGRADE)	N\$
SECTION 4:	REGRAVELLING (SUBBASE & GRAVEL WEARING COURSE)	N\$
SECTION 5:	STORMWATER DRAINAGE	N\$
SECTION 6:	STORMWATER DRIFT	N\$
SECTION 7:	SPEED HUMPS	N\$
SECTION 8:	ANCILLARY ROADWORKS	N\$
SECTION 9:	CLEANING	N\$
SUB-TOTAL		N\$
Contingencies - Add 10% to be spent with authorisation of Engineer	N\$	
SUB-TOTAL		N\$
TOTAL CARRIED TO BID SUBMISSION FORM		N\$

ITEM NO	PAYMENT	DESCRIPTION	SECTION 1: PRELIMINARY AND GENERAL			
			UNIT	QTY	RATE	AMOUNT N\$
	SABS 1200A	SECTION 1: PRELIMINARY AND GENERAL				
1.1	8.3	SCHEDULED FIXED-CHARGE AND VALUE RELATED ITEMS				
1.1.1	8.3.2	Establishment of Facilities on the Site	Sum	1.0		
1.1.2	8.3.3	Other Fixed-charge obligations	Sum	1.0		
1.1.3	8.3.4	Removal of Site Establishment	Sum	1.0		
1.2	8.4	SCHEDULED TIME-RELATED ITEMS				
1.2.1	8.4.1	Contractual Requirements	Sum	1.0		
1.2.2	8.4.2	Operation and Maintenance of Facilities on Site				
		(a) Offices and storage sheds	Sum	1.0		
		(e) Ablution and latrine facilities	Sum	1.0		
1.3	8.5	PROVISIONAL SUMS				
1.2.3		Location, exposure, protection and/or move existing services	Prov. Sum	1.0		
1.2.4		Additional tests ordered by the Engineer (including overheads, charges and profits)	Prov. Sum	1.0		
SUB-TOTAL FOR SECTION 1: PRELIMINARY AND GENERAL (CARRIED FORWARD TO SUMMARY)						
ITEM NO	PAYMENT	DESCRIPTION	SECTION 2: BLADING & RESHAPING			
			UNIT	QTY	RATE	AMOUNT N\$
2		SECTION 2: BLADING & RESHAPING				

2.1		BLADING				
		Maximum of Four (4) blades pass to be done per road width. Rate is for one blade per kilometre				
2.1.1		Light blading	Bl-km			Rate Only
2.1.2		Heavy blading	Bl-km	6.4		
2.1.3		Water the road width with a water bowser truck	m2			Rate Only
2.2		RESHAPING				
		Rip to minimum depth of 100mm, mix and process with water, reshape gravel road to the specified cross section and compact to 95% modified AASHTO maximum density				
2.2.1		Reshaping gravel road	m2			Rate Only
SUB-TOTAL FOR SECTION 2: BLADING & RESHAPING (CARRIED FORWARD TO SUMMARY)						
SECTION 3: EARTHWORKS (ROADS, SUBGRADE)						
ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT N\$
3	SABS 1200 DM	SECTION 3: EARTHWORKS (ROADS, SUBGRADE)				
3.1		TREATMENT OF ROAD-BED				
	8.3.3(a) PSDM-4.1	Road-bed preparation and compaction of material of:				
3.1.1		Rip, process and compact In-situ material 150mm to 93% Mod AASHTO density	m ³	593.0		
3.2		EARTHWORKS				
		Borrow to fill from borrow pit:				
3.2.1		Compact to 93% mod AASHTO density	m ³			Rate Only

3.3		SELECTED LAYER				
3.3.1		Compact 150 mm of G7 selected layer to 95% mod AASHTO maximum density in road layer works	m ³			Rate Only
SUB-TOTAL FOR SECTION 3: EARTHWORKS (ROADS, SUBGRADE)(CARRIED FORWARD TO SUMMARY)						
SECTION 4: REGRAVELLING (SUBBASE & GRAVEL WEARING COURSE)						
ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT N\$
4	SABS 1200 ME	SECTION 4: REGRAVELLING (SUBBASE & GRAVEL WEARING COURSE)				
	8.3.1 PSME-1.1.1	Construct subbase / Gravel Wearing Course with imported material from borrow pits in all materials for all roads, including unlimited free-haul:				
4.1		150mm G6 Subbase compacted to 95% modified AASHTO maximum density	m ³	593.0		
4.2		150mm G6 Gravel Wearing Course compacted to 95% Modified AASHTO maximum density, as per TRH 20 material specification	m ³	548.0		
SUB-TOTAL FOR SECTION 4: REGRAVELLING (CARRIED FORWARD TO SUMMARY)						
SECTION 5: STORMWATER DRAINAGE						
ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT N\$
5		SECTION 5: STORMWATER DRAINAGE				
5.1		EARTH SIDE DRAINS				
	1200 DA	Excavation for open drains:				
5.1.1	8.3.2	Excavate and construct V-drains (Earth Side drains) in all materials, backfill and compact and dispose of surplus/ unsuitable material.	m	300.0		
5.1.2		Clearing and shaping existing open	m			Rate Only

		drains				
5.2		CULVERTS				
		EXCAVATION				
	8.3.2(a)	Excavate in all materials for trenches backfill, compact, and dispose of surplus/unsuitable material, for pipes (box) over 500 mm diam (length) and up to 1200 mm diam (width). for total trench depth:				
5.2.1		Exceeding 0,0 m but not exceeding 1,0 m	m			Rate Only
5.2.2		Exceeding 1,0 m but not exceeding 2,0 m	m			Rate Only
5.3	SANS 1200 LE	PIPE CULVERTS (PRECAST CONCRETE)				
		Transport, bed and install portal and rectangular culverts:				
5.3.1	8.2.5	a) cast-in-situ concrete 30 MPa/40 mm floor slabs	m ³			Rate Only
5.3.2		b) cast-in-situ concrete 30 MPa/40 mm apron slabs	m ³			Rate Only
5.3.3	8.2.5	c) Mesh 395 for Concrete floor & apron	m ²			Rate Only
5.3.4	8.2.5	d) 900 mm x 450 mm portal culvert	m			Rate Only
5.3.5	8.2.5	e) 900 mm x 600 mm portal culvert	m			Rate Only
5.4		CAST-IN-SITU CONCRETE INLET AND OUTLET STRUCTURES				
	8.2.5	Cast in-situ concrete (including formwork, reinforcement) inlet and outlet structures as detailed on drawing no. P1988/HH-CR-005 for:				
		900 mm x 600 mm portal culvert:				
5.4.1		Concrete & Formwork	m ³			Rate Only
5.4.2		Mesh 395	m ²			Rate Only
SUB-TOTAL FOR SECTION 5: STORMWATER DRAINAGE (CARRIED FORWARD TO SUMMARY)						
			SECTION 6: STORMWATER DRIFT			
ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT NS

6	SABS 1200 GA	SECTION 6: STORMWATER DRIFT				
6.1	8.3	SCHEDULED REINFORCING ITEMS				
	8.3.1	Steel bars				
6.1.1		(i) 600mm long R20 dowels	No	34		
6.1.2	8.3.2	(ii) High-Tensile Welded Mesh Ref 395	m2	142		
6.2	8.4	SCHEDULE CONCRETE ITEMS				
	8.4.3	Strength concrete, Grade 30/19				
		(a) Grade 30/19 including formwork				
6.2.1		(i) Floor slabs laid in 3.5m x 3.0m panels on 250 micron DPC as per drawings	m³	22		
6.2.2		(a) 10 mm thick bitumen impregnated expansion material between walls with ABE approved sealant	m	16		
SUB-TOTAL FOR SECTION 6: STORMWATER DRIFT (CARRIED FORWARD TO SUMMARY)						
			SECTION 7: SPEED HUMP			
ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT N\$
7	SABS 1200 GA	SECTION 7: SPEED HUMP				
		INTERLOCK & STANDARD KERBS SPEED HUMP				
7.1		Cut in existing roads layer	m2			Rate Only
7.2		Concrete kerbing to SABS 927 (Class 30/19) supply & install concrete kerbing complete with concrete backing:	m			Rate Only
7.3		35 Mpa Interlocks Pavers 60mm on 20mm shifted sand	m2			Rate Only

SUB-TOTAL FOR SECTION 7: SPEED HUMPS (CARRIED FORWARD TO SUMMARY)						
			SECTION 8: ANCILLARY ROADWORKS			
ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT N\$
8	SANS 1200 MM	SECTION 8: ANCILLARY ROADWORKS				
8.1		ROAD SIGNS				
		Sign faces with painted or galvanized (as stated) background. Symbols, characters, legend, and borders in engineering grade retro-reflective material with signboards constructed from Aluminium sheet (2,0 mm thick) or Steel sheet as approved by the Engineer				
	8.3	Supply and install road signs complete including support and concrete works as per drawings for:				
8.1.1		(a) STOP sign 600mm	No.			Rate Only
		(b) Warning signs:				
8.1.2		(i) W350 DRIFT Sign 600mm	No.	2		
8.1.3		(ii) W401 (600 x 150mm) Danger plates	No.	2		
8.2		ROAD MARKINGS				
		Retro-reflective road marking paint applied at nominal rate of 0.42 litre/m ² as scheduled				
		(a) White lines (broken or unbroken)				
8.2.1		(i) 100 mm wide	m			Rate Only
8.2.2		(ii) 300 mm wide	m			Rate Only
		(b) Yellow lines (broken or unbroken)				

8.2.3		(i) 150 mm wide	m			Rate Only
8.2.4		(c) White lettering and symbols	m ²			Rate Only
8.2.5		Setting out and premarking the lines (excluding traffic- island markings, lettering and symbols)	m			Rate Only
SUB-TOTAL FOR SECTION 8: ANCILLARY ROADWORKS (CARRIED FORWARD TO SUMMARY)						
SECTION 9: CLEANING AND FINISHING						
ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT N\$
9	SABS 1200 D	SECTION 9: CLEANING AND FINISHING				
9.1		Cleaning and finishing of site after completion of the works and the removal of all construction rubble and debris to approved spoil sites	Sum	1.0		
SUB-TOTAL FOR SECTION 9: CLEANING AND FINISHING (CARRIED FORWARD TO SUMMARY)						

PRICED ACTIVITY SCHEDULE AUTHORISED BY:

NAME:		SIGNATURE:	
POSITION:		DATE:	
AUTHORISED FOR AND ON BEHALF OF:	COMPANY		

SECTION V: GENERAL CONDITIONS OF CONTRACT AND CONTRACT AGREEMENT

Any resulting contract shall be placed by means of a Letter of Acceptance and shall be subject to the General Conditions of Contract (GCC) for the Procurement of Goods **W/RFQ/KRC-26/2019** available at **Kunene regional Council Offices, T-Junction between Dr. Sam Nujoma Drive and Mbumbiango Muharukua Street in Opuwo Town** except where modified by the Special Conditions below.

SECTION VI SPECIAL CONDITIONS OF CONTRACT

Procurement Reference Number: **W/RFQ/KRC-26/2019**

The clause numbers given in the first column correspond to the relevant clause number of the General Conditions of Contract: Request for Sealed Quotation.

GCC Clause Reference	Special Conditions
Employer GCC 1.1(r)	Kunene regional Council
Intended Completion Date GCC	The intended completion date is: <u>60 calendar days</u>
Project Manager GCC 1.1(y)	The Project Manager is: Mr. George Uusiku RFA Technical Assistance to Local Authorities and Regional Councils
Site GCC 1.1(aa)	The Site is located at Sesfontein Settlement
Start Date GCC 1.1(dd)	The Start Date shall be: Early January 2019
The Works GCC 1.1(hh)	The Works consist of: As specified in section 3 of this document
Interpretation GCC 2.2	The project will be completed in the following sections: As whole
Language and Law GCC 3.1	The language of the contract is English The law that applies to the Contract is the law of Namibia.
Project Manager's Decisions 4.1	The Project Manager shall obtain specific approval from the Employer before carrying out any of his duties under the Contract which in the Project Manager's opinion will cause the amount finally due under the Contract to exceed the Contract Price or will give entitlement to extension of time. This requirement shall be waived in an emergency affecting safety of personnel or the Works or adjacent property.

GCC Clause Reference	Special Conditions
Delegation GCC 5.1	The Project Manager may delegate his/her duties.
Notices GCC 6	<p>Any notice shall be sent to the following addresses:</p> <p>For the Employer: Kunene regional Council, P Bag 502, Opuwo the contact person shall be: Mrs Saara Nampala. Tel: 065-273 950</p> <p>For the Contractor: Company Name: _____ Contact Person: _____ Tel. / Cell. no: _____ Email: _____</p>
Insurance GCC 13.1	<p>Except for the cover mentioned in (d)(i) hereunder, the other insurance covers shall be in the joint names of the Contractor and the Employer and the minimum insurance amounts shall be:</p> <ul style="list-style-type: none"> (a) for the Works, Plant and Materials: (for the full amount of the works including removal of debris, professional fee etc...) (b) for loss or damage to Equipment: (for the replacement value of the equipment that the contractor intends to use on site until the taking over by the Employer. (c) for loss or damage to property (except the Works, Plant, Materials, and Equipment) in connection with Contract for an amount representing the value of the properties that are exposed to the action of the contractor in the execution of the works. It will extend to the property of the Procuring Entity as well). (d) for personal injury or death: <ul style="list-style-type: none"> (i) of the Contractor's employees:[The Contractor shall take an adequate insurance cover for its employees for any claim arising in the execution of the works]. (ii) of other people: [This cover shall be for an adequate amount for Third Party extended to the Employer and its representatives]. (e) for loss or damage to materials on-site and for which payment have been included in the Interim Payment Certificate, where applicable.

GCC Clause Reference	Special Conditions
	The Contractor shall choose to take the insurance covers indicated above as separate covers or a combination of the Contractor's All Risks coupled with the Employer's liability and First Loss Burglary, after approval of the Employer. All insurance covers shall be of nil or the minimum possible deductibles at sole expense of the contractor.
Site Date GCC 14.1	No site data available. The contractor to familiarise themselves with the site condition and may request any additional available information from the Employer.
Possession of the Site GCC 20.1	The Site Possession Date shall be: Within 7 days after the contractor submit all required documents as per contract requirement.
Procedure for Disputes GCC 24	No Adjudicator shall be appointed under the contract and arbitration shall not apply. If any dispute arises between the Employer and the Contractor in connection with or arising out of the Contract, the parties shall seek to resolve any such dispute by amicable agreement. If the parties fail to resolve such dispute by amicable agreement, within 14 days after one party has notified the other in writing of the dispute, then the dispute shall be referred to court by either party.
Program GCC 25.1	The Contractor shall submit for approval a Program for the Works within Seven (7) calendar days from the date of the Letter of Acceptance.
GCC 25.3	Program updates shall be required when relevant.
Defects Liability Period GCC 33.1	No Defects Liability Period applicable to this contract.
Payment Certificates GCC 39.7	A single statement of the estimated value of the work executed shall be submitted on completion of the Works. The Project Manager shall check the statement and certify the amount to be paid to the Contractor.
Payments GCC 40	The amount certified by the Project Manager shall be paid in full within 30 days of receipt by the Employer of an invoice, supported by: (a) the payment certificate; and (b) a certificate of Completion of the Works.
Adverse weather Conditions GCC 41.1 (l)	Continuous rainfall or excessive temperature not favourable to carry out the work.
Price Adjustment GCC 44.	The Contract is not subject to price adjustment.
Retention GCC 45.	No proportion of any payments shall be retained

GCC Clause Reference	Special Conditions
Liquidated Damages GCC 46.1	<p>The liquidated damages for the whole of the Works are N\$ 300.00 per day.</p> <p>The maximum amount of liquidated damages for the whole of the Works is N\$ 15 000.00.</p>
Bonus GCC 47.1	<p>No bonus shall be paid to the contractor.</p>
Advance Payment GCC 48.1	<p>(i) No advance payment shall be made</p>
Performance Security GCC 49.1	<p>No Performance Security required.</p>
GCC 56.1	<p>“As built” drawings or operating and maintenance manuals are not required.</p>
GCC 59.1	<p>The percentage to apply to the value of the work not completed, representing the Employer’s additional cost for completing the Works, is: 20%</p>

QUOTATION CHECKLIST SCHEDULE**Procurement Reference No.: W/RFQ/KRC-26/2019**

Description	Attached	Not Attached
Quotation letter		
Bid Security Declaration		
Priced Activity Schedules		
Certified copy of Company Registration Certificate		
Original Valid Good Standing Tax Certificate		
Original Valid Good Standing Social Security Certificate		
List of similar project competed by the bidder		
Affirmative action		
List of similar project competed by the bidder		
Any Additional information.....(specify)		

Disclaimer: The list defined above is meant to assist the Bidder in submitting the relevant documents and shall not be a ground for the bidder to justify its non-submission of major documents for its quotation to be responsive. The onus remains on the Bidder to ascertain that it has submitted all the documents that have been requested and are needed for its submission to be complete and responsive.