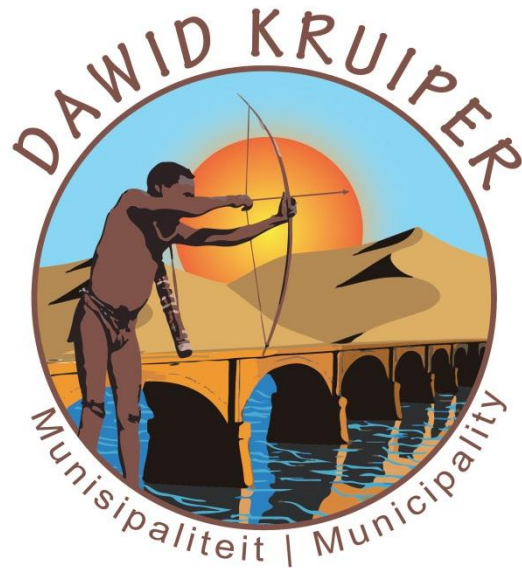


MUNISIPALITEIT DAWID KRUIPER MUNICIPALITY



BID

MELKSTROOM WASTE WATER TREATMENT WORK

DIRECTORATE DEVELOPMENT AND PLANNING

PRIVATE BAG X6003

UPINGTON

8800

NOTICE TN024/2021

Bidders name : _____

Bid Price : R _____

DAWID KRUIPER MUNICIPALITY

MELKSTROOM WASTE WATER TREATMENT WORK

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DAWID KRUIPER MUNICIPALITY

Republic of South Africa



**DAWID KRUIPER MUNICIPALITY PROCUREMENT:
GENERAL CONDITIONS OF CONTRACT
MELKSTROOM WASTE WATER TREATMENT WORK**

DAWID KRUIPER MUNICIPALITY

SECTION "A"

GENERAL CONDITIONS OF QUOTATION

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GOVERNMENT PROCUREMENT: GENERAL CONDITIONS OF CONTRACT

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General Conditions of Contract

1. Definitions

1. The following terms shall be interpreted as indicated:
 - 1.1 “Closing time” means the date and hour specified in the bidding documents for the receipt of bids.
 - 1.2 “Contract” means the written agreement entered into between the purchaser and the supplier, as recorded in the contract form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.
 - 1.3 “Contract price” means the price payable to the supplier under the contract for the full and proper performance of his contractual obligations.
 - 1.4 “Corrupt practice” means the offering, giving, receiving, or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution.
 - 1.5 "Countervailing duties" are imposed in cases where an enterprise abroad is subsidized by its government and encouraged to market its products internationally.
 - 1.6 “Country of origin” means the place where the goods were mined, grown or produced or from which the services are supplied. Goods are produced when, through manufacturing, processing or substantial and major assembly of components, a commercially recognized new product results that is substantially different in basic characteristics or in purpose or utility from its components.
 - 1.7 “Day” means calendar day.
 - 1.8 “Delivery” means delivery in compliance of the conditions of the contract or order.
 - 1.9 “Delivery ex stock” means immediate delivery directly from stock actually on hand.
 - 1.10 “Delivery into consignees store or to his site” means delivered and unloaded in the specified store or depot or on the specified site in compliance with the conditions of the contract or order, the supplier bearing all risks and charges involved until the goods are so delivered and a valid receipt is obtained.
 - 1.11 "Dumping" occurs when a private enterprise abroad market its goods on own initiative in the RSA at lower prices than that of the country of origin and which have the potential to harm the local industries in the RSA.

- 1.12 "Force majeure" means an event beyond the control of the supplier and not involving the supplier's fault or negligence and not foreseeable. Such events may include, but is not restricted to, acts of the purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.
- 1.13 "Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of any bidder, and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the bidder of the benefits of free and open competition.
- 1.14 "GCC" means the General Conditions of Contract.
- 1.15 "Goods" means all of the equipment, machinery, and/or other materials that the supplier is required to supply to the purchaser under the contract.
- 1.16 "Imported content" means that portion of the bidding price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the supplier or his subcontractors) and which costs are inclusive of the costs abroad, plus freight and other direct importation costs such as landing costs, dock dues, import duty, sales duty or other similar tax or duty at the South African place of entry as well as transportation and handling charges to the factory in the Republic where the goods covered by the bid will be manufactured.
- 1.17 "Local content" means that portion of the bidding price, which is not included in the imported content provided that local manufacture does take place.
- 1.18 "Manufacture" means the production of products in a factory using labour, materials, components and machinery and includes other related value-adding activities.
- 1.19 "Order" means an official written order issued for the supply of goods or works or the rendering of a service.
- 1.20 "Project site," where applicable, means the place indicated in bidding documents.
- 1.21 "Purchaser" means the organization purchasing the goods.
- 1.22 "Republic" means the Republic of South Africa.
- 1.23 "SCC" means the Special Conditions of Contract.

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- 1.24 “Services” means those functional services ancillary to the supply of the goods, such as transportation and any other incidental services, such as installation, commissioning, provision of technical assistance, training, catering, gardening, security, maintenance and other such obligations of the supplier covered under the contract.
- 1.25 “Supplier” means the successful bidder who is awarded the contract to maintain and administer the required and specified service(s) to the State.
- 1.26 “Tort” means in breach of contract.
- 1.27 “Turnkey” means a procurement process where one service provider assumes total responsibility for all aspects of the project and delivers the full end product / service required by the contract.
- 1.28 “Written” or “in writing” means hand-written in ink or any form of electronic or mechanical writing.
- 2. Application**
- 2.1 These general conditions are applicable to all bids, contracts and orders including bids for functional and professional services (excluding professional services related to the building and construction industry), sales, hiring, letting and the granting or acquiring of rights, but excluding immovable property, unless otherwise indicated in the bidding documents.
- 2.2 Where applicable, special conditions of contract are also laid down to cover specific goods, services or works.
- 2.3 Where such special conditions of contract are in conflict with these general conditions, the special conditions shall apply.
- 3. General**
- 3.1 Unless otherwise indicated in the bidding documents, the purchaser shall not be liable for any expense incurred in the preparation and submission of a bid. Where applicable a non-refundable fee for documents may be charged.
- 3.2 Invitations to bid are usually published in locally distributed news media and on Dawid Kruiper municipality's website.
- 4. Standards**
- 4.1 The goods supplied shall conform to the standards mentioned in the bidding documents and specifications.
- 5. Use of contract documents and information inspection**
- 5.1 The supplier shall not, without the purchaser's prior written consent, disclose the contract, or any provision thereof, or any specification, plan, drawing, pattern, sample, or information furnished by or on behalf of the purchaser in connection therewith, to any person other than a person employed by the supplier in the performance of the contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purposes of such performance.

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- 5.2 The supplier shall not, without the purchaser's prior written consent, make use of any document or information mentioned in GCC clause 5.1 except for purposes of performing the contract.
- 5.3 Any document, other than the contract itself mentioned in GCC clause 5.1 shall remain the property of the purchaser and shall be returned (all copies) to the purchaser on completion of the supplier's performance under the contract if so required by the purchaser.
- 5.4 The supplier shall permit the purchaser to inspect the supplier's records relating to the performance of the supplier and to have them audited by auditors appointed by the purchaser, if so required by the purchaser.

6. Patent Rights

- 6.1 The supplier shall indemnify the purchaser against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the goods or any part thereof by the purchaser.
- 6.2 When a supplier developed documentation / projects for Dawid Kruiper municipality, the intellectual, copy and patent rights or ownership of such documents or projects will vest in Dawid Kruiper municipality.

7. Performance security

- 7.1 Within thirty (30) days of receipt of the notification of contract award, the successful bidder shall furnish to the purchaser the performance security of the amount specified in SCC.
- 7.2 The proceeds of the performance security shall be payable to the purchaser as compensation for any loss resulting from the supplier's failure to complete his obligations under the contract.
- 7.3 The performance security shall be denominated in the currency of the contract, or in a freely convertible currency acceptable to the purchaser and shall be in one of the following forms:
- (a) a bank guarantee or an irrevocable letter of credit issued by a reputable bank located in the purchaser's country or abroad, acceptable to the purchaser, in the form provided in the bidding documents or another form acceptable to the purchaser; or
 - (b) a cashier's or certified cheque.
- 7.4 The performance security will be discharged by the purchaser and returned to the supplier not later than thirty (30) days following the date of completion of the supplier's performance obligations under the contract, including any warranty obligations, unless otherwise specified.

8. Inspections, tests and analyses

- 8.1 All pre-bidding testing will be for the account of the bidder.
- 8.2 If it is a bid condition that goods to be produced or services to be rendered should at any stage be subject to inspections, tests and analyses, the bidder or contractor's premises shall be open, at all reasonable hours, for inspection by a representative of the purchaser or organization acting on behalf of the purchaser.
- 8.3 If there are no inspection requirements indicated in the bidding documents and no mention is made in the contract, but during the contract period it is decided that inspections shall be carried out, the purchaser shall itself make the necessary arrangements, including payment arrangements with the testing authority concerned.
- 8.4 If the inspections, tests and analyses referred to in clauses 8.2 and 8.3 show the goods to be in accordance with the contract requirements, the cost of the inspections, tests and analyses shall be defrayed by the purchaser.
- 8.5 Where the goods or services referred to in clauses 8.2 and 8.3 do not comply with the contract requirements, irrespective of whether such goods or services are accepted or not, the cost in connection with these inspections, tests or analyses shall be defrayed by the supplier.
- 8.6 Goods and services which are referred to in clauses 8.2 and 8.3 and which do not comply with the contract requirements may be rejected.
- 8.7 Any contract goods may on or after delivery be inspected, tested or analysed and may be rejected if found not to comply with the requirements of the contract. Such rejected goods shall be held at the cost and risk of the supplier who shall, when called upon, remove them immediately at his own cost and forthwith substitute them with goods, which do comply with the requirements of the contract. Failing such removal the rejected goods shall be returned at the suppliers cost and risk. Should the supplier fail to provide the substitute goods forthwith, the purchaser may, without giving the supplier further opportunity to substitute the rejected goods, purchase such goods as may be necessary at the expense of the supplier.
- 8.8 The provisions of clauses 8.4 to 8.7 shall not prejudice the right of the purchaser to cancel the contract on account of a breach of the conditions thereof, or to act in terms of Clause 22 of GCC.

- 9. Packing**
- 9.1 The supplier shall provide such packing of the goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packing, case size weights shall take into consideration, where appropriate, the remoteness of the goods' final destination and the absence of heavy handling facilities at all points in transit.
- 9.2 The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the contract, including additional requirements, if any, and in any subsequent instructions ordered by the purchaser.
- 10. Delivery and Documents**
- 10.1 Delivery of the goods and arrangements for shipping and clearance obligations, shall be made by the supplier in accordance with the terms specified in the contract.
- 11. Insurance**
- 11.1 The goods supplied under the contract shall be fully insured in a freely convertible currency against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified.
- 12. Transportation**
- 12.1 Should a price other than an all-inclusive delivered price be required, this shall be specified
- 13. Incidental Services**
- 13.1 The supplier may be required to provide any or all of the following services, including additional services, if any:
- (a) performance or supervision of on-site assembly and/or commissioning of the supplied goods;
 - (b) furnishing of tools required for assembly and/or maintenance of the supplied goods;
 - (c) furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied goods;
 - (d) performance or supervision or maintenance and/or repair of the supplied goods, for a period of time agreed by the parties, provided that this service shall not relieve the supplier of any warranty obligations under this contract; and
 - (e) training of the purchaser's personnel, at the supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied goods.
- 13.2 Prices charged by the supplier for incidental services, if not included in the contract price for the goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the supplier for similar services.

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14. Spare parts

- 14.1 As specified, the supplier may be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the supplier:
- (a) such spare parts as the purchaser may elect to purchase from the supplier, provided that this election shall not relieve the supplier of any warranty obligations under the contract; and;
 - (b) in the event of termination of production of the spare parts:
 - (i) advance notification to the purchaser of the pending termination, in sufficient time to permit the purchaser to procure needed requirements; and
 - (ii) following such termination, furnishing at no cost to the purchaser, the blueprints, drawings, and specifications of the spare parts, if requested

15. Warranty

- 15.1 The supplier warrants that the goods supplied under the contract are new, unused, of the most recent or current models, and that they incorporate all recent improvements in design and materials unless provided otherwise in the contract. The supplier further warrants that all goods supplied under this contract shall have no defect, arising from design, materials, or workmanship (except when the design and/or material is required by the purchaser's specifications) or from any act or omission of the supplier, that may develop under normal use of the supplied goods in the conditions prevailing in the country of final destination.
- 15.2 This warranty shall remain valid for twelve (12) months after the goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the contract, or for eighteen (18) months after the date of shipment from the port or place of loading in the source country, whichever period concludes earlier, unless specified otherwise.
- 15.3 The purchaser shall promptly notify the supplier in writing of any claims arising under this warranty.
- 15.4 Upon receipt of such notice, the supplier shall, within the period specified and with all reasonable speed, repair or replace the defective goods or parts thereof, without costs to the purchaser.
- 15.5 If the supplier, having been notified, fails to remedy the defect(s) within the period specified, the purchaser may proceed to take such remedial action as may be necessary, at the supplier's risk and expense and without prejudice to any other rights which the purchaser may have against the supplier under the contract.

- 16. Payment**
- 16.1 The method and conditions of payment to be made to the supplier under this contract shall be specified.
- 16.2 The supplier shall furnish the purchaser with an invoice accompanied by a copy of the delivery note and upon fulfillment of other obligations stipulated in the contract.
- 16.3 Payments shall be made promptly by the purchaser, but in no case later than thirty (30) days after submission of an invoice or claim by the supplier.
- 16.4 Payment will be made in Rand unless otherwise stipulated.
- 17. Prices**
- 17.1 Prices charged by the supplier for goods delivered and services performed under the contract shall not vary from the prices quoted by the supplier in his bid, with the exception of any price adjustments authorized or in the purchaser's request for bid validity extension, as the case may be.
- 18. Variation Orders**
- 18.1 In cases where the estimated value of the envisaged changes in purchase does not vary more than 15% of the total value of the original contract, the contractor may be instructed to deliver the goods or render the services as such. In cases of measurable quantities, the contractor may be approached to reduce the unit price, and such offers may be accepted provided that there is no escalation in price.
- 19. Assignment**
- 19.1 The supplier shall not assign, in whole or in part, its obligations to perform under the contract, except with the purchaser's prior written consent.
- 20. Subcontracts**
- 20.1 The supplier shall notify the purchaser in writing of all subcontracts awarded under this contracts if not already specified in the bid. Such notification, in the original bid or later, shall not relieve the supplier from any liability or obligation under the contract.
- 21. Delays in the supplier's performance**
- 21.1 Delivery of the goods and performance of services shall be made by the supplier in accordance with the time schedule prescribed by the purchaser in the contract.
- 21.2 If at any time during performance of the contract, the supplier or its subcontractor(s) should encounter conditions impeding timely delivery of the goods and performance of services, the supplier shall promptly notify the purchaser in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the supplier's notice, the purchaser shall evaluate the situation and may at his discretion extend the supplier's time for performance, with or without the imposition of penalties, in which case the extension shall be ratified by the parties by amendment of contract.

- 21.3 The right is reserved to procure outside of the contract small quantities or to have minor essential services executed if an emergency arises, the supplier's point of supply is not situated at or near the place where the goods are required, or the supplier's services are not readily available.
- 21.4 Except as provided under GCC Clause 25, a delay by the supplier in the performance of its delivery obligations shall render the supplier liable to the imposition of penalties, pursuant to GCC Clause 22, unless an extension of time is agreed upon pursuant to GCC Clause 22.2 without the application of penalties.
- 21.5 Upon any delay beyond the delivery period in the case of a goods contract, the purchaser shall, without cancelling the contract, be entitled to purchase goods of a similar quality and up to the same quantity in substitution of the goods not supplied in conformity with the contract and to return any goods delivered later at the supplier's expense and risk, or to cancel the contract and buy such goods as may be required to complete the contract and without prejudice to his other rights, be entitled to claim damages from the supplier.

22. Penalties

- 22.1 Subject to GCC Clause 25, if the supplier fails to deliver any or all of the goods or to perform the services within the period(s) specified in the contract, the purchaser shall, without prejudice to its other remedies under the contract, deduct from the contract price, as a penalty, a sum calculated on the delivered price of the delayed goods or unperformed services using the current prime interest rate calculated for each day of the delay until actual delivery or performance. The purchaser may also consider termination of the contract pursuant to GCC Clause 23.

23. Termination for default

- 23.1 The purchaser, without prejudice to any other remedy for breach of contract, by written notice of default sent to the supplier, may terminate this contract in whole or in part:
- (a) if the supplier fails to deliver any or all of the goods within the period(s) specified in the contract, or within any extension thereof granted by the purchaser pursuant to GCC Clause 21.2;
 - (b) if the supplier fails to perform any other obligation(s) under the contract; or
 - (c) if the supplier, in the judgment of the purchaser, has engaged in corrupt or fraudulent practices in competing for or in executing the contract.

- 23.2 In the event the purchaser terminates the contract in whole or in part, the purchaser may procure, upon such terms and in such manner, as it deems appropriate, goods, works or services similar to those undelivered, and the supplier shall be liable to the purchaser for any excess costs for such similar goods, works or services. However, the supplier shall continue performance of the contract to the extent not terminated.
- 23.3 Where the purchaser terminates the contract in whole or in part, the purchaser may decide to impose a restriction penalty on the supplier by prohibiting such supplier from doing business with the public sector for a period not exceeding 10 years.
- 23.4 If a purchaser intends imposing a restriction on a supplier or any person associated with the supplier, the supplier will be allowed a time period of not more than fourteen (14) days to provide reasons why the envisaged restriction should not be imposed. Should the supplier fail to respond within the stipulated fourteen (14) days the purchaser may regard the supplier as having no objection and proceed with the restriction.
- 23.5. Any restriction imposed on any person by the purchaser will, at the discretion of the purchaser, also be applicable to any other enterprise or any partner, manager, director or other person who wholly or partly exercises or exercised or may exercise control over the enterprise of the first-mentioned person, and with which enterprise or person the first-mentioned person, is or was in the opinion of the purchaser actively associated.
- 23.6 If a restriction is imposed, the purchaser must, within five (5) working days of such imposition, furnish the National Treasury, with the following information:
- (i) the name and address of the supplier and / or person. restricted by the purchaser;
 - (ii) the date of commencement of the restriction
 - (iii) the period of restriction; and
 - (iv) the reasons for the restriction.

These details will be loaded in the National Treasury's central database of suppliers or persons prohibited from doing business with the public sector.

- 23.7. If a court of law convicts a person of an offence as contemplated in sections 12 or 13 of the Prevention and Combating of Corrupt Activities Act, No. 12 of 2004, the court may also rule that such person's name be endorsed on the Register for Tender Defaulters. When a person's name has been endorsed on the Register, the person will be prohibited from doing business with the public sector for a period not less than five years and not more than 10 years. The National Treasury is empowered to determine the period of restriction and each case will be dealt with on its own merits. According to section 32 of the Act the Register must be open to the public. The Register can be perused on the National Treasury website

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24. Antidumping and countervailing duties and rights

24.1 When, after the date of bid, provisional payments are required, or anti-dumping or countervailing duties are imposed, or the amount of a provisional payment or anti-dumping or countervailing right is increased in respect of any dumped or subsidized import, the State is not liable for any amount so required or imposed, or for the amount of any such increase. When, after the said date, such a provisional payment is no longer required or any such anti-dumping or countervailing right is abolished, or where the amount of such provisional payment or any such right is reduced, any such favourable difference shall on demand be paid forthwith by the supplier to the purchaser or the purchaser may deduct such amounts from moneys (if any) which may otherwise be due to the supplier in regard to goods or services which he delivered or rendered, or is to deliver or render in terms of the contract or any other contract or any other amount which may be due to him.

25. Force Majeure

25.1 Notwithstanding the provisions of GCC Clauses 22 and 23, the supplier shall not be liable for forfeiture of its performance security, damages, or termination for default if and to the extent that his delay in performance or other failure to perform his obligations under the contract is the result of an event of force majeure.

25.2 If a force majeure situation arises, the supplier shall promptly notify the purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the purchaser in writing, the supplier shall continue to perform its obligations under the contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the force majeure event.

26. Termination for insolvency

26.1 The purchaser may at any time terminate the contract by giving written notice to the supplier if the supplier becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the supplier, provided that such termination will not prejudice or affect any right of action or remedy, which has accrued or will accrue thereafter to the purchaser.

27. Settlement of Disputes

27.1 If any dispute or difference of any kind whatsoever arises between the purchaser and the supplier in connection with or arising out of the contract, the parties shall make every effort to resolve amicably such dispute or difference by mutual consultation.

27.2 If, after thirty (30) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the purchaser or the supplier may give notice to the other party of his intention to commence with mediation. No mediation in respect of this matter may be commenced unless such notice is given to the other party.

27.3 Should it not be possible to settle a dispute by means of mediation, it may be settled in a South African court of law.

27.4 Notwithstanding any reference to mediation and/or court proceedings herein,
(a) the parties shall continue to perform their respective obligations under the contract unless they otherwise agree; and
(b) the purchaser shall pay the supplier any monies due the supplier for goods delivered and / or services rendered according to the prescripts of the contract.

28. Limitation of Liability	28.1	<p>Except in cases of criminal negligence or willful misconduct, and in the case of infringement pursuant to Clause 6;</p> <p>(a) the supplier shall not be liable to the purchaser, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the supplier to pay penalties and/or damages to the purchaser; and</p> <p>(b) the aggregate liability of the supplier to the purchaser, whether under the contract, in tort or otherwise, shall not exceed the total contract price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment.</p>
29. Governing Language	29.1	The contract shall be written in English. All correspondence and other documents pertaining to the contract that is exchanged by the parties shall also be written in English.
30. Applicable law	30.1	The contract shall be interpreted in accordance with South African laws, unless otherwise specified.
31. Notices	31.1	Every written acceptance of a bid shall be posted to the supplier concerned by registered or certified mail and any other notice to him shall be posted by ordinary mail to the address furnished in his bid or to the address notified later by him in writing and such posting shall be deemed to be proper service of such notice.
	31.2	The time mentioned in the contract documents for performing any act after such aforesaid notice has been given, shall be reckoned from the date of posting of such notice.
32. Taxes and duties	32.1	A foreign supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside the purchaser's country.
	32.2	A local supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted goods to the purchaser.
	32.3	No contract shall be concluded with any bidder whose tax matters are not in order. Prior to the award of a bid SARS must have certified that the tax matters of the preferred bidder are in order.
	32.4	No contract shall be concluded with any bidder whose municipal rates and taxes and municipal services charges are in arrears.

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- 33. Transfer of contracts** 33.1 The contractor shall not abandon, transfer, cede assign or sublet a contract or part thereof without the written permission of the purchaser
- 34. Amendment of contracts** 34.1 No agreement to amend or vary a contract or order or the conditions, stipulations or provisions thereof shall be valid and of any force unless such agreement to amend or vary is entered into in writing and signed by the contracting parties. Any waiver of the requirement that the agreement to amend or vary shall be in writing, shall also be in writing.
- 35. Prohibition of restrictive practices** 35.1 In terms of section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, an agreement between, or concerted practice by, firms, or a decision by an association of firms, is prohibited if it is between parties in a horizontal relationship and if a bidder(s) is / are or a contractor(s) was / were involved in collusive bidding.
- 35.2 If a bidder(s) or contractor(s) based on reasonable grounds or evidence obtained by the purchaser has / have engaged in the restrictive practice referred to above, the purchaser may refer the matter to the Competition Commission for investigation and possible imposition of administrative penalties as contemplated in section 59 of the Competition Act No 89 Of 1998.
- 35.3 If a bidder(s) or contractor(s) has / have been found guilty by the Competition Commission of the restrictive practice referred to above, the purchaser may, in addition and without prejudice to any other remedy provided for, invalidate the bid(s) for such item(s) offered, and / or terminate the contract in whole or part, and / or restrict the bidder(s) or contractor(s) from conducting business with the public sector for a period not exceeding ten (10) years and / or claim damages from the bidder(s) or contractor(s) concerned.

GOVERNMENT PROCUREMENT: GENERAL CONDITIONS OF CONTRACT

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Revised July 2010

DAWID KRUIPER MUNICIPALITY

SPECIFICATION

MELKSTROOM WASTE WATER TREATMENT WORK

1. SCOPE OF BID

2. The bid is for the construction of bulk sewer supply to Dawid Kruiper Municipality.

3. CLOSING DATE AND COMPULSORY SITE MEETING

- 3.1. Sealed bids clearly marked “**TN024/2021 : MELKSTROOM WASTE WATER TREATMENT WORK**” must be placed in the Municipal tender Box **before or at 14:00 on Friday, 10 September 2021** and will be opened directly thereafter in the Councillor Chambers at the Municipal Offices.
- 3.2. A compulsory site meeting will be held on **27 August 2021** at **11:00** in the Council Chamber at the Municipal Building located in Mutual Street, Upington.
- 3.3. The site meeting commences strictly as indicated above and doors will be closed.

3. GENERAL REQUIREMENTS

- 3.1. This bid document as a whole, without any alteration, modification, deletion, editing or formatting of the documents content, must be completed and returned no later than the closing date and time to be evaluated. Any incomplete, altered, modified, edited or formatted document will not be considered.
- 3.2. The lowest or only bid will not necessarily be accepted.
- 3.3. Bids per fax or E- mail will also not be considered, only the original signed document will be accepted.
- 3.4. The following forms, Summary of items and bid price, MBD 1, MBD 4, MBD 6.1, MDB 7.1, MBD 8 and MBD 9, must be completed.
- 3.5. Bids will be evaluated in accordance with the applicable Preferential Point Scoring System as set out in the Councils Supply Chain Management Policy.
- 3.6. B-BBEE points would be allocated if:
 - 3.6.1 A certified copy of the B-BBEE verification certificate. A verification certificate will only be accepted if the verification agency is accredited by South African National Accreditation System (SANAS) or
 - 3.6.2 An original Sworn Affidavit is attached to the bid document.
- 3.7. Bidders must be registered at National Treasury’s Central Suppliers Data Base (CSD) and proof must be submitted.
- 3.8. A copy of the tax clearance certificate issued and/or the document issued by SARS indicating the tax clearance PIN. Please note that it is the responsibility of the supplier to ensure that all tax related matters are in order daily.

4. COMPULSORY DOCUMENTATION

These documents **must be attached** to the bid form. Bids not containing these documents will be deemed as incomplete. (See appendix F)

- 4.1. A copy of the Municipal account not older than 3 months.
- 4.2. If the bidder is not liable for levies for municipal services, a Sworn Affidavit indicating reasons as to why a municipal account cannot be submitted and/or a Lease Agreement indicating such must be provided.

- 4.3. A grade **5CE CIDB** registration is required to qualify for this tender. Tenderers who do not comply with this condition will not be considered

5. BID PRICING

- 5.1. Bidders are required to quote prices according to the price schedules and specifications.
- 5.2. Price(s) quoted must be valid for at least 90 (ninety) days from bid closing date
- 5.3. Price(s) quoted must be firm and must be inclusive of VAT.
- 5.4. All prices must include delivery cost, accommodation and travel cost.

6. METHOD OF DELIVERY AND ADDRESS

Goods and services must be delivered as a whole.
Delivery must be made to

Dawid Kruiper Municipality
Municipal building
Mutual Street
Upington
Northern Cape

7. LEGISLATIVE REQUIREMENTS

- 7.1. Occupational Health and Safety Act (Act 85 of 1993) and Construction Regulations 2014
- 7.2. Disaster Management Act (Act 57 of 2002) regarding the COVID-19 Corona Virus crisis facing South Africa and the world. National regulations and procedures need to be adhered to, and all employees and the public need to be protected at all times.

SPECIFIC REQUIREMENTS

- 8.1. The bidder must submit proof of previous experience and **proof of similar work** successfully concluded in respect of the type of project (concrete work)
- 8.2. General
The Municipality needs the services of a contractor for the construction of bulk sewer supply to Melkstroom, Upington
 - 8.2.1. The contractor shall make his own arrangements for obtaining power and water for construction and domestic purposes as well as toilet facilities as required by the Health and Safety Regulations. The contractor shall be responsible for all costs involved.
 - 8.2.2. The contractor shall make his own arrangements for a camp site
 - 8.2.3. The contractor must take the safety of the residents and their property into account during the planning and execution of the works.
 - 8.2.4. The contractor shall be responsible to locate and safeguard any existing service or work he may encounter during construction.
 - 8.2.5. The contractor shall be responsible for any damage to such existing services.
 - 8.2.6. A triplicate book supplied by the contractor to be used for site instruction shall at all times be kept on site.
 - 8.2.7. No trench may be left open over weekends and holidays.
 - 8.2.8. The contractor shall erect the necessary signs, notices and barricades for the duration of the contract in order to safeguard both the works and the public.
 - 8.2.9. The contractor shall be responsible for obtaining all of the necessary way leaves applicable to work near any existing services.
 - 8.2.10. Project must be completed within eight months after date of appointment

NB: More details of the project will be given during the compulsory site meeting

8.3. General Information

8.3.1. Bidders must complete the full document and submit proof where necessary. The complete bid document must be returned. Any documents the bidder wants to attach must be added by means of neatly marked attachments.

8.3.2. The Bidder must submit at least two (2) projects successfully completed (attach summary sheet, contact list to be contacted, project value, project description and completion certificate) in the past ten (10) years for the construction of concrete structures or any other concrete works.

8.4. Bill of Quantities

8.4.1. General

This bill of quantities must be read at all times with the Conditions of Contract, Special Conditions of Contract, the bid document, the General Specifications, the Project Specifications and Drawings.

Refer to **Appendix B of the Technical Specification (Section "G")** for the Bill of Quantities.

8.4.2. Price all items

Prices and unit prices must be entered against each item in the bill of quantities. Items for which no price or unit price is entered, shall be deemed to be covered by other prices and unit prices in the bill of quantities.

8.4.3. Payments

Payment shall only be made for items as specified in the bill of quantities. The employer retains the right to have any work that is not according to specification, be rectified before payment.

8.5. Tender Documents

The following documents form part of this tender.

8.5.1. The General Conditions of Contract for Construction works (Third Edition) 2015 as published by the South African Institution of Civil Engineering. This publication is available and bidders must obtain their own copies at their own cost.

8.5.2. The SANS 1200 Standardized Specifications for Civil Engineering Construction and SANS 0400 National Building Regulations prepared by Standards South Africa. These publications are available and bidders must obtain their own copies at their own cost.

8.6. Drawings

The following drawings are applicable to the contract and are issued with this tender document and will form part of the Contract Documents as:

Refer to **Appendix A of the Technical Specification (Section "G")** for the tender drawings

9. PRE-QUALIFICATION CRITERIA FOR PREFERENTIAL PROCUREMENT

In accordance with the prescriptions of Government Gazette 40553 of 20 January 2018 (Preferential Procurement Policy Framework Act, 2000: Preferential Procurement Regulations, 2017) the following pre-qualification criteria for preferential procurement will apply to this tender:

Only tenderers who will comply to the following criteria may respond;

9.1. Tenderers with a minimum B-BBEE level 1. Proof **MUST** be submitted as required per Specifications 3.6 above.

9.2. **If no proof is submitted, in terms of Specifications set out in 3.6 above, the Tender will be deemed as Non-Responsive.**

DAWID KRUIPER MUNICIPALITY

SECTION "C"

To: The Municipal Manager
Private Bag X6003
UPINGTON
8800

Sir

In response to the official notice calling for the supply and delivery of the services listed I/we, the undersigned, carrying on a business under the name of:

Address: _____

Tel nr: _____

do hereby quote to supply the services in accordance with the General Conditions of Quotation and the Specifications attached hereto except in so far as amended in our accompanying covering letter, at the prices given and to deliver those services within the stated delivery period measured from the date of the Council's letter of acceptance of my/our quotation. Quotation prices are included in Section "D" hereof.

The undersigned agrees, that in terms of these documents this Quotation shall remain open for acceptance for a period of **90 (ninety)** days from the date on which quotations are returnable and that notification of acceptance by the Municipal Manager shall constitute a binding contract with effect from the date of such notification.

Bid price (all taxes included): R_____

Amount in words: _____

SIGNED AT _____ ON THIS _____ DAY OF _____ 2021.

Signed by, or on behalf of the bidder, in the presence of the undersigned witnesses.

WITNESSES:

1. _____

2. _____

SIGNATURE OF BIDDER

DAWID KRUIPER MUNICIPALITY

SECTION "D"

SUMMARY OF ITEMS AND BID PRICES

All prices quoted must be VAT inclusive

Complete Bills of Quantities is included in **Appendix B**.

After I/we have checked with the general conditions of the bid, I/we bid as follows:

ITEM	DESCRIPTION	AMOUNT
1	SANS 1200 A: General	
2	SANS 1200 C: Site Clearance	
3	SANS 1200 D: Earthworks	
4	SANS 1200 DB: Earthworks (Pipe Trenches)	
5	SANS 1200 G: Concrete (Structural)	
6	SANS 1200 H: Structural Steelwork	
7	SANS 1200 LB: Bedding (Pipes)	
8	SANS 1200 LC: Cable Ducts	
9	SANS 1200 LD: Sewers	
14	Subtotal 1	
15	10% contingencies	
16	Subtotal 2	
17	15 % VAT on Subtotal 2	
18	TOTAL (This amount to be entered in Section "C" above)	

NB : Completion of this page is compulsory and the total must be entered as the bid price in the MBD 1 form below and section C above.

Signature of Bidder

Witnesses: 1.....

 2.....

DAWID KRUIPER MUNICIPALITY

SECTION "E"

FORMS TO BE COMPLETED

**PART A
INVITATION TO BID**

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE DAWID KRUIPER MUNICIPALITY			
BID NUMBER:	TN024/2021	CLOSING DATE:10 September 2021	CLOSING TIME: 14:00
DESCRIPTION	BULK SEWER SUPPLY FOR MELKSTROOM		
THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM (MBD7).			

BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT

Dawid Kruiper Municipality
Civic Centre
Mutual Street
Uppington
8800

SUPPLIER INFORMATION			
NAME OF BIDDER			
POSTAL ADDRESS			
STREET ADDRESS			
TELEPHONE NUMBER	CODE		NUMBER
CELLPHONE NUMBER			
FACSIMILE NUMBER	CODE		NUMBER
E-MAIL ADDRESS			
VAT REGISTRATION NUMBER			
TAX COMPLIANCE STATUS	TCS PIN:		OR CSD No:
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE [TICK APPLICABLE BOX]	<input type="checkbox"/> Yes <input type="checkbox"/> No	B-BBEE STATUS LEVEL SWORN AFFIDAVIT	<input type="checkbox"/> Yes <input type="checkbox"/> No

[A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE/ SWORN AFFIDAVIT (FOR EMES & QSEs) MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE]

<p>ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>[IF YES ENCLOSE PROOF]</p>	<p>ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS /SERVICE S /WORKS OFFERED ?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>[IF YES, ANSWER PART B:3]</p>
<p>TOTAL NUMBER OF ITEMS OFFERED</p>	<p>TOTAL BID PRICE: R.....</p>		
<p>SIGNATURE OF BIDDER</p>	<p>..... ...</p>	<p>DATE</p>	
<p>CAPACITY UNDER WHICH THIS BID IS SIGNED</p>			
<p>BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO:</p>		<p>TECHNICAL INFORMATION MAY BE DIRECTED TO:</p>	
<p>DEPARTMENT</p>	<p>Supply Chain Management Unit</p>	<p>DEPARTMENT</p>	<p>Project Management Unit</p>
<p>CONTACT PERSON</p>	<p>Michael Rooi</p>	<p>CONTACT PERSON</p>	<p>Hilton Wilson</p>
<p>TELEPHONE NUMBER</p>	<p>054 338 7133</p>	<p>TELEPHONE NUMBER</p>	<p>054 338 7056</p>
<p>FACSIMILE NUMBER</p>	<p>-</p>	<p>E-MAIL ADDRESS</p>	<p>hilton.wilson@dkma.gov.za</p>
<p>E-MAIL ADDRESS</p>	<p>michael.rooi@dkm.gov.za</p>		

**PART B
TERMS AND CONDITIONS FOR BIDDING**

1. BID SUBMISSION:

- 1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.
- 1.2. **ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED--(NOT TO BE RE-TYPED) OR ONLINE**
- 1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.

2. TAX COMPLIANCE REQUIREMENTS

- 2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.
- 2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VIEW THE TAXPAYER'S PROFILE AND TAX STATUS.
- 2.3 APPLICATION FOR THE TAX COMPLIANCE STATUS (TCS) CERTIFICATE OR PIN MAY ALSO BE MADE VIA E-FILING. IN ORDER TO USE THIS PROVISION, TAXPAYERS WILL NEED TO REGISTER WITH SARS AS E-FILERS THROUGH THE WEBSITE WWW.SARS.GOV.ZA.
- 2.4 FOREIGN SUPPLIERS MUST COMPLETE THE PRE-AWARD QUESTIONNAIRE IN PART B:3.
- 2.5 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.
- 2.6 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.
- 2.7 WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.

3. QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS

- 3.1. IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)?
 YES NO
- 3.2. DOES THE ENTITY HAVE A BRANCH IN THE RSA?
 YES NO
- 3.3. DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA?
 YES NO
- 3.4. DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA?
 YES NO
- 3.5. IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION?
 YES NO

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

**NB: FAILURE TO PROVIDE ANY OF THE ABOVE PARTICULARS MAY RENDER THE
BID INVALID.
NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE.**

SIGNATURE OF BIDDER:

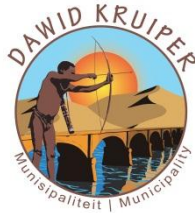
.....

CAPACITY UNDER WHICH THIS BID IS SIGNED:

.....

DATE:

.....



DECLARATION OF INTEREST

- 1. No bid will be accepted from persons in the service of the state¹.
- 2. Any person, having a kinship with persons in the service of the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to persons in service of the state, it is required that the bidder or their authorised representative declare their position in relation to the evaluating/adjudicating authority.
- 3. In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.

3.1 Full Name of bidder or his or her representative:.....

3.2 Identity Number:

3.3 Position occupied in the Company (director, trustee, hareholder²):.....

3.4 Company Registration Number:

3.5 Tax Reference Number:.....

3.6 VAT Registration Number:

3.7 The names of all directors / trustees / shareholders members, their individual identity numbers and state employee numbers must be indicated in paragraph 4 below.

3.8 Are you presently in the service of the state? **YES / NO**

3.8.1 If yes, furnish particulars.

.....
.....

¹MSCM Regulations: "in the service of the state" means to be –

- (a) a member of –
 - (i) any municipal council;
 - (ii) any provincial legislature; or
 - (iii) the national Assembly or the national Council of provinces;
- (b) a member of the board of directors of any municipal entity;
- (c) an official of any municipality or municipal entity;
- (d) an employee of any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No.1 of 1999);
- (e) a member of the accounting authority of any national or provincial public entity; or
- (f) an employee of Parliament or a provincial legislature.

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

3.9 Have you been in the service of the state for the past twelve months? **YES / NO**
3.9.1 If yes, furnish particulars

.....
.....

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

3.10.1 If yes, furnish particulars.

.....
.....

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

3.11.1 If yes, furnish particulars

.....
.....

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

3.12.1 If yes, furnish particulars.

.....
.....

3.13 Are any spouse, child or parent of the company's director's trustees, managers, principle shareholders or stakeholders in service of the state? **YES / NO**

3.13.1 If yes, furnish particulars.

.....
.....

3.14 Do you or any of the directors, trustees, managers, principle shareholders, or stakeholders of this company have any interest in any other related companies or business whether or not they are bidding for this contract? **YES / NO**

3.14.1 If yes, furnish particulars:

.....
.....

MBD 4

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

Full Name	Identity Number	State Employee Number

.....
Signature

.....
Date

.....
Capacity

.....
Name of Bidder

DECLARATION FOR PROCUREMENT ABOVE R10 MILLION (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? ***YES / NO**

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

.....
.....

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? ***YES / NO**

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, furnish particulars

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

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

4.1. If yes, furnish particulars

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

* Delete if not applicable

1 CERTIFICATION

I, THE UNDERSIGNED (NAME)

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

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

.....

Signature

.....

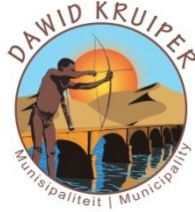
Date

.....

Position

.....

Name of Bidder



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

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

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

1. GENERAL CONDITIONS

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

- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and
- the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).

1.2

- a) The value of this bid is estimated to **not exceed** R50 000 000 (all applicable taxes included) and therefore the **80/20** preference point system shall be applicable; or
- b) Either the 80/20 preference point system will be applicable to this tender
(*delete whichever is not applicable for this tender*).

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.

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

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

B-BBEE Status Level of Contributor	Number of points (90/10 system)	Number of points (80/20 system)
1	10	20
2	9	18
3	6	14
4	5	12
5	4	8
6	3	6
7	2	4
8	1	2
Non-compliant contributor	0	0

5. BID DECLARATION

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

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

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

7. SUB-CONTRACTING

7.1 Will any portion of the contract be sub-contracted?

(Tick applicable box)

YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
-----	--------------------------	----	--------------------------

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	<input type="checkbox"/>	NO	<input type="checkbox"/>
-----	--------------------------	----	--------------------------

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 last 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
.....
.....



DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

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

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

Item	Question	Yes	No
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:		

MBD 8

CERTIFICATION

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

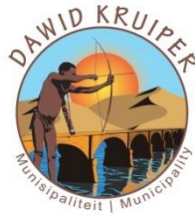
I ACCEPT THAT, IN ADDITION TO CANCELLATION OF A CONTRACT, ACTION MAY BE TAKEN AGAINST ME SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....
Signature

.....
Date

.....
Position

.....
Name of Bidder



CERTIFICATE OF INDEPENDENT BID DETERMINATION

- 1 This Municipal Bidding Document (MBD) must form part of all bids¹ invited.
- 2 Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).² Collusive bidding is a *pe se* prohibition meaning that it cannot be justified under any grounds.
- 3 Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:
 - a. take all reasonable steps to prevent such abuse;
 - b. reject the bid of any bidder if that bidder or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system; and
 - c. cancel a contract awarded to a person if the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract.
- 4 This MBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.
- 5 In order to give effect to the above, the attached Certificate of Bid Determination (MBD 9) must be completed and submitted with the bid:

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

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

NOTICE

MBD 9

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

TN024/2021 MELKSTROOM WASTE WATER TREATMENT WORK

in response to the invitation for the bid made by:

DAWID KRUIPER MUNICIPALITY

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

I certify, on behalf of: _____ that:
(Name of Bidder)

1. I have read and I understand the contents of this Certificate;
2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;
3. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
4. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign, the bid, on behalf of the bidder;
5. For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:
 - (a) has been requested to submit a bid in response to this bid invitation;
 - (b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
 - (c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder
6. The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However communication between partners in a joint venture or consortium³ will not be construed as collusive bidding.

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.

7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
- (a) prices;
 - (b) geographical area where product or service will be rendered (market allocation)
 - (c) methods, factors or formulas used to calculate prices;
 - (d) the intention or decision to submit or not to submit, a bid;
 - (e) the submission of a bid which does not meet the specifications and conditions of the bid; or
 - (f) bidding with the intention not to win the bid.
8. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this bid invitation relates.
9. The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

.....
Signature

.....
Date

.....
Position

.....
Name of Bidder



2 CONTRACT FORM - PURCHASE OF GOODS/WORKS

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

3 PART 1 (TO BE FILLED IN BY THE BIDDER)

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

NAME (PRINT)

CAPACITY

SIGNATURE

NAME OF FIRM

DATE

WITNESSES	
1	.....
2.	.....
DATE:	

CONTRACT FORM - PURCHASE OF GOODS/WORKS

4 PART 2 (TO BE FILLED IN BY THE PURCHASER)

- 1. I..... in my capacity as..... accept your bid under reference numberdated.....for the supply of goods/works indicated hereunder and/or further specified in the annexure(s).
- 2. An official order indicating delivery instructions is forthcoming.
- 3. I undertake to make payment for the goods/works delivered in accordance with the terms and conditions of the contract, within 30 (thirty) days after receipt of an invoice accompanied by the delivery note.

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

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

SIGNED ATON.....

NAME (PRINT)

SIGNATURE

OFFICIAL STAMP

WITNESSES	
1.	.....
2.	.....
DATE	.....



CONTRACT FORM - RENDERING OF SERVICES

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

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

I hereby undertake to render services described in the attached bidding documents to (name of the institution)..... in accordance with the requirements and task directives / proposals specifications stipulated in Bid Number..... at the price/s quoted. My offer/s remain binding upon me and open for acceptance by the Purchaser during the validity period indicated and calculated from the closing date of the bid.

1. The following documents shall be deemed to form and be read and construed as part of this agreement:

- (iv) Bidding documents, viz
 - Invitation to bid;
 - Tax clearance certificate;
 - Pricing schedule(s);
 - Filled in task directive/proposal;
 - Preference claims for Broad Based Black Economic Empowerment Status Level of Contribution in terms of the Preferential Procurement Regulations 2011;
 - Declaration of interest;
 - Declaration of Bidder's past SCM practices;
 - Certificate of Independent Bid Determination;
 - Special Conditions of Contract;
- (v) General Conditions of Contract; and
- (vi) Other (specify)

2. I confirm that I have satisfied myself as to the correctness and validity of my bid; that the price(s) and rate(s) quoted cover all the services specified in the bidding documents; that the price(s) and rate(s) cover all my obligations and I accept that any mistakes regarding price(s) and rate(s) and calculations will be at my own risk.

3. I accept full responsibility for the proper execution and fulfilment of all obligations and conditions devolving on me under this agreement as the principal liable for the due fulfillment of this contract.

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

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

NAME (PRINT)

CAPACITY

SIGNATURE

NAME OF FIRM

DATE

WITNESSES	
1	.....
2	.....
DATE:	.....

CONTRACT FORM - RENDERING OF SERVICES

PART 2 (TO BE FILLED IN BY THE PURCHASER)

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

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

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

SIGNED AT ON

NAME (PRINT)

SIGNATURE

OFFICIAL STAMP

WITNESSES	
1	.....
2	.....
DATE:	



CONTRACT FORM - SALE OF GOODS/WORKS

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

PART 1 (TO BE FILLED IN BY THE BIDDER)

1. I hereby undertake to purchase all or any of the goods and/or works described in the attached bidding documents from (name of institution)..... in accordance with the requirements stipulated in (bid number)..... at the price/s quoted. My offer/s remain binding upon me and open for acceptance by the seller during the validity period indicated and calculated from the closing time of bid.
2. The following documents shall be deemed to form and be read and construed as part of this agreement:
 - (vii) Bidding documents, viz
 - Invitation to bid;
 - Tax clearance certificate;
 - Pricing schedule(s);
 - Declaration of interest;
 - Declaration of Bidder's past SCM practices;
 - Special Conditions of Contract;
 - (viii) General Conditions of Contract; and
 - (ix) Other (specify)
3. I confirm that I have satisfied myself as to the correctness and validity of my bid; that the price(s) quoted cover all the goods and/or works specified in the bidding documents; that the price(s) cover all my obligations and I accept that any mistakes regarding price(s) and calculations will be at my own risk.
4. I accept full responsibility for the proper execution and fulfilment of all obligations and conditions devolving on me under this agreement as the principal liable for the due fulfillment of this contract.
5. I undertake to make payment for the goods/works as specified in the bidding documents.
6. I declare that I have no participation in any collusive practices with any bidder or any other person regarding this or any other bid.
7. I confirm that I am duly authorised to sign this contract.

NAME (PRINT)

CAPACITY

SIGNATURE

NAME OF FIRM

DATE

WITNESSES	
1	.....
2	.....
DATE:	

CONTRACT FORM - SALE OF GOODS/WORKS

PART 2 (TO BE FILLED IN BY THE SELLER)

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

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

ITEM NO.	DESCRIPTION	PRICE (ALL APPLICABLE TAXES INCLUDED)		

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

SIGNED ATON.....

NAME (PRINT)

SIGNATURE

OFFICIAL STAMP

WITNESSES 1. 2. DATE
--

DAWID KRUIPER MUNICIPALITY

SECTION "F"

Annexures

Attach all annexures and documents to this page

1. Tax Clearance certificate
2. CSD registration
3. Certified B-BBEE Certificate or Original Sworn Affidavit
4. Municipal account
5. Documents as required under "Specific requirements"

DAWID KRUIPER MUNICIPALITY

SECTION "G"

TECHNICAL SPECIFICATION

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1. INTRODUCTION

Tender for the construction of the bulk services (sewer) for Melkstroom, Upington for Dawid Kruiper Municipality.

The works is located adjacent to the N14, north east of Upington, Northern Cape Province, South Africa, as indicated in **Figure 0-1**.

Tenders are to be completed in accordance with the conditions included in the document.

2. SCHEDULE OF DOCUMENTS FOR THE TECHNICAL SPECIFICATION

The following documents form part of the **Technical Specification**:

- Scope of Work:
 - Locality
 - Background
 - Description of the Works
- Project Specifications
- "Standardised Specifications for Civil Engineering Construction" (SANS 1200) (Not included in this document), with specific emphasis on the following:
 - SANS 1200 A : General
 - SANS 1200 C : Site clearance
 - SANS 1200 D : Earthworks
 - SANS 1200 DB : Earthworks (Pipe Trenches)
 - SANS 1200 G : Concrete (Structural)
 - SANS 1200 L : Medium-pressure pipelines
 - SANS 1200 LB : Bedding (pipes)
 - SANS 1200 LC : Cable ducts
 - SANS 1200 LD : Sewers

3. SCOPE OF WORK

3.1. LOCALITY

The site is located adjacent to the N14, north east of Upington, Northern Cape Province, South Africa, as indicated in **Figure 0-1**.

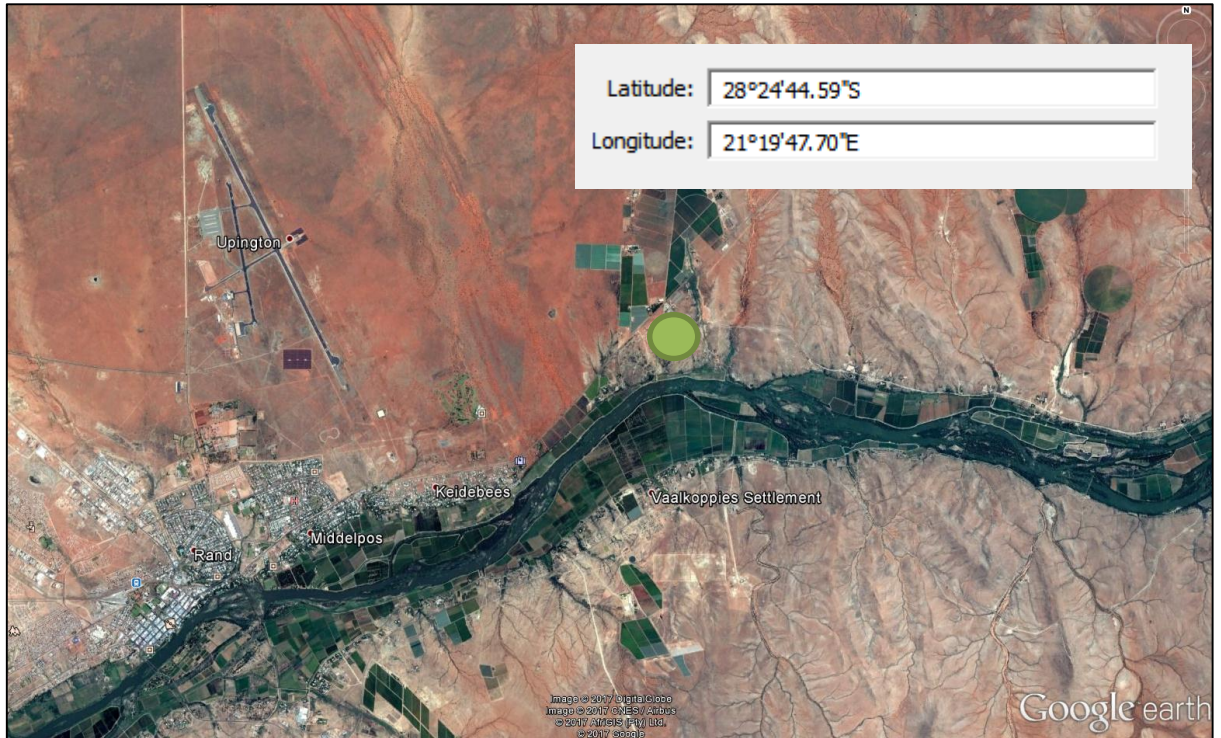


Figure 0-1 – Site Locality (Map Data from Google, 2017)

3.2. BACKGROUND

Tender documentation for the construction of the bulk services (sewer) for Melkstroom, Upington for Dawid Kruiper Municipality.

The construction of a bulk sewerage package plant, based on 182 current household stands with a design horizon of 20 years (a total of 245 household stands in 2040) will be constructed at Melkstroom. Additional capacity allowance for treating of effluent from the surrounding farms has been made. The treated effluent will be discharged into the river.

3.3 Description of the Scope of Work

3.3.1 General

The Scope of Work in terms of this tender document is summarised below:

- Fencing (Galvanized).
 - Bulk Sewer Installation.
- Bulk sewerage package plant, sized for 245 household and surrounding farms;

4. Project Specifications

4.1 Introduction

4.1.1 Scope

This Project Specification comprises three sections:

- General description of the requirements to be met and a list of the design briefs and Standardised and Particular Specifications applicable to this Contract;
- Variations and additions to the Standardised Specifications that are applicable to this Contract; and
- The Particular Specifications applicable to this Contract are bound herein under this section and these form part of the Project Specification of this Contract.

4.1.2 Status

The Project Specification supplements the Standardised and Particular Specifications and forms an integral part of the Contract. Unless otherwise stated, these Specifications are additional to, and should be read in conjunction with the Standardised Specifications.

4.2 GENERAL DESCRIPTION OF THE WORKS

PS-1 General Description

The works to be carried out is described in the **Scope of Work** section.

PS-2 General

Any and all existing roads utilised for construction purposes shall be strictly maintained in their original condition. Should any road be damaged by the Contractor, it shall be immediately reinstated to its original condition at his expense.

The responsibility for ensuring that all anticipated costs in the above regard for all affected roads are included in this Tender rests with the Tenderer. The affected roads vary in typical standard and both surfaced and unsurfaced roads are present. The Tenderer shall make full allowance for this work in his tender submission and all costs shall be included in the listed items.

PS-3 Construction Programme**PS-3.1 Preliminary programme**

The Time for Completion for this Contract is 8 calendar months (including access to site). The Tenderer shall be deemed to have allowed fully for all possible delays due to normal adverse weather conditions, and public holidays as specified in the Special Conditions of Contract and the Project Specifications.

The Contractor shall commence Work within fourteen (14) days after handover of the Site.

PS-3.2 Programmes Required

The cost of the provision of all programmes will be deemed to be included in the rates provided under the scheduled preliminary and general items.

PS-3.2.1 Construction Programme

The Contractor shall submit to the Engineer for approval, a properly detailed construction programme suitably subdivided into sections and activities within each section of the Works. A resource schedule and cash flow shall also be submitted before the commencement of the Contract.

This programme shall be submitted within 7 days on commencement of the Contract.

PS-3.2.2 Progress

The Contractor shall be responsible for furnishing detailed programs and information pertaining to the progress of the Works in a format acceptable to the Engineer for the full duration of the Contract. This shall include the maintenance of a daily diary detailing the activities, equipment, etc. of the relevant day, which shall be submitted by 08:00 on the following day to the Engineer

Where delays have taken place, the construction programme shall be updated showing how the Contractor shall make up for lost time. Where delay is due to abnormal climatic conditions the extension in time approved shall be indicated. This shall be done at least on a monthly basis before the regular Site Meeting.

All the costs thereof shall be deemed to be included in the prices quoted.

PS-3.2.3 Delay in Completion

The Contractor shall organize the works in such a manner that no delay occurs. Delay due to faulty organization or lack of materials or labour or to any other cause within the control of the Contractor will not be considered and the Engineer may order the Contractor to expedite the work, should the work in the opinion of the Engineer not be proceeding in a satisfactory manner.

The Contractor shall make every effort to work in accordance with this programme and, should he at any time fall behind, he shall submit for approval a revised programme detailing how he proposes to bring his work back to schedule.

PS-3.2.4 Ordering of Long Delivery Items

The Contractor's attention is drawn to the fact that where certain items of equipment are required early in the project construction programme, especially for those required for building in into structures, and where long delivery items are involved, those are to be ordered and supplied to site timeously in order to avoid any delays to the overall project construction programme of the Works.

PS-4 Construction Camp

Possible positions of the construction camp will be provided by the Client on contract award.

The layout of the construction camp site shall be submitted to the Engineer before the Contractor starts erecting his camp.

PS-4.1 Notification of Contractor's Site Requirements

As early as possible, after tender clarification and before award of contract, the Contractor shall notify the Engineer of his requirements for the services listed below.

PS-4.2 Stacking and Office Sites

The Contractor shall, where required, fence (temporary fencing or barricading) the site establishment and laydown areas allocated to him, provide lockable gates (if applicable) and have large name-boards displayed (if applicable). The Contractor is responsible for keeping his areas neat and tidy without weeds and accumulations of rubbish. Buildings shall be respectable.

Inflammable and hazardous materials shall be stored safely and separately. Adequate firefighting equipment shall be made available by the Contractor.

The Contractor shall be responsible for taking all necessary precautions to safeguard his site establishment and installation from theft and damage, but complying with the Employer's safety requirements.

At the end of the contract, the Contractor shall clear the site of all buildings, latrines, concrete slabs, cables, water pipes, sewers, fences, name-boards and rubbish which were the result of his occupation.

PS-4.3 Electricity Supplies

The Contractor shall make his own arrangements for electrical supply and the related cost thereof. No separate payment will be made in this regard.

PS-4.4 Water Supplies

The Contractor shall make his own arrangements for water supply and the related cost thereof. No separate payment will be made in this regard.

PS-4.5 Compressed Air

The Contractor shall supply his own compressed air for erection and construction purposes. No separate payment will be made in this regard.

PS-4.6 Excrement Disposal

The Contractor shall, at his own expense, be responsible for safely and hygienically dealing with and disposing of all human excrement and similar matter generated on the Site during the course of the Contract, to the satisfaction of the responsible health authorities in the area of the Site and the Engineer. All such excrement shall be removed from the Site and shall not be disposed of by the Contractor on the Site.

The Contractor shall further comply with any other requirements in this regard as may be stated in the Contract.

No separate payment will be made to the Contractor in respect of discharging his obligations in terms of this sub-clause and the costs thereof shall be deemed to be included within the Contractor's tendered Preliminary and General Items.

PS-4.7 Use of Client's Cranes

No overhead gantry or mobile cranes will be made available from the Client. The Contractor should include the use of required cranes in the Tendered price if required (***not foreseen***).

PS-5 Health and Safety

PS-5.1 Applicable legislation

The following rules and regulations shall apply at all times on the construction site:

- Occupational Health and Safety Act (Act No 85 of 1993);
- Motor vehicles shall comply with Road Traffic Ordinance, Ordinance 21 of 1966 and Regulations framed thereunder;
- The standards of safety and good housekeeping required of Contractors are those established by the National Occupational Safety Association (NOSA) and the International Organization of Standardization (ISO); and
- Construction regulation 2014.
- Disaster Management Act (Act 57 of 2002) regarding the COVID-19 Corona Virus crisis facing South Africa and the world. National regulations and procedures need to be adhered to, and all employees and the public need to be protected at all times.

PS-6 Site Preservation

The Contractor shall take all precautions to avoid damage to, or interference with existing equipment, buildings, fences, walls, roads, trees and all services, whether hidden or exposed. Costs of repairs or replacement for any such damage shall be to the Contractor's account.

PS-7 General Site Regulations

PS-7.1 Appointment of a Competent Person for Excavation Work

The Contractor shall, in writing, appoint a competent person(s) to be in charge of excavations. All excavations shall be performed under the supervision of such a competent person.

PS-7.2 Safe Excavation Practices

Slopes of excavation must be as flat as possible. A slope of 1 vertical: 1.5 horizontal should be considered maximum for dry conditions. In wetter conditions, either a flatter slope must be used, or if space is a constraint, shoring, bracing and dewatering must be done.

Excavated material must be placed as far from the trench edge as practically possible.

The approval of the Contractor's competent person for excavation work must be obtained before heavy equipment may be placed within the angle of repose of the soil of an excavation.

Tools not in use must be removed from the excavation to avoid it injuring employees or being lost in the event of a slide.

Excavation must be backfilled and properly compacted as soon as possible after the work has been completed.

PS-7.3 Working in Excavations

When persons are working in an excavation, another person must be in attendance outside the excavation.

The Contractor must ensure that convenient and safe access is provided to every excavation in which persons are required to work and which is more than 1.5 m deep. Provided that where an excavation is longer than 50 m, safe access shall be provided at intervals of not more than 12 m.

Any excavation must be adequately shored if people are required to work in the excavation and the depth is more than 4 m or where conditions render this necessary at lesser depths.

Undercutting is not allowed.

PS-7.4 Demarcation

The Contractor shall cause every excavation, which is accessible to people, adjacent to roads or thoroughfares, or whereby the health and safety of persons may be endangered to be adequately demarcated by a visible solid barrier or fence at least 900 mm high to define the general area in which excavations are taking place.

Red warning lights must be provided at night in all excavated areas (if in the path of traffic).

The purpose of demarcation is to warn that a worksite exists and to define its limits. It is not a substitute for barricades and it shall be manned where necessary, e.g. flag men on road works.

PS-7.5 Shoring

A Contractor shall not, except for the purpose of erecting shoring or bracing, require or permit any person to work in an excavation under unsupported overhanging material or in an excavation which is more than 1.5 m deep and which has no bracing. Bracing shall not be necessary where the excavation is in solid rock, if the competent person for excavations satisfy himself that the rock is solid and that potential failure planes do not exist.

The Contractor must ensure that shoring and bracing are supported by cross-braces of adequate strength, secured by suitable means. Where the width of the excavation is such that cross bracing is not possible, supporting braces shall bear against footings so arranged as to prevent the braces from kicking out.

The Contractors appointed competent person for excavations must ensure that the shoring and bracing is of sufficient strength to support all excavated or other material, equipment or loads imposed on the excavation.

PS-7.6 Barricading

A solid barricade must protect all excavations.

Barricading includes providing safe passage through the work site if a bypass is not available (safe passage means unobstructed foot and headway).

Solid barricades must be clearly visible and must comply with all statutory requirements relevant to the job in hand and must be checked regularly and kept up to standard at all times. The purpose of a barricade is to prevent people from falling into the excavation.

Barrier tape (Chevron tape) is intended for demarcation and is not a barricade.

PS-7.7 Storm and Groundwater Control

Damage to completed and half-completed work by stormwater must be avoided by diverting stormwater away from excavations and if possible to dig uphill to allow storm-water to flow out of the excavation.

Excavating at a slope could control groundwater, thus draining groundwater to a low point for pumping.

It is the Contractor's responsibility to keep the works free from stormwater by using diversion channels, berms etc. at his cost.

PS-7.8 Inspections of Excavations

A close watch must be maintained at all times for signs of slipping, e.g. cracks developing at the edge of the excavation or bulges in the batter.

Excavations must be inspected by a competent person and pronounced safe before each shift and after each occurrence of rain or change to the excavation / shoring.

All inspections by the competent person for excavations must be recorded in a register created for that purpose.

PS-8 Site Facilities Required**PS-8.1 General**

Site facilities will not be required by the Engineer.

The Contractor shall not be permitted to erect a temporary construction camp for the housing of his labour adjacent to or on the site of the Works. No accommodation is available.

The Contractor shall provide adequate and approved temporary ablution and latrine facilities for his workmen on site and remove these facilities on completion. Latrines shall be provided at the rate of one per ten persons. Location shall be properly screened and their use strictly enforced.

No sign posting will be permitted unless authorized in writing by the Engineer.

The Contractor shall supply, install, properly maintain and remove all temporary construction facilities and utilities necessary for full and complete execution of the Works. Such items shall include, but not be limited to, the following:

- all temporary buildings;
- all sanitary facilities ;
- first aid facilities;
- electrical distribution and lighting;
- all cranes and other equipment for lifting;
- pumping facilities and piping, etc.;
- water distribution system.

PS-9 Features Requiring Special Attention

PS-9.1 Flexibility of Construction Activities

The Engineer has the right to instruct the Contractor to deviate/adjust/direct/modify the Contractor's schedule and/or activities to serve the best interest of the project. The Contractor shall be flexible and able to adapt to changing circumstances.

PS-10 Quality control (QC) and quality assurance (QA) measures

It will be the full responsibility of the Contractor to undertake appropriate quality control and quality assurance measures on Site. The Contractor shall submit to the Engineer for approval before the commencement of any major activity, his proposed quality control assurance methodology and proceedings to be observed during the Contract. Should the Engineer deem the QA system to be inadequate to ensure construction to specification, the Contractor shall adapt the system to conform.

The Engineer shall audit the Contractor's QA 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 project, or construction outside specification.

PS-11 Existing Services

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.

The Contractor will further be held responsible for any damage to existing services caused by or arising out of his operations and any damage shall be made good at his own expense.

Payment will not be made for the crossing or handling of services which have been identified as being abandoned or for services which will be abandoned on completion of the project, except where such latter services are required to be operational during the rehabilitation of the relevant portion of the works which they serve.

PS-12 Overhaul

No overhaul shall be paid on this Contract

PS-13 Site supervision and testing

The Contractor shall ensure that sufficient qualified and experienced supervisory staff, the required transport, instruments, equipment and tools are available to control his own workmanship. The Engineer or his representative will not act as foreman or surveyor.

The Contractor shall furnish the Employer and the Engineer with a list of addresses and telephone numbers of key personnel in the Contractor's organization who may be contacted in an emergency both during and outside normal office working hours. This list will be required prior to any payments being certified.

Key personnel listed above will be available for the duration of the Contract and may not be removed or re-allocated by the Contractor without the written permission of the Engineer.

PS-14 Ordering of accessories

The Contractor shall check all dimensions and quantities shown on the drawings and/or in the Schedule of Quantities. The dimensions and quantities of all accessories shall be agreed upon between the Contractor and the Engineer before said accessories are ordered.

During preparation of this Tender the Contractor is to ascertain if all materials and equipment to be supplied can be obtained in South Africa and if not, and should the tender be accepted, the Contractor is to take steps to import the same so that the Works are not delayed. Delay in the Works owing to non-delivery of materials and equipment will not be considered a cause for delay in completing the Works.

PS-15 Restriction on blasting

Blasting shall only be permitted on the instruction of the Engineer.

PS-16 Publications, Advertising and Photographs

The Contractor shall not publish, or cause to be published in any papers, articles or information to the Works nor permit any advertising mentioning the subject of this Contract and shall not display or allow Sub-Contractors to display any advertisement on the Site or elsewhere in connection with the works without prior permission in writing from the Employer.

The taking of photographs of the Works or any portion thereof is expressly forbidden except for progress photographs which may be taken with the written permission of the Engineer. The Contractor shall be responsible for the observance of this clause by the Contractor's employees and by the employees of the Sub-Contractors.

PS-17 Site Meetings

The Engineer will hold regular site meetings and keep and circulate minutes. The Contractor shall attend and shall ensure that all Sub-Contractors are represented.

PS-18 Security and Safety Regulations

The Contractor is to familiarise himself and comply with all security and safety regulations of the Employer.

PS-19 Extension of time due to abnormal rainfall

Extension of time in respect of delays resulting from wet climatic conditions on the Site will only be considered in respect of abnormally wet climatic conditions and shall be determined for each calendar month or part thereof, in accordance with the formula given below:

$$V = (Nw - Nn) + (Rw - Rn)/X$$

in which formula the symbols shall have the following meanings:

V = Potential extension of time in calendar days for the calendar month under consideration:

If V is negative and its absolute value exceeds Nn, then V shall be taken as equal to minus Nn.

When the value of V for any month exceeds the number of days in the particular month, V will be the number of days in the month.

Nw = Actual number of days in the calendar month under consideration on which a rainfall of Y mm or more was recorded on the Site

Nn = Average number of days, derived from existing records of rainfall in the region of the Site, on which a rainfall of Y mm or more was recorded for the calendar month

Rw = Actual rainfall in mm recorded on the Site in an approved rain gauge for the calendar month under consideration

Rn = Average rainfall in mm for the calendar month, derived from existing records of rainfall in the region of the Site

The factor (Nw - Nn) shall be deemed to be a fair allowance for variations from the average number of days during which the rainfall exceeds Y mm.

The factor (Rw - Rn)/X shall be deemed to be a fair allowance for variations from the average number of days during which the rainfall did not exceed Y mm but wet conditions prevented or disrupted work.

The rainfall records at the nearest rainfall station to the site for a 10 year period shall apply for purposes of this contract. The monthly averages (Rn and Nn) for this period shall, for the purposes of this Contract be taken as normal and as the values to be substituted for Rn and Nn in the formula above. The values of X and Y shall be 20 and 10 respectively.

The potential extension of time V has been calculated for each month and year of the period concerned to indicate the possible effect of the rainfall formula. The values of V were obtained by applying the rainfall formula and using the actual rainfall figures and the calculated values of Rn and Nn indicated in the table.

The Contractor shall, at his own cost, provide and erect on the Site at a location approved by the Engineer, an approved rain gauge, which shall be fenced off in a manner which will prevent any undue interference by workmen and others. The Contractor shall, at his own cost, arrange for the reading of the rain gauge on a daily basis for the duration of the Contract. The gauge readings, as well as the date and time at which the reading was taken shall be recorded in a separate record book provided by the Contractor for this purpose. All entries in the rainfall record books shall be signed by the person taking the reading and the gauge shall be properly emptied immediately after each reading has been taken. If required by the Engineer, the Engineer shall be entitled to witness the reading of the gauge.

The Contractor's claims for extension of time in respect of delays resulting from wet climatic conditions on the Site during each month, shall be submitted in writing to the Engineer monthly; provided always that

- the period allowed to the Contractor in which to submit his claim for each month shall be seven (7) days, calculated from the last day of the month to which the claim applies; and
- the Engineer shall give his ruling on the claim, within fourteen (14) days.

The Contractor's monthly claim shall be accompanied by a copy of the signed daily rainfall readings for the applicable month.

The extent of any extension of time which may be granted to the Contractor in respect of wet climatic conditions (whether normal or abnormal) shall be determined as the algebraic sum of the "V" values for each month between the Commencement Date and the Due Completion Date of the Contract; provided always that

- rainfall occurring within the period of the Contractor's Christmas shut-down period shall not be taken into account in the calculation of the monthly "V" values;
- rainfall occurring during any period during which the Contractor was delayed due to reasons other than wet climatic conditions on the Site, and for which delay an extension of time is granted by the Engineer, shall not be taken into account in the calculation of the monthly "V" values;
- if the algebraic sum of the "V" values for each month is negative, the time for completion will not be reduced on account of subnormal rainfall, and
- where rainfall is recorded only for part of a month, the "V" value shall be calculated for that part of the month using pro rata values for Nn and Rn.

The Engineer shall, simultaneous with granting any extension of time in terms of this clause, revise the Due Completion Date of the Contract to reflect an extension of time having been granted in respect of wet climatic conditions, to the extent of the algebraic sum of all the "V" values for all the preceding months of the Contract, less the aggregate of the "Nn" values for the remaining (unexpired) months of the Contract (viz less aggregate of the potential maximum negative "V" values for the remaining Contract Period). Thus, provided that where such period is negative, the Due Completion Date shall not be revised.

Any extension of time in respect of wet climatic conditions granted in terms of this clause shall not be deemed to take into account delays experienced by the Contractor in repairing or reinstating damage to or physical loss of the Works arising from the occurrence of abnormal climatic conditions. Extension of time in respect of any such repairs or

reinstatement regarding damage shall be the subject of a separate application for extension of time in accordance with the provisions of the Conditions of Contract.

PS-20 Drawings

All construction drawings issued from time to time must be properly mounted on suitable material and kept in a good condition. Any drawings becoming bleached or otherwise obscured so that they cannot be properly read must be replaced. All drawings issued for construction shall have the date of issue clearly stamped on, the receipt thereof shall be acknowledged in writing by the Contractor.

Any errors due to misreading of damaged or obscured drawings or superseded drawings shall be made good by the Contractor at his own expense. The Contractor shall keep a register of drawings of the Site which shall be brought up to date, at least once a week. Any drawings required must be brought to the attention of the Engineer, in writing, at least one month in advance of date required.

Only drawings that have been approved and signed off by the Engineer are allowed on site.

PS-21 Environmental Control

The Contractor will be held responsible for any claims or damages resulting from incidents such as the following:

- Excessive dust;
- Burning of the veld or grazing;
- Damage to fauna and flora;
- Damage to private or rented property;
- Damage to existing or new structures and services;
- Uncontrolled dumping; and
- Damage to the works being carried out by other contractors and subcontractors.

No burning of the trees and timber will be allowed on the Site. All necessary precautions must be taken to ensure that acceptable noise levels are adhered to.

PS-22 Rejected work and materials

Materials which do not conform to the requirements of the Contract Document, are not equal to samples approved by the Employer or Engineer or are in any way unsatisfactory or unsuited to the purpose for which they are intended, shall be rejected. Any defective work, whether as the result of poor workmanship, use of defective materials, damage through carelessness or any other cause, shall be removed within ten (10) days after written notice is given by the Employer or Engineer, and the work shall be re-executed by the Contractor. The fact that the Employer or Engineer may have previously overlooked such defective work shall not constitute an acceptance of any part of it. Such remedial work shall be for the Contractor's account and no claims for extra cost or extension of time shall be entertained.

PS-23 Employment of local labour

It is the intention that this Contract should make maximum use of the local labour force that is presently underemployed. To this end the Contractor shall limit the utilisation on the Contract of non-local employees to that of key personnel only and to employ and train local labour to the extent necessary for the execution and completion of this Contract.

The minimum requirements in terms of the utilization of local labour are as follows:

- Minimum local labour to be utilized: A minimum of 20 persons
- General worker compensation: A minimum of **R 186.84 / day**
- Community Liaison Officer (CLO) compensation: A minimum of R 250 / day

PS-24 Employment OF LOCAL SUB CONTRACTORS

It is the intention that this contract should make provision for local sub-contractors where possible. A List of Local sub-contractors will be provided to each tenderer to ensure they liaise with local sub-contractors. The principal contractor should liaise directly with the local sub-contractors w.r.t pricing and or any terms of conditions to be stipulated within

their sub contract agreement. The principal contractor will be paid for his tendered rates, which should any cost of work allocated to sub-contractors.

- Local sub-contractors with a CIDB grading of at least 1CE/1GB should be utilised.

General Requirements:

The principal contractor shall make provision for the following within the contract to ensure all local/ specialised sub-contractors comply with contract specifications.

- Personal Protective Equipment (PPE) for sub-contractors and local labourers.
- Administration, Management and supervision of appointed sub-contractors.
- Handling % for material and/or equipment
- Procurement of Material, delivery and transport of material
- Daily transport, accommodation and sustenance, where applicable.
- Quality Management based on the Principal contractors QMS in place.

PS-25 Medical examinations

Employees must be declared fit. The Contractor shall provide a list of employees' names and authorised identity book copies. Medical examinations should be booked three days in advance and a maximum number of persons can be accommodated. Availability should be checked. Payment for these medicals must be arranged by the Contractor in advance.

PS-26 Work hours

All personnel shall maintain the following work hours:

Normal shifts not to exceed 10 hours per day;
All applicable labour laws must be complied with; and
No Sunday work is permitted, but plant may be maintained.

Permission for excessive and abnormal overtime work shall be obtained from the Employer before work may commence.**4.3 Amendments to the Standardized Specifications**

The following variations and additions to the SANS 1200 Standardised Specifications. The prefix PS indicates an amendment to SABS 1200. The letters and numbers following these prefixes respectively indicate the relevant Standardised Specification and clause numbers in SABS 1200 to which the variation or addition there under applies.

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

PSA GENERAL

PSA 1 SCOPE

REPLACE THE CONTENTS OF SUBCLAUSE 1.1, INCLUDING THE NOTES, WITH THE FOLLOWING:

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

PSA 3 MATERIALS

PSA 3.1 QUALITY

ADD THE FOLLOWING AT THE END OF SUBCLAUSE 3.1:

"All manufactured materials supplied shall be new materials unless the contrary is specified. All materials specified to be in accordance with SANS Specifications shall bear the SABS mark."

ADD THE FOLLOWING SUB-CLAUSES TO SUBCLAUSE 3:

"PSA 3.3 ORDERING OF MATERIALS

The quantities set out in the Schedule of Quantities have been carefully determined from calculations based on data available at the time of its compilation but are to be considered as approximate quantities only. Before ordering materials of any kind the Contractor shall be solely responsible for determining, from the drawings issued or approved by the Engineer for construction purposes, the actual quantities of materials required for the execution of the Works. No liability or responsibility whatsoever shall be attached to the Employer or the Engineer in respect of materials ordered by the Contractor except when ordered in accordance with the drawings issued or approved by the Engineer for construction purposes.

PSA 3.4 MATERIALS SUPPLIED BY THE EMPLOYER

Materials designated in the Contract documents to be supplied by the Employer shall not be obtained by the Contractor from any other source than from the Employer. Requisitions for materials to be supplied by the Employer shall be submitted timeously by the Contractor in writing and shall be signed by the Contractor or its authorised representative and countersigned by the Engineer.

The Contractor or its authorised representative shall, upon delivery of all such materials, sign a receipt therefore and having been accepted by the Contractor, such materials will, except only for such defects and deficiencies as may have been recorded by the Contractor in writing on the said receipt, be deemed to be

in a sound and satisfactory condition and will thenceforth be deemed to be its sole responsibility, as if such materials had been supplied by the Contractor itself.

The onus shall be entirely on the Contractor to ensure that he accepts only sound materials from the Employer, and notwithstanding the supply of materials by the Employer, the Engineer is authorised to reject as unsuitable any such material on the Site of the Works which, in his opinion, is unsound, defective or in any way not in compliance with the specifications. The Contractor shall immediately remove such rejected materials from the Site of the Works and shall replace them at its own expense, with new and sound materials which are in accordance with the Specifications to the satisfaction of the Engineer.

In the event of any circumstances arising which necessitate the replacement of any materials which were supplied by the Employer, the Contractor shall, unless otherwise instructed in writing by the Engineer, obtain such replacement materials only from the Employer. In such circumstances, the Contractor shall be liable to and pay to the Employer, all costs incurred by the Employer in supplying such replacement materials, irrespective of whether the Contractor could have obtained the said replacement materials from another source at a lesser cost than the Employer; Provided always that the Contractor will not be held liable for the costs of the replacement by the Employer of unsound materials which were not accepted by the Contractor as aforesaid."

PSA 4 PLANT

PSA 4.1 SILENCING OF PLANT

REPLACE THE CONTENTS OF SUBCLAUSE 4.1 WITH THE FOLLOWING:

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

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

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

PSA 4.2 CONTRACTOR'S OFFICES, STORES AND SERVICES

ADD THE FOLLOWING PARAGRAPH BEFORE THE EXISTING FIRST PARAGRAPH IN SUBCLAUSE 4.2:

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

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

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

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

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

PSA 5 CONSTRUCTION**PSA 5.1 SURVEY****PSA 5.1.2 PRESERVATION AND REPLACEMENT OF SURVEY BEACONS AND PEGS SUBJECT TO THE LAND SURVEY ACT**

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

ADD THE FOLLOWING AFTER THE SECOND SENTENCE OF SUBCLAUSE 5.1.2:

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

REPLACE THE THIRD SENTENCE OF SUBCLAUSE 5.1.2 WITH THE FOLLOWING:

"At the completion of the Contract, the Contractor shall expose all pegs that were listed at the commencement of the construction as being in order and the Contractor shall arrange with a registered Land Surveyor for the checking of the positions of all such pegs and the replacement of any thereof which the Land Surveyor's check reveals have become disturbed or damaged. The Contractor

shall, as a precedent to the issue of the Certificate of Completion, provide to the Engineer, a certificate from the Registered Land Surveyor, certifying that all the pegs listed at the commencement of construction in accordance with the provisions of this clause, have been checked and that those found to have been disturbed, damaged or destroyed have been replaced in their correct positions, all in accordance with the provisions of the said Act.

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

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

PSA 5.3 PROTECTION OF EXISTING STRUCTURES

REPLACE: "Machinery and Occupational Safety Act, 1983, (Act No. 6 of 1983)"
WITH : "Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) and Construction Regulations 2003, as amended," AND INSERT THE FOLLOWING
AFTER "(Act No. 27 of 1956)" : "as amended".

PSA 5.4 PROTECTION OF OVERHEAD AND UNDERGROUND SERVICES

REPLACE THE HEADING AND THE CONTENTS OF SUBCLAUSE 5.4 WITH THE FOLLOWING:

"PSA 5.4 LOCATION AND PROTECTION OF EXISTING SERVICES

PSA 5.4.1 LOCATION OF EXISTING SERVICES

Before commencing with any work in an area, the Contractor shall ascertain the presence and actual position of all services which can reasonably be expected by an experienced and competent Contractor to be present on, under, over or within the Site. It is the responsibility of the contractor to identify the position of any current installed services on the construction site(s)

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

Thereafter, the Contractor shall, by the use of appropriate methodologies carefully expose the services at such positions as are agreed to by the Engineer,

for the purposes of verifying the exact location and position of the services. Where the exposure of existing services involves excavation to expose underground services, the further requirements of Sub-clauses 4.4 and 5.1.2.2 of SABS 1200D (as amended) shall apply.

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

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

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

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

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

as well as for consequential damage, whether caused directly by the Contractor's operations or by the lack of proper protection;

Provided always that the Contractor will not be held liable in respect of damages occurring to services not being Known Services.

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

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

PSA 5.4.2 PROTECTION DURING CONSTRUCTION

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

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

PSA 5.4.3 ALTERATIONS AND REPAIRS TO EXISTING SERVICES

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

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

The Employer will accept no liability for damages due to a delay in having alterations or repairs effected by the respective service owners. The Contractor shall provide all reasonable opportunity, access and assistance to persons carrying out alterations or repairs of existing services."

PSA 5.7 SAFETY

REPLACE THE CONTENTS OF SUBCLAUSE 5.7 WITH THE FOLLOWING:

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

- (a) Provide to its Employees on the site of the works, all safety materials, clothing and equipment necessary (Personal Protective Equipment) to ensure full compliance with the provisions of Mine Health and Safety Act (Act No. 29 of 1996), The Occupational Health and Safety Act and Regulations (Act No. 85 of 1993) and Construction Regulations 2014, as amended at all times, and shall institute appropriate and effective measures to ensure the proper usage of such safety materials, clothing and equipment at all times;

- (b) Provide, install and maintain all barricades, safety signage and other measures to ensure the safety of workmen and all persons in, on and around the site, as well as the general public;
- (c) Implement on the site of the works, such procedures and systems and keep all records as may be required to ensure compliance with the requirements of the Act at all times;
- (d) Implement all necessary measures so as to ensure compliance with the Act by all subcontractors engaged by the Contractor and their employees engaged on the works;
- (e) Full compliance with all other requirements pertaining to safety as may be specified in the Contract;

ADD THE FOLLOWING SUBCLAUSES TO CLAUSE 5:

"PSA 5.9 SITE MEETINGS

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

PSA 6 TOLERANCES

ADD THE FOLLOWING SUBCLAUSE TO CLAUSE 6:

"PSA 6.4 USE OF TOLERANCES

No guarantee is given that the full specified tolerances will be available independently of each other, and the Contractor is cautioned that the liberal or full use of any one or more of the tolerances may deprive him of the full or any use of tolerances relating to other aspects of the work.

Except where the contrary is specified, or when clearly not applicable, all quantities for measurement and payment shall be determined from the 'authorised' dimensions. These are specified dimensions or those shown on the Drawings or, if changed, as finally prescribed by the Engineer, without any allowance for the specified tolerances. Except if otherwise specified, all measurements for determining quantities for payment will be based on the 'authorised' dimensions.

If the work is constructed in accordance with the 'authorised' dimensions plus or minus the tolerances allowed, the calculation of quantities will be based on the 'authorised' dimensions, regardless of the actual dimensions to which the work has been constructed.

When the work is not constructed in accordance with the 'authorised' dimensions plus or minus the tolerances allowed, the Engineer may nevertheless, at his sole discretion, accept the work for payment. In such cases no payment shall be made for quantities of work or material in excess of those calculated for the 'authorised' dimensions, and where the actual dimensions are less than the 'authorised' dimensions minus the tolerance allowed, quantities for payment shall be calculated based on the actual dimensions as constructed."

PSA 7 TESTING**PSA 7.1 PRINCIPLES****PSA 7.1.2 STANDARD OF FINISHED WORK NOT TO SPECIFICATION**

INSERT THE WORDS "or checks by an approved laboratory ..." AFTER THE WORDS "Where the Engineer's checks ..." IN THE FIRST LINE OF SUBCLAUSE 7.1.2.

PSA 7.2 APPROVED LABORATORIES

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

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

- (a) any testing laboratory certified by the South African National Accreditation Systems (SANAS) in respect of the nature and type of testing to be undertaken for the purposes of the Contract;

PSA 8 MEASUREMENT AND PAYMENT

PSA 8.1 MEASUREMENT

PSA 8.1.1 METHOD OF MEASUREMENT, ALL SECTIONS OF THE SCHEDULE

DELETE THE WORDS: "and South West Africa".

PSA 8.1.2 PRELIMINARY AND GENERAL ITEM OR SECTION

PSA 8.1.2.1 CONTENTS

REPLACE THE LAST SENTENCE OF SUBCLAUSE 8.1.2.1(b) WITH THE FOLLOWING:

Separate items will be scheduled to cover the Fixed, Value-related and Time-related components of the Contractor's Preliminary and General costs."

AND REPLACE THE WORDS "substantial completion" IN SUBCLAUSE 8.1.2.1(c) WITH "Certificate of Completion".

PSA 8.1.2.2 TENDERED SUMS

REPLACE THE CONTENTS OF THIS SUBCLAUSE WITH THE FOLLOWING:

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

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

PSA 8.2 PAYMENT

PSA 8.3 SCHEDULED FIXED-CHARGE AND VALUE-RELATED ITEMS

REPLACE THE CONTENTS OF SUBCLAUSE 8.3.1 WITH THE FOLLOWING:

"PSA 8.3.1 FIXED PRELIMINARY AND GENERAL CHARGESUNIT: SUM

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

PSA 8.3.2 VALUE-RELATED PRELIMINARY AND GENERAL CHARGES ...UNIT: SUM

The sums tendered shall include full compensation for all value-related preliminary and general charges as described in Subclause PSA 8.1.2.2.

PSA 8.4 SCHEDULED TIME-RELATED ITEMS

REPLACE THE CONTENTS OF SUBCLAUSE 8.4 WITH THE FOLLOWING:

"PSA 8.4.1 TIME-RELATED PRELIMINARY AND GENERAL CHARGESUNIT: SUM

The sum tendered shall include full compensation for all time-related preliminary and general charges as described in Subclause PSA 8.1.2.2.

PSA 8.6 PRIME COST ITEMS

REPLACE SUBCLAUSE 8.6 WITH THE FOLLOWING:

"PSA 8.6 PRIME COST SUMS

- (a) Description of Item to which Prime Cost Sum Applies Unit: PC Sum
- (b) Charge Required by Contractor on Sub-item (a) aboveUnit: %

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

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

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

If the Contractor shall have omitted within its Tender to insert a tendered percentage under sub-item (b), or tendered a zero percentage, the Contractor's tendered rate for sub-item (b) shall be deemed to be zero and the Contractor shall not be entitled to any payment under sub-item (b)."

PSA 8.8.4 LOCATION AND PROTECTION OF EXISTING SERVICES

PSA 8.8.4.1 DETECTION, LOCATION AND EXPOSURE

REPLACE THE CONTENTS OF SUBCLAUSE 5.1.2.2 WITH THE FOLLOWING

"The exposure by the Contractor of underground services, as required in terms of Sub-clause 5.4 of SABS 1200 A (as amended) shall be carried out by careful hand excavation at such positions and to such dimensions as are agreed to by the Engineer.

Unless otherwise instructed or agreed by the Engineer, no service shall be left exposed after its exact position has been determined and all excavations carried out for the purposes of exposing underground services shall be promptly backfilled and compacted to the following densities:

- (a) In roadways: 90% Mod AASHTO density; and
- (b) In all other areas: 93% Mod AASHTO density.

Where hand excavations to expose underground services have to be carried out in roadways, the Contractor shall reinstate the road layerworks in accordance with the provisions of Sub-clause 5.9 of SABS 1200DB.

Payment in respect of the exposing of the services by means of hand excavation as described above, will be made in accordance with Sub-clause PSD 8.3.8.1.

Payment in respect of the reinstatement of layer works in road ways will be made in accordance with Sub-clause 8.3.6.1 of SABS 1200DB (as amended).

PSA 8.10 COMPLIANCE WITH OHS ACT AND SAFETY REGULATIONS (INCLUDING CONSTRUCTION REGULATIONS, 2014) UNIT: SUM

The tendered sum shall include full compensation to the Contractor for compliance with all the safety regulations, laws and requirements as described in Clause 12 of the Conditions of Contract and Clause PSA5.7.

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

PSD EARTHWORKS

PSD 2 INTERPRETATIONS

PSD 2.1 SUPPORTING SPECIFICATIONS

REPLACE SUB-CLAUSE 2.1.2 WITH THE FOLLOWING:

"PSD 2.1.2: Any of the other SANS 1200 Specifications may form part of the Contract Documents."

PSD 2.3 DEFINITIONS

REPLACE THE WORD AND THE DEFINITION FOR "Borrow" WITH THE FOLLOWING:

"Borrow material: Material, other than material obtained from excavations required for the Works, obtained from sources such as borrow pits or the authorised widening of excavations. 'Borrow' shall have a corresponding meaning."

REPLACE THE DEFINITION FOR "Specified density" WITH THE FOLLOWING:

"Specified density: The specified dry density expressed as a percentage of modified AASHTO density."

REPLACE THE DEFINITION FOR "Stockpile" WITH THE FOLLOWING:

"Stockpile (verb) : The process of selecting and, when necessary, loading, transporting and off-loading material in a designated area for later use for a specific purpose."

ADD THE FOLLOWING DEFINITIONS:

"Commercial Source: A source of material provided by the Contractor, not the Employer, and including any borrow pit, provided by the Contractor.

Fill: An embankment or terrace constructed of material obtained from excavations or borrow pits. In roads, it includes the earthworks up to the underside of the selected subgrade level.

Fill (material) : Material used for the construction of an embankment or terrace.

Roadbed: The natural in situ material on which the fill, or in the absence of fill, the pavement layers, are constructed."

PSD 3 MATERIALS**PSD 3.1 CLASSIFICATION FOR EXCAVATION PURPOSES****PSD 3.1.1 METHOD OF CLASSIFYING**

ADD THE FOLLOWING:

The Contractor shall be at liberty to use any excavating method for all classes of material, but the method of excavation shall not dictate the classification of excavation.

The Engineer shall decide under which one of the two excavation classes, excavation shall be classified for payment. In the first instance, the classification shall be based on an inspection of the material to be excavated, which classification shall be agreed on in writing before the excavation may be started.

In the event of disagreement between the Contractor and the Engineer, the Contractor shall make available plant as specified in SANS 1200D at his own cost, in order to determine whether or not the material can be reasonable removed. The decision of the Engineer shall thereafter be final and binding.

The contractor shall immediately inform the Engineer if and when the nature of the material being excavated changes to the extent that a new classification for further excavation is warranted. Failure on the part of the Contractor to advise the Engineer in good time shall entitle the Engineer to classify, at his discretion, such excavation as may have been executed in material of a different nature.

PSD 3.1.2 CLASSES OF EXCAVATION

ADD THE FOLLOWING:

"Only two classes of excavation will be measured for earthworks for this Contract, viz. hard rock excavation and soft excavation. Hard rock excavation shall be as specified in Clause 3.1.2 (c) of SANS 1200D. All other excavation will be considered as soft excavation for this Contract (i.e. all excavation as specified in Clauses 3.1.2(a), 3.1.2(b), 3.1.2(d) and 3.1.2(e) will be "soft" excavation)."

PSD 3.2 CLASSIFICATION FOR PLACING PURPOSES**PSD 3.2.3 MATERIAL SUITABLE FOR BACKFILL OR FILL AGAINST STRUCTURES**

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

"Material used for backfill behind structures shall generally be the material excavated, subject to the following conditions:

- (a) The material shall not contain an excessive number of stones retained on a 50mm sieve; and
- (b) The material shall not contain large clay lumps that do not break up under the action of the compaction equipment; and

- (c) The liquid limit of the material shall not exceed 40, neither shall the PI exceed 18."

PSD 3.3 SELECTION

ADD THE FOLLOWING SUB-CLAUSE:

"PSD 3.3.3 SELECTION IN BORROW PITS AND EXCAVATIONS

Approval of a borrow area for a certain purpose does not necessarily mean that all the material in that area is suitable for the specified purpose. What it does mean is that the borrow area contains some suitable material. The onus shall rest on the Contractor to ensure that only material that is indeed suitable is removed and used for the specified purpose.

When the Contractor has to select excavated material for a specific purpose, the above provisions relating to borrow areas shall apply *mutatis mutandis* to excavations.

The Contractor shall not waste or contaminate material that has been selected for a specific purpose."

PSD 4 PLANT

PSD 4.4 DETECTORS

REPLACE THE CONTENTS OF SUBCLAUSE 4.4 WITH THE FOLLOWING:

"The Contractor shall, for the purposes of detecting and locating underground services in accordance with the provisions of Sub-clause 5.4 of SANS 1200A and Sub-clause 5.1.2 of SANS 1200D, at its own cost, provide and use detecting equipment which is suitable for the detection of underground cables and pipes."

PSD 5 CONSTRUCTION**PSD 5.1 PRECAUTIONS****PSD 5.1.1 SAFETY****PSD 5.1.1.1 BARRICADING AND LIGHTING**

REPLACE “Machinery and Occupational Safety Act, 1983 (Act 6 of 1983)” *WITH* “Occupational Health and Safety Act, 1993 (Act 85 of 1993) and Construction Regulations 2014”.

PSD 5.1.1.2 SAFEGUARDING OF EXCAVATIONS

REPLACE “Machinery and Occupational Safety Act” *WITH* “Occupational Health and Safety Act, 1993 (Act 85 of 1993) and Construction Regulations 2014”.

PSD 5.1.1.3 EXPLOSIVES

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

"The Contractor will generally be permitted to use explosives for breaking up hard material during excavations, for demolishing existing structures, and for other purposes where explosives are normally required, subject to the following conditions:

- (a) The Engineer may prohibit the use of explosives in cases where, in his opinion, the risk of injury to persons or damage to property or to adjoining structures is too high. Such action by the Engineer does not entitle the Contractor to additional payment for having to resort to less economical methods of construction.
- (b) The Engineer's prior written approval shall be obtained for each and every blasting operation. This approval may be withheld if the Contractor does not use explosives safely, responsibly and carefully.
- (c) The Contractor shall comply fully with the requirements of the Explosives Act, Act 83 of 1997 and all other legislation and regulations as may be applicable to blasting and the use of explosives.
- (d) Before blasting is undertaken, the Contractor shall satisfy the Engineer that he has established whether or not the insurers concerned require pre- and post-blasting inspections of buildings and structures within a certain radius of the proposed blasting.

Should such inspections be required, the Contractor shall, together with the Engineer and the insurer, examine and measure the buildings, houses or structures in the vicinity of the proposed blasting site and establish and record, together with the owner, lessee or occupier, the extent of any existing cracking or damage before the commencement of blasting operations.

- (e) When there is a possibility of damage to power and telephone lines or any other services or property, the Contractor shall adapt his method of blasting and the size of the charges and shall use adequate protective measures (e.g.. cover-blasting, to reduce the risk of damage.
- (f) All accidents, injury to persons and animals and damage to property shall be reported to the Engineer in detail and in writing immediately.
- (g) The Engineer shall be given 24 hours' notice by the Contractor before each blasting operation is carried out.
- (h) When blasting to specified profiles, the Contractor shall so arrange the holes and charges that the resulting exposed surfaces are as sound as the nature of the material permits. The Contractor shall make good, at its own expense, any additional excavation necessitated by the shattering of rock in excess of any overbreak allowances specified in the Project Specifications or given on any drawing.

Notwithstanding the Contractor's compliance with the above provisions, the Contractor shall remain liable for any injury to persons and animals and loss of or damage to property occurring as a result of blasting operations."

PSD 5.1.2.3 PROTECTION OF CABLES

REPLACE SUBCLAUSE 5.1.2.3 WITH THE FOLLOWING

“PSD 5.1.2.3 PROTECTION DURING CONSTRUCTION

Further to the requirements of Sub-clause 5.4.2 of SANS 1200A (as amended), major excavating equipment and other Plant shall not be operated dangerously close to Known Services. Where necessary, excavation in close proximity to Known Services shall be carefully carried out with suitable hand tools, excluding picks wherever their use could damage the services. No additional payment will apply to such more difficult work.

Should any service not being a Known Service be discovered or encountered during the course of the Contract, the Contractor shall, in addition to complying with the requirements of Sub-clause 5.4.2 of SABS 1200A (as amended), immediately notify the Engineer thereof and implement such measures as will prevent damage of such service or, if it was damaged in the course of discovery, will prevent and minimise the occurrence of any further damage occurring.”

PSD 5.1.2.4 NEGLIGENCE

DELETE SUBCLAUSE 5.1.2.4.

PSD 5.1.3 STORMWATER AND GROUNDWATER

ADD THE FOLLOWING:

"The Contractor shall, where applicable and at the earliest practicable opportunity, install the permanent drainage specified or shown on the Drawings and shall at his own cost provide the temporary drainage required to protect the Works."

PSD 5.1.5 REINSTATEMENT AND MAINTENANCE OF ROADS

ADD THE FOLLOWING:

"Where crossings have been made, the roads shall be reinstated in accordance with the details specified in Sub-clause 5.9 of SANS 1200DB."

PSD 5.1.6 ROAD TRAFFIC CONTROL

DELETE THE SECOND SENTENCE OF SUBCLAUSE 5.1.6.

PSD 5.2 METHODS AND PROCEDURES

PSD 5.2.2 EXCAVATION

PSD 5.2.2.1 EXCAVATION FOR GENERAL EARTHWORKS AND FOR STRUCTURES

ADD THE FOLLOWING TO PARAGRAPH (b):

"When the nature of the material precludes the above procedure, additional excavations shall be carried out to provide working space for the erection of formwork. In general, payment will be made for excavating a working width of 600 mm, but the Contractor may excavate a greater working width at no additional cost to the Employer."

REPLACE THE FIRST SENTENCE OF PARAGRAPH (e) WITH THE FOLLOWING:

"Where excavations have been carried below the authorised levels, the Contractor shall backfill such excavations to the correct level with approved gravel compacted to 93% of modified AASHTO density or to the density of the surrounding material, whichever is the higher density.

Where excavations for structures have been carried out in hard material, the Engineer may direct that over-excavation be backfilled with weak concrete if there is a danger of settlement or differential settlement of the foundations.

Where the sides of excavations against which concrete is to be cast have been over-excavated or have collapsed partially, the Contractor shall re-trim the excavations if necessary and, unless other remedial measures are agreed to by the Engineer, shall cast the concrete for the structure, including the additional concrete that may be required as a result of the over-excavation or partial collapse. The cost of the additional concrete or remedial measures shall be for the Contractor's account."

PSD 5.2.2.3 DISPOSAL

REPLACE THE WORDS "in the project specification." AT END OF THE SECOND SENTENCE WITH: "at sites to be designated by the Contractor and approved by the Engineer.

PSD 7 TESTING**PSD 7.2 TAKING AND TESTING OF SAMPLES**

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

"The Contractor shall arrange with the approved independent laboratory engaged by the Contractor in terms of Sub-clause PS 8.2.1 of Portion 1 of the Project Specifications, to carry out sufficient tests on a regular basis as agreed between it and the Engineer to determine whether the degree of compaction, and, where applicable, the quality of materials used, comply with the Specifications and shall submit the results of these tests to the Engineer in a form approved by him.

The compaction requirements for fills shall be deemed complied with when at least 75% of the dry-density tests on any lot show values equal to or above the specified density and when no single value is more than five percentage points below the specified value."

PSD 8 MEASUREMENT AND PAYMENT**PSD 8.3 SCHEDULED ITEMS****PSD 8.3.1 SITE PREPARATION**

REPLACE SUB-CLAUSES 8.3.1.1 AND 8.3.1.2 WITH THE FOLLOWING:

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

PSD 8.3.2 BULK EXCAVATION

REPLACE THIS ITEM WITH THE FOLLOWING:

“PSD 8.3.2.1 EXCAVATE IN ALL MATERIALS AND USE FOR EMBANKMENT OR BACKFILL AS ORDERED, FROM:

- (a) Necessary excavations (compaction effort)Unit: m³
- (b) Designated Borrow Pits (compaction effort) Unit: m³
- (c) Commercial Sources (compaction effort) Unit: m³

The unit of measurement shall be the cubic metre measured in place in accordance with Sub-clause 8.2 of SANS 1200D.

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

The tendered rates shall cover the cost of complying with all the precautions required in terms of Sub-clause 5.1 of SANS 1200D (as amended), in addition to the cost of excavating in all materials, basic selection, loading, transporting within the applicable freehaul distance, off-loading, spreading or backfilling, watering, compacting (compaction effort as provided in the BOQ and drawings), final grading, complying with the requirements of for tolerances, providing for testing, finishing and tidying, all in accordance with the specifications.

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

PSD 8.3.2.2 EXCAVATE IN ALL MATERIALS AND DISPOSEUNIT: M³

The unit of measurement shall be the cubic metre of material excavated, measured in place in accordance with Sub-clause 8.2 of SANS 1200D.

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

The tendered rates shall cover the cost of complying with all the precautions required in terms of Sub-clause 5.1 of SABS 1200D (as amended), in addition to the cost of excavation, basic selection, loading, transporting within the applicable free haul distance, off-loading at the spoil site, maintaining and finishing the spoil site, all in accordance with the specifications.

PSD 8.3.2.3 EXTRA-OVER ITEMS 8.3.2.1 (A), 8.3.2.1(B) AND 8.3.2.2 FOR:

(a) Hard rock excavation Unit: m³

The rate shall cover the additional cost of the operations enumerated in Sub-clauses 8.3.2.1 and 8.3.2.2 above for any portion of the excavation that is classified as hard rock.”

PSD 8.3.4 IMPORTING OF MATERIALS

ADD THE FOLLOWING TO CLAUSE a:

Rate to also include the compaction of the material in place. The type of material and compaction effort to be provided in the BOQ.

PSDB EARTHWORKS (PIPE TRENCHES)

PSDB 3 MATERIALS

PSDB 3.1 CLASSES OF EXCAVATION

ADD THE FOLLOWING TO THIS SUB-CLAUSE:

"Only two classes of excavation will be measured for the pipe trenches of this Contract, viz. hard rock excavation and soft excavation. Hard rock excavation shall be as specified in Clause 3.1.2 (c) of SABS 1200D. All other excavation will be considered as soft excavation for this Contract (i.e. all excavation as specified in SABS 1200 D Clauses 3.1.2(a), 3.1.2(b), 3.1.2(d) and 3.1.2(e)) will be "soft" excavation.

The Contractor's attention is called to the definition of hard rock."

PSDB 3.5 BACKFILL MATERIALS

ADD THE FOLLOWING PARAGRAPHS TO SUB-CLAUSE 3.5:

"(c) Cement-stabilised backfilling

Backfilling shall, where directed by the Engineer, be stabilised with 5% cement. The aggregate shall consist of approved soil or gravel containing stones not bigger than 38 mm and with a plasticity index not exceeding 10.

The soil or gravel shall be mixed with 5% cement and shall be compacted in layers of 100 mm thick to 90% of modified AASHTO density.

(d) Soilcrete backfilling

The aggregate for soilcrete shall be mixed with 5% cement and shall consist of approved soil or gravel containing stones not bigger than 38 mm and with a plasticity index not exceeding 10.

The soil or gravel shall be mixed in a concrete mixer with the cement and enough water to acquire a consistency that allows the mixture to be placed with vibrators to fill all voids between the pipe and the sides of the trench. Shuttering shall be used where necessary."

PSDB 3.7 SELECTION

REPLACE THE WORDS "if he so wishes" IN THE FIRST LINE OF THE SECOND PARAGRAPH WITH THE WORDS "at his own cost".

PSDB 5 CONSTRUCTION**PSDB 5.2 MINIMUM BASE WIDTHS**

REPLACE PARAGRAPH (a) WITH THE FOLLOWING:

"Where two pipes are placed in the same trench, they shall be 300 mm apart and the specified side allowance shall still be applicable."

ADD THE FOLLOWING AFTER PARAGRAPH (b):

"The above is not applicable to trenches for subsurface drains.

Trenches for subsurface drains shall be excavated to the dimensions and gradients shown on the drawings or directed by the Engineer.

The specified width of trenches and the width of the excavation measured for payment shall not be less than 0,5m, but the Contractor may reduce the actual width with the Engineer's permission."

PSDB 5.6 BACKFILL**PSDB 5.6.3 DISPOSAL OF SOFT EXCAVATION MATERIAL**

REPLACE THE WORDS "unless otherwise required in the project specification." AT THE END OF SUBCLAUSE 5.6.3 WITH:

"or to spoil in accordance with the requirements of Subclause PSD 5.2.2.3, as instructed by the Engineer."

PSDB 8 MEASUREMENT AND PAYMENT**PSDB 8.3 SCHEDULED ITEMS****PSDB 8.3.2 EXCAVATION:**

ADD THE FOLLOWING CLAUSES:

"The attention of the Contractor is drawn to clauses 5.2, 8.1 and 8.2 of SANS 1200DB in relation to the basic principles of quantity calculation and measurement and payment for excavation, backfilling and compaction in the pipe trenches.

The unit of measurement shall be the volume (m³) of material excavated, backfilled and compacted (inclusive of surplus disposal), measured on the neat lines of the drawings, as specified in SANS 1200DB clauses 5.2, 8.1 and 8.2.

The rate for this item shall include all costs for lateral support. Lateral support will not be measured and paid separately for this Contract. The rate shall make allowances for any deviation in the total volume of excavated and compacted material resulting from the trench profile produced using the Contractor's proposed method of construction, as compared to that illustrated on the drawings."

ADD THE FOLLOWING SUBITEMS IN 8.3.2 AFTER SUBITEM 8.3.2():

- "(d) Excavate in all materials for stormwater inlet and outlet structures and for manholes, catchpits, valve chambers and the like, irrespective of depth, and backfill around structures Unit: m³

The unit of measurement shall be the cubic metre of material excavated, measured in place according to the authorised dimensions, and excluding the volume of material excavated and paid for under subitem (a).

The tendered rate shall include for the costs of excavating in all materials, backfilling, compacting, trimming and tidying the final surface around the structure, disposing of surplus and unsuitable materials within the free-haul distance and, where applicable, selecting and keeping separate, excavated material suitable for use as backfill.

- (e) Excavate open drains in all materialsUnit: m³

The tendered rates shall include full compensation for excavating in all materials within the dimensions specified or authorised by the Engineer and to the specified lines and profiles, for the disposal of surplus and unsuitable excavated material where applicable, and in the case of item (d), for backfilling with suitable approved material compacted to 90% of modified AASHTO density around the structures.

PSDB-8.3.4 PARTICULAR ITEMS

PSDB 8.3.4. A SHORE TRENCH OPPOSITE STRUCTURE OR SERVICE

ADD THE FOLLOWING:

"It will be the Contractor's responsibility to ensure the safety and stability of the trenches. Payment for shoring on the rest of the pipeline, should it be necessary, shall be deemed to be included in the rates for trench excavation."

PSG CONCRETE (STRUCTURAL)

PSG 3 MATERIALS

PSG 3.5 ADMIXTURES

ADD THE FOLLOWING:

"Admixtures as per SANS 50934-1/ 2/ 3/ 4/ 5/ 6: 2011 & 2012"

PSG 3.6 REINFORCEMENT

ADD THE FOLLOWING:

"Bending Dimensions and scheduling of steel reinforcement for concrete as per SANS 282: 2011;

Steel Bars for Concrete Reinforcement as per SANS 920: 2011; and

Welded steel fabric for reinforcement of concrete as per SANS 1024: 2012."

PSG 4.5 FORMWORK

PSG 4.5.1 DESIGN

ADD THE FOLLOWING:

"All formwork or scaffolding required for any part of the Works shall be designed by the Contractor, and before commencing with the erection of any formwork or scaffolding, the Contractor shall submit the methods he proposes to use to the Engineer for approval. The Engineer has the authority to order alterations to the design or the sizes of any part of the formwork or scaffolding. The Contractor shall check the safety and suitability of all such alterations. The fact that the Engineer has approved or altered any part of the formwork or scaffolding shall not be construed as relieving the Contractor of his responsibility with regard to the strength and stability of the formwork or scaffolding."

PSG 4.5.3 TIES

ADD THE FOLLOWING:

"No plugs, bolts, ties or clamps of any description used to hold the formwork will be allowed to project into or through the concrete unless expressly approved by the Engineer.

Only approved tie-rods consisting of solid rods (that remain embedded in the concrete) and with removable ends shall be used to hold the formwork of the walls. The removable tie-rod ends shall facilitate removal without damage to the concrete, and no permanently embedded parts of such tie-rods shall have less than 50 mm of cover to the finished concrete surface.

The cavities left in the concrete when the tie-rod end cones are removed shall be soundly caulked with a cement mortar to which an approved shrinkage-reducing

agent has been added, and shall be neatly finished to a smooth surface uniform with that of the surrounding concrete.

The cost of supplying special tie-rods as well as the filling of cavities left by the tie-rod cones shall be included in the rates tendered for formwork under the appropriate pay items.

On no account shall formwork be secured to reinforcing bars."

PSG 5 CONSTRUCTION

PSG 5.1 REINFORCEMENT

PSG 5.1.2 FIXING

ADD THE FOLLOWING:

"The Engineer will inspect the reinforcing after it has been fixed in place, the formwork has been cleaned, cover blocks have been positioned, and before concreting commences.

Welding of reinforcing steel will not be permitted."

PSG 5.1.3 COVER

ADD THE FOLLOWING:

"The distance between pipes in the concrete and the reinforcing steel shall nowhere be less than

- (a) 40 mm or
- (b) 5 mm plus the maximum size of the coarse aggregate, whichever is the largest.
- (c) the cover specified on the Drawings."

PSG 5.5 CONCRETE

PSG 5.5.1 QUALITY

PSG 5.5.1.7 STRENGTH CONCRETE

ADD THE FOLLOWING:

"The concrete mixes shall be designed by the Portland Cement Institute or a similar approved laboratory."

The minimum ordinary Portland cement content for strength concrete with a 28 day characteristic compressive strength of 25MPa and higher shall be 325kg/m³. The maximum ordinary Portland cement content shall be 400kg/m³ in reinforced concrete and 500 kg/m³ in prestressed concrete.

The maximum water: cement ratio shall be 0.55 for ordinary Portland cement.

Compressive strength of hardened concrete as per SANS 5863: 2006 and flexural strength as per SANS 5864: 2006."

PSG 5.5.3 MIXING

PSG 5.5.3.2 READY-MIXED CONCRETE

ADD THE FOLLOWING:

"Ready-mixed concrete may be used on the Site. The Contractor shall take samples for testing from every load delivered to the Site."

PSG 5.5.8 CURING AND PROTECTION

ADD THE FOLLOWING:

"The curing methods of retaining the formwork in place or covering with a waterproof membrane are strongly recommended.

PSG 5.5.19 BRICKWORK

Brickwork shall be carried out as specified for manholes in subclause 5.6.4 of 1200 LD using bricks conforming to the requirements for bricks in subclause 3.5.1 of 1200 LD.

PSG 5.5.20 PLASTERWORK

Plasterwork shall consist of a single coat, comprising one application of a 1:6 cement:sand mixture with a woodfloat finish. The thickness of the plaster shall be between 13 and 20 mm. All plaster shall be finished smooth, shall be plumb and corners shall be rounded and square.

PSG 6 TOLERANCES**PSG 6.2 PERMISSIBLE DEVIATIONS****PSG 6.2.3 SPECIFIED PERMISSIBLE DEVIATIONS**

ADD THE FOLLOWING:

"Degree-of-accuracy II is applicable.

Every specified permissible deviation is binding in itself. The cumulative effect of permissible deviations will not be considered. The maximum permissible vertical deviation is subject to the other permissible deviations."

REPLACE SUBCLAUSE 6.2.3(d)(5) WITH THE FOLLOWING:

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

"Vertically, per metre of height
subject to a maximum of

PSG 7 TESTS**PSG 7.1 FACILITIES AND FREQUENCY OF SAMPLING****PSG 7.1.1 FACILITIES**

ADD THE FOLLOWING:

"The Contractor shall provide sufficient storage capacity for the concrete cubes and shall test the cubes by means of an approved, calibrated cube testing press installed on Site in a manner approved by the Engineer, or shall arrange to have them tested by an approved laboratory.

The cost of all testing, including the cost of sampling, storage and transport of samples shall be included in the rates tendered for concrete work."

PSG 7.1.2 FREQUENCY OF SAMPLING

ADD THE FOLLOWING:

"Sampling for concrete tests as per SANS5861-2: 2006."

“PSG 7.1.3 PAYMENT OF TESTING

The cost for the required testing will be included in the tendered rates and no separate payment will be made for testing required.”

PSG 7.2 TESTING**PSG 7.2.1 GENERAL**

ADD THE FOLLOWING:

“Casting and curing of test specimens as per SANS5861-3: 2006.”

ADD THE FOLLOWING CLAUSE

“PSG 7.2.5 ADDITIONAL TESTING REQUIRED

Lump test as per SANS 5862-1: 2006;
Flow test of freshly mixed concrete as per SANS 5862-2: 2006; and
Vebe test as per SANS 5862-3: 2006.”

PSG 8 MEASUREMENT AND PAYMENT**PSG 8.1 MEASUREMENT AND RATES****PSG 8.1.2 REINFORCEMENT**

REPLACE THE CONTENTS OF THIS SUBCLAUSE WITH THE FOLLOWING:

"The unit of measurement for steel bars shall be the ton of reinforcement in place, in accordance with the Drawings or as authorised by the Engineer.

The unit of measurement for welded steel fabric shall be the kilogram of fabric reinforcement in place, and the quantity shall be calculated from the net area covered by the mesh, excluding overlaps.

Clips, ties, separators, stools and other steel used for positioning reinforcement will not be measured, unless these are shown on the bending schedules.

The tendered rate shall include full compensation for the supply, delivery, cutting, bending, welding, placing and fixing of the steel reinforcement, including all tying wire, stools, supports and waste."

PSG 8.10 TESTING FOR WATERTIGHTNESS:

- (a) (Structure stated)Unit: sum
- (b) Etc for other structures

The unit of measurement shall be the number of each structure successfully passing the specified watertightness tests to the satisfaction of the Engineer.

The sums tendered shall include full compensation for the provision of all labour, plant and materials necessary for carrying out the test for watertightness as specified.

PSL MEDIUM-PRESSURE PIPELINES

PSL 3 MATERIAL

PSL 3.1 GENERAL

ADD THE FOLLOWING PARAGRAPHS:

"Each type of pipe delivered to the Site shall be of a standard length corresponding to the standard lengths offered by the pipe manufacturer in his catalogue, with a maximum permissible variation in length of $\pm 2\%$.

A pipe that is shorter or longer than the defined standard will be rejected by the Engineer, except when such non-standard lengths are required in terms of the Contract and have been specifically manufactured or cut as such by the pipe manufacturer or supplier."

PSL 3.9 CORROSION PROTECTION

PSL 3.9.2 STEEL PIPES

ADD THE FOLLOWING TO SUB-CLAUSE 3.9.2.2 AND CHANGE THE HEADING ACCORDINGLY:

"PSL 3.9.2.2 STEEL FLANGES, SPECIALS, FITTINGS AND VALVES INCLUDING AND OVER 150MM NOMINAL BORE

All mild steel specials and valves, installed in exposed positions (i.e. not buried in ground), are to be lined with an approved epoxy system (COPON or similar approved) to give a total dry film thickness of at least 250 microns.

All pipes, specials and fittings installed below ground level are to be coated and wrapped with a double layer of bitumen-impregnated glass fibre complying with the requirements for Type 1 of SANS 1130 to form a coating of average thickness 5 mm and of minimum thickness 4.5 mm and, on completion of the coating, white washing of the sheathing."

PSL 3.9.3 PROTECTION AGAINST ELECTROLYTIC CORROSION

ADD THE FOLLOWING TO SUB-CLAUSE 3.9.3:

"All underground flanges, flange adapters and flexible couplings, including all bolts, nuts and washers, are to be cleaned properly, given a uniform coat of petroleum based primer, a petroleum mastic applied in all corners, around bolts, nuts, etc., wrapped with a petroleum based impregnated tape (DENSO or similar approved) and a polyethylene outer wrap.

All underground welded joints and fittings shall be cleaned properly, given a uniform coat of petroleum based primer, coated and wrapped with a petroleum based impregnated tape (DENSO or similar approved) and a polyethylene outer wrap.

Welded joints to be repaired to the original specification.

Unprotected inside surfaces of pipes and specials, especially after site welding, shall be treated in accordance with the type of lining specified for the particular pipe sections.

The electrical continuity between mild steel and stainless steel pipe connections (or any other dissimilar metals) shall be broken by the installation of isolation kits, certified fit for this isolation purpose.”

PSL 3.10 VALVES

DELETE THE CONTENTS OF THE SUB-CLAUSE AND REPLACE WITH THE FOLLOWING:

“PSL 3.10.1 GATE VALVES

Gate valves shall comply with the following as applicable:

- (a) for working pressures up to 1600kPa and over DN 50 but not exceeding 600mm shall be of cast iron and shall comply with the relevant requirements of SANS 664;
- (b) for working pressures over 1000kPa and of diameter exceeding DN 600 shall be of cast steel and shall comply with the material and construction requirements of SANS 191 and with dimensional requirements of the approved manufacturer;
- (c) the outlet connections shall be flanged or spigot plain ended as scheduled;
- (d) the spindles shall be rising and made from either zinc-free bronze, 304 stainless steel or as approved;
- (e) the spindles shall be fitted with hand wheels;
- (f) the direction of closing shall be clockwise;
- (g) the valve design shall be such that it may be opened or closed against the differential pressure specified in the Project Specification or schedule, with an effort applied by one man of 200N exerted simultaneously with each hand on the rim of a standard handwheel, or on the cross bar of a tee key with hands spaced 900mm apart (total effort 400N). In order to achieve this, gate valves shall be fitted as required with either plain or ball thrust bearing, spur gearing and close-machined channel guides and shoes;
- (h) for working pressures above 1000kPa and valves of DN 250 and under, and all valves of DN 300 and over, valves shall be fitted with a spur reduction gear having an advantage of not less than 2:1;

- (i) for working pressures above 1000kPa valves shall be fitted with ball-bearing spindle thrust collars;
 - i) the seat rings shall be pinned, and manufactured from either phosphor bronze in accordance with BS 1400 (zinc-free bronze), 304 stainless steel or as approved;
 - ii) alternatively resilient seal valves (RSV) may be offered. The gate of the RSV shall be completely covered by natural or an approved neoprene rubber to a minimum thickness of 1 mm and pinhole free;
- (j)
 - i) the gland packing shall be lubricated and graphited cotton packing provided in accordance with the requirements of BS 437 Type A;
 - ii) two rubber "O" seal rings of an approved design shall be provided;
- (k) the design of all valves shall be such that they may be mounted vertically; and
- (l) flanged valves shall be drilled off-centre.

PSL 3.10.2 BUTTERFLY VALVES

Butterfly valves for working pressures up to 2500kPa shall comply with the relevant requirements of BS 5155 and the following:

- (a) The valve shall:
 - i) be manufactured from materials as specified in Table 3 of BS 5155;
 - ii) be suitable for connecting to pipe flanges by individual bolting;
 - iii) have a replaceable stainless steel or zinc-free, phosphor bronze (both of an approved quality) seat mechanically fixed to the body and a resilient rubber or neoprene seal, replaceable and adjustable on site, mechanically fixed to the edge of the disc;
 - iv) be suitable for flow in either direction, capable of use as a regulating valve and shall shut off drop tight, and have a maximum working pressure as stated in the Project Specification;
 - v) be clockwise closing;

- vi) be designed for installation with the main shaft horizontal and the operating shafts vertical;
 - vii) be designed such that it may be opened or closed against the differential pressure specified in the Project Specification or scheduled, with an effort not exceeding 250N on the handwheel in the case of valves up to 300mm in diameter, and not exceeding 400 N on the handwheel in the case of larger valves;
- (b) the seal retaining rings and screws shall be of an approved stainless steel or zinc-free, phosphor bronze;
 - (c) the main shaft shall be offset from the centreline of the disc so as not to pass through the seal;
 - (d) the body ends shall be flanged and drilled off centreline; and
 - (e) the valve assembly shall be protected against corrosion in accordance with the requirements of PSL 3.9.

Each valve shall be supplied with a certificate certifying that it complies with the requirements of this specification and that it has been tested and inspected in terms of BS 5155.

PSL 5 CONSTRUCTION

PSL 5.1 LAYING

PSL 5.1.1 GENERAL

ADD THE FOLLOWING TO THIS SUB-CLAUSE:

“The pipelines shall be laid to straight grades to the levels and to the routes indicated on the drawings.

Pipes shall be laid free from cold stresses. No deflections shall be taken in curvature of pipes, but shall be taken with approved bends with exceptions as hereinafter specified.

Skids of sufficient number shall be supplied to support the pipes to proper height. If pipe is supported over the trench, skids shall be of sufficient length to prevent collapsing of the trench and of sufficient strength to carry the pipe. For coated pipe a sufficient number of skids shall be used to prevent damage to the coating.”

PSL 5.3 SETTING OF VALVES, SPECIALS AND FITTINGS

ADD THE FOLLOWING TO THIS SUB-CLAUSE:

“Valves shall be jointed such as to remain operative when the downstream pipe is removed.

All valves shall be placed as and where indicated on the drawing.”

PSL 6 TOLERANCES**PSL 6.2 ALIGNMENT (PLAN AND LEVEL)**

Delete Clause 6.3 and replace with:

“The permissible deviation in plan and level alignment from the designated line of the pipeline shall be $\pm 20\text{mm}$ and $\pm 10\text{mm}$ respectively provided always that the rate of departure from the designated line nowhere exceeds 1 in 600.”

PSL 7 TESTING**PSL7.3 STANDARD HYDRAULIC PIPE TEST****PSL 7.3.1 TEST PRESSURE AND TIME OF TEST**

The maximum working pressure for the different pipes is indicated by the class of the pipe.

PSLB BEDDING (PIPES)

PSLB 3 MATERIALS

PSLB 3.1 SELECTED GRANULAR MATERIAL

REPLACE THE CONTENTS OF THIS SUBCLAUSE WITH THE FOLLOWING:

"Selected granular material shall have a PI not exceeding 6 and shall be free from sharp-edged particles exceeding 19 mm."

PSLB 3.2 SELECTED FILL MATERIAL

IN THE FIRST LINE DELETE

"PI not exceeding 6"

AND SUBSTITUTE

"PI not exceeding 12".

PSLB 3.3 BEDDING

ADD THE FOLLOWING:

"HDPE pipes are deemed to be flexible pipes for the purposes of this subclause. Due to the site being in a dolomitic region, all pipes (water, sewer and stormwater) will be HDPE"

PSLB 3.4 SELECTION

PSLB 3.4.1 SUITABLE MATERIAL AVAILABLE FROM TRENCH EXCAVATION

REPLACE THE WORDS "(but is not required)" IN THE FIFTH LINE WITH THE WORDS "(at his own cost)".

PSLB 8 MEASUREMENT AND PAYMENT

PSLB 8.1 PRINCIPLES

PSLB 8.1.5 DISPOSAL OF DISPLACED MATERIAL

REPLACE THE CONTENTS OF THIS SUBCLAUSE WITH THE FOLLOWING:

"Material displaced by the pipeline and by imported material from sources other than trench excavation, shall be disposed of at an approved site furnished by the Contractor. No haulage is payable for such material."

PSLC CABLE DUCTS

PSLC 3 MATERIALS

PSLC 3.1 DUCTS

ADD THE FOLLOWING:

PSLC 3.1.2 SPLIT UPVC PIPES

Split pipes shall only be used to provide ducts for existing services that cannot be severed and threaded through the ducts. The pipes shall be cut accurately in the middle, and opposite halves shall be matched as sawn. Split pipes shall be placed around the service, firmly bound by steel straps, and encased in concrete."

PSLC 3.4 CABLE DUCT MARKERS

ADD THE FOLLOWING:

"A cable duct marker shall consist of a 300mm x 300mm x 100mm deep, class 20MPa/19 mm concrete block, connected by means of a non-ferrous metal strip to a temporary plug to seal the end of the duct. The plug shall prevent moisture or soil from entering the duct. The metal strip shall be firmly connected to both the plug and the concrete block. The concrete block shall be positioned not further than 0,5 m horizontally from the end of the cable duct. The face of the concrete block shall be clearly marked "E" to indicate electricity cables."

PSLC 5 CONSTRUCTION

PSLC 5.1 EXCAVATION OF TRENCHES

PSLC 5.1.1 TRENCH WIDTHS AND DEPTHS

"The pipe trench shall have a minimum depth to provide a cover of not less than 600 mm between the top pipe and the finished road surface level. Where this depth cannot be maintained due to the nature of the ground, the depth may be altered at the discretion of the Engineer. When the pipe has less cover than 600 mm it shall be covered by concrete slabs with a minimum thickness of 50 mm and a width equal to 400 mm plus the diameter of the pipe they protect, unless otherwise directed by the Engineer. The concrete slabs shall be provided by the Contractor."

PSLC 5.3 DUCT LAYING**PSLC 5.3.1 STRAIGHT LAYING**

ADD THE FOLLOWING:

"If the trench is to contain more than one pipe exceeding 75 mm internal diameter, the base of the trench shall slope so that water may drain away from the pipes. The level of the bottom of the trench shall fall at least 75mm per 30m."

PSLC 5.3.3 DRAW WIRE

REPLACE THE CONTENTS OF THIS SUBCLAUSE WITH THE FOLLOWING:

"A length of 3,05 mm diameter galvanized iron wire (supplied by Telkom) shall be attached to the cleaning-brush and drawn into the pipe and left for use as a draw wire. Surplus wire at least 2 m in length shall be left neatly coiled at each end of each duct. All open pipe ends must be plugged to prevent the ingress of dirt."

ADD THE FOLLOWING SUBCLAUSES:

PSLC 5.3.6 SCREENING**PSLC 5.3.6.1 GENERAL**

Pipe ducts shall be screened against electrical interference by copper wires. All joints in screen wires shall be soldered.

PSLC 5.3.6.2 COMPOSITION OF SCREEN FOR PIPE DUCTS

The screen shall consist of two strands of 2.50mm diameter copper wire, bound together by two turns of similar copper wire every 5m. The binding shall be undertaken by the Contractor. The screen shall be placed approximately 200mm above the pipe or the top layer of pipes."

PSLC 5.6 LAYING OF CABLES WITH OTHER SERVICES

ADD THE FOLLOWING:

"Trenches for ducts shall be excavated so that pipes can be laid at least 300 mm from power cables. Where this is not possible, pipes shall be separated from power cables by vertically placed concrete or paving slabs."

"PSLC 7.4 FINAL INSPECTION

A final inspection will take place on completion of the work. The Contractor shall, at his own cost, expose all pipe ends prior to the final inspection, after which they may be finally plugged and closed."

PSLC 8 MEASUREMENT AND PAYMENT

PSLC 8.2 SCHEDULED ITEMS

PSLC 8.2.5 SUPPLY, LAY, BED, AND PROVE DUCT

REPLACE THE PAYMENT PARAGRAPH WITH THE FOLLOWING:

"Separate items are scheduled for each diameter of duct.

The rates shall cover -

- (a) cost of collecting the ducts, draw wire and screening wire and the cost of laying the ducts and screening wire, installing the draw wire, jointing, bedding and providing all as specified, and
- (b) for all other ducts, the cost of providing all the material and the cost of laying the ducts, installing the draw wire, jointing, bedding and providing all as specified."

PSLD SEWERS**PSLD 3 MATERIALS****PSLD 3.5 MANHOLES, CHAMBERS, ETC****PSLD 3.5.2 PRECAST CONCRETE SECTIONS**

ADD THE FOLLOWING:

"Sectional spun-concrete cylinders shall be manufactured from dolomitic aggregate."

PSLD 3.6 MARKER POSTS

REPLACE THE WORDS "Project Specification" WITH "Drawings".

PSLD 5 CONSTRUCTION**PSLD 5.9 CONNECTING SEWERS****PSLD 5.9.1 LOCATION AND DETAILS**

DELETE THE FOLLOWING FROM THE FIRST PARAGRAPH:

"or required in terms of the Project Specifications."

DELETE THE SECOND PARAGRAPH.

PSLD 8 MEASUREMENT AND PAYMENT**PSLD 8.2 SCHEDULED ITEMS****PSLD 8.2.11 CONNECTION TO EXISTING SEWER AT**

REPLACE THIS ITEM WITH THE FOLLOWING:

"PSLD 8.2.11 CONNECTION TO EXISTING SEWERUNIT: SUM

The tendered sum shall include full compensation for excavation, making an opening in the existing manhole, installing new pipes in the new opening, breaking out and modifying the channelization inside the manhole to suit the new pipe layout, ensuring the watertightness of the new connection, supplying all the necessary materials, removing surplus material and debris, all labour and equipment required to make the connection, and liaison with the local authorities."

4.2. PARTICULAR SPECIFICATIONS

PC BUILDING WORK

CONTENTS

PC 01 SCOPE

PC 02 BRICKWORK, PLASTER WORK AND FLOOR SCREEDS

PC 03 DOORS AND WINDOWS

PC 04 GLAZING

PC 05 CARPENTRY AND JOINERY

PC 06 ROOF SHEETING AND ACCESSORIES

PC 07 ELECTRICAL WORK

PC 08 PLUMBING

PC 09 PAINTING

PC 10 MEASUREMENT AND PAYMENT

PC 01 SCOPE

This is a Particular Specification and covers the various construction activities associated with the erection of buildings. ***Note that not all the items covered in this specification might necessarily be applicable to this contract.***

Building work shall be carried out in accordance with the National Building Regulations, SANS 10400, the applicable clauses of the SANS Standardized Specifications and the information contained in this Specification.

Work appurtenant to the erection of buildings such as earthworks, concrete work, structural steelwork, etc, shall be carried out as specified in the appropriate Standardized Specifications and will be measured and paid for under those Specifications.

PC 02 BRICKWORK, PLASTER WORK AND FLOOR SCREEDS

PC 02.1 MATERIALS

(a) Bricks

Bricks shall comply with SABS 227 and shall be of the class scheduled or shown on the Drawings.

Satisfactory proof of the load-bearing capacity of the bricks offered shall be submitted before deliveries are made to the Site.

Air bricks shall be well-burnt terracotta and shall be free from cracks and blemishes and lined with copper mosquito gauze.

Three samples of each type of brick shall be submitted to the Engineer for approval. All subsequent deliveries shall be of a standard equal to or better than that of the approved samples.

Strength of the bricks to be 14MPa.

Burnt Clay Masonry Units as per SANS 227: 2007.

(b) Cement

Cement shall comply with the requirements of SASS 471 and shall be stored under cover. The use of Portland Blast-furnace Cement (PBFC) which complies with the requirements of SABS 626 will only be allowed if approved by the Engineer.

(c) Aggregate

Fine aggregate shall be naturally occurring sand or shall consist of crushed rock or gravel, and shall be hard, clean and free from adherent coatings or other deleterious matter. Sand for plaster and mortar shall comply with the requirements of SABS 1090, whereas the aggregates for normal and granolithic floor screeds shall comply with the requirements of as 1199 and as 1201 respectively.

(d) Water

Water shall be clean and free from clay, silt, oil, acid, alkali, organic or other matter which would impair the required strength and durability of the mortar, plaster or floor screed.

(e) Wall ties

Wall ties shall be of the galvanized, crimped, single-wire type with a 3.5 mm diameter, and shall comply with the requirements of SABS 28.

(f) Damp-proof sheeting

Damp-proof sheeting shall comply with SABS 248, type FV for fibre felt, or SASS 952, type a for embossed polyethylene sheeting.

PC. 02.2 CONSTRUCTION OF BRICKWORK

(a) Cement mortar

Initial drying shrinkage and wetting expansion of mortar as per SANS 6254: 2006.

Compressive strength of mortar as per SANS 6255: 2006.

Cement mortar will, unless otherwise specified, consist of 1 part of Portland cement to 4 parts of sand by volume for normal brickwork and 1 part of Portland cement to 3 parts of sand by volume for reinforced brickwork. The ingredients for cement mortar shall be measured in proper gauge boxes on a boarded platform and thoroughly mixed. Alternatively, mixing may be by means of an approved mechanical batch mixer. Only when the dry ingredients have been thoroughly mixed and a mixture of uniform colour has been obtained may the water be added in sufficient quantity to obtain mortar with the required consistency.

Cement mortar shall be used within two hours of adding water to the mix and shall not be used after two hours or if it has begun to set. Mortar shall be turned over frequently until it is used to prevent it from setting.

(b) Brickwork

Dimensions of all the brickwork shall be set out and built as shown on the Drawings. Bricks shall be kept wet before laying and the top of brickwork shall be wetted before any further bricks are laid. Bricks shall be well buttered with mortar before being laid and all joints shall be thoroughly flushed up as the work proceeds. All joints to face brickwork shall be neatly made and key drawn with a 6 mm key.

Brickwork shall be carried up in a uniform manner with no portion being raised more than 1 m above an adjacent portion. All perpend, quoins, etc, shall be kept strictly true and square and the whole properly bonded together.

Brickwork shall be built in stretcher bond or english bond as shown on the drawings, and bats shall not be used except where required for the bond. All joints shall be 10 mm wide and four courses shall measure 340 mm.

Brickwork for cavity walls and solid walls built in stretcher bond shall be tied with wall ties placed not more than one metre apart in every third course, and shall be staggered vertically. At openings, the ties shall be positioned not more than 300 mm apart along the periphery of the opening and 150 mm from the opening.

Face brickwork shall be kept perfectly clean and rubbing down of the brickwork shall not be allowed. Scaffold boards shall be turned back during heavy rain to avoid splashing. Soiled brickwork shall be cleaned at the Contractor's expense, and the cleaning method shall be approved by the Engineer.

Metal ties for cavity walls as per SANS 28: 2010.

(c) Reinforced brickwork

Brickwork over door and window openings shall be reinforced with steel rods, welded or expanded mesh, etc. Reinforcement shall be placed in each course of brickwork for a minimum of 4 courses or as shown on the drawings.

Reinforced brickwork shall continue at least 300 mm on each side of the openings.

Brick lintels shall be built upon rigid temporary supports left in position for not less than 7 days after brick-laying. Prestressed concrete lintels may be used where approved by the Engineer.

(d) Key for plaster

Joints of all brickwork receiving plaster shall be raked out, or the brick surfaces shall otherwise be prepared with an acrylic slurry or any other approved bonding agent.

(e) Damp-proofing

A damp-proof course shall be laid over the full width of all the walls at a minimum height of 150 mm above the final ground level or wherever else it may be required, and it shall be lapped for at least 150 mm at angles and joints. A damp-proof course shall also be laid and stepped up under all external sills.

(f) General

Rough and fair cutting shall be performed as required, and the brickwork shall be fitted around any steel work. Face brickwork shall be carefully cut and fitted to suit fittings.

Chases shall be left or formed for edges of concrete floors, staircases, etc.

Chases shall also be provided wherever they may be required for pipes, conduits, switch boxes, distribution boards, and the like. Joints shall be raked out for flashings.

PC 02.3**PLASTER WORK**

(a) Plaster coats

A plastered finish shall consist of a single coat, comprising one application of a 1:6 cement: sand mixture with a wood or steel-float finish.

(b) Thickness

The total thickness of the plaster finish shall be 13 mm minimum and 20 mm maximum.

(c) Workmanship

All plaster work shall be finished smooth and ready to receive paint. Plaster shall be finished with the faces of all switch and plug boxes, the interiors of which shall be kept free from plaster. Plastered surfaces shall be plumb and jambs and reveals shall be formed square.

The plasterer shall cut out and make good all cracks, blisters and other defects and leave the plaster work, on completion, in a state which is acceptable to the Engineer.

PC 02.4**FLOOR SCREEDS**

Floor screeds shall have a mix proportion by mass consisting of 1 part of Portland cement and 3 parts of fine aggregate. A minimum amount of water is to be used, but it shall be sufficient to allow adequate compaction.

Screeds shall be laid on clean hardened bases in panels not exceeding 14 m² and shall be steel-trowelled to a true and smooth finish. In monolithic construction the panels shall not exceed 30 m². Joints in screeds shall coincide as nearly as possible with joints in the bases. The thickness of screeds shall be as shown on the drawings or as directed by the Engineer.

The entire screed surface shall be free from loose or raised particles of aggregate, trowel marks or from any irregularities, humps or depressions exceeding 5 mm when measured from a 3 m long straight-edge.

Screeds shall be cured for 3 to 7 days as may be directed by the Engineer, and shall be protected from damage.

No moisture-sensitive floor finish shall be laid on screeds unless a reliable moisture test shows that the screed is sufficiently dry to receive the covering.

PC 03 DOORS AND WINDOWS**PC 03.1 MATERIALS****(a) General**

All steel and iron work shall be delivered clean and free from rust, pitting or other defects. Shop primings shall be applied before delivery and shall consist of a coat of red oxide paint, or any other approved anti-rust paint on all surfaces.

Unless otherwise specified, all materials shall conform at least to the appropriate SASS or SS standards where such standards apply to ironmongery, steel, cast iron or any other related materials.

(b) Pressed steel door frames

Pressed steel door frames shall comply with SASS 1129 and shall be manufactured from 1,6 mm thick mild-steel sheeting, pressed to the required shapes, properly mitred, welded and reinforced, with all welding neatly cleaned off.

Frames shall be of the widths required to suit the thickness of the walls into which they are built and shall be fitted with suitable tie bars and braces at the bottom. Three lugs to be built into the brickwork shall be provided on each jamb.

Rebates in frames and transoms for doors shall be of the widths required to suit the thicknesses of the doors and shall be fitted with a pair of approved steel butt hinges set flush into recesses in the frames. 4,5 mm thick reinforcing plates shall be welded to the backs of the frames at hinge positions.

Heads of frames over double doors shall be drilled where required to form keeps for bolts and shall be fitted with one rubber buffer for each leaf of the door.

Frames for single doors shall be fitted with approved chromium striking plates and an adjustable striking-plate keeper boxed in at the back of the frame by a welded-on sheet-metal box. The frames shall be fitted with a minimum of two rubber buffers.

Frames shall be protected against twisting and damage during transit and erection.

(c) Pressed-steel doors

Pressed-steel doors shall be manufactured from 1,6 mm thick steel plate. The doors shall be of standard design, pressed to shape with 40 mm reveals all round. The doors shall be strengthened with full-length vertical V-shaped or other approved sectional strengthening ribs projecting to the outer face. Two horizontal stiffening rails shall also be welded to the inner face of the doors.

A door shall be hung on a pair of 100 mm long steel butt hinges with loose pins.

The leaves of the hinges shall be welded to both the door and the door frame, and a 1,6 mm thick steel plate shall be welded to the inner face of the door to protect the lock.

One leaf of double doors shall be fitted at the top and bottom with approved 150 mm cast brass barrel bolts in an approved manner and the other leaf shall be fitted with a lock, the striking plate of which shall be fixed to the first leaf.

Where indicated on the drawings, doors shall be fitted with louvered ventilation grills of approved design, backed with insect and vermin-proof gauze screening.

(d) Steel window frames

All steel window frames shall comply with SABS 727 and shall be of the types and sizes shown on the Drawings.

Standard industrial types of steel window frames shall be constructed from rolled mild-steel industrial sections, 35 mm wide by 3 mm thick, with opening sections constructed from standard residential sections, 25 mm wide by 3 mm thick, welded at angles and properly jointed at intersections.

Window frames shall be formed perfectly flat, truly square and properly jointed at all angles, and the opening portion shall fit properly on all faces and shall open and close freely.

Glazing bars shall be continuous with jointed intersections, the ends being neatly tenoned into the frame and securely welded in position.

Frames shall be fitted with standard fixing lugs

Opening sections shall open as indicated on the drawings, and shall be fitted with steel hinges with brass pins. Pivots shall be fitted with bronze ring centres.

Side hung or top hung opening sections shall be fitted with brass handles and friction stays. Bottom hung sections shall be fitted with friction pivots and spring catches.

Weather bar drips shall be attached to the fixed frames for the complete width of the window at the head of outward opening sections.

Composite windows shall preferably be delivered to the Site fully assembled, complete with mullions and transoms.

(e) Door locks and handles

All door locks shall comply with the requirements of SABS 4 and shall be of approved manufacture and pattern. All locks shall be supplied with two keys. Keys shall be distinctly numbered with consecutive numbers and each key shall be stamped with the same number as that of the lock which it controls. No two locks in anyone building may have the same key.

External doors shall be fitted with four-lever heavy-duty mortice locks, which shall be master-keyed.

All locks shall be properly installed and, after completion, striker plates shall be adjusted and the locks serviced.

Door handles shall be of cast zinc of approved manufacture and pattern.

(f) Miscellaneous fittings

All retaining devices for doors and windows as well as fittings such as coat hooks, retaining hooks, etc, shall be of solid brass. All fittings shall be secured by screws or set screws of the same material and finish as the fitting.

Fittings to be fixed to plastered walls, masonry or floors shall be fixed direct by means of patent plastic or fibre plugs fitted into drilled holes. Door stops shall be provided at every door and shall be 40 mm diameter rubber stops.

PC 03.2 INSTALLATION OF DOORS AND WINDOWS

All built-in door and window frames shall be set straight, plumb and level, and shall operate to the satisfaction of the Engineer after fixing has been completed.

Fittings shall be either removed, or wrapped and protected from damage, until all rough trades have been completed.

PC 04 GLAZING**PC 04.1 MATERIALS****(a) Glass**

Glass shall comply with the requirements of CKS 55. The quality of all window glass shall be such that surface deterioration will not develop after glazing.

All glass shall be free from bubbles, waviness, scratches, stains or other imperfections.

Unless otherwise specified, sheet glass for glazing shall be fiat-drawn clear glass of ordinary glazing quality and of the thicknesses indicated below:

For panes not exceeding 0,75 m² in area.....3 mm

For panes exceeding 0,75 m² but not exceeding 1,5 m² in area.....4 mm

(b) Putty

All putty shall comply with the requirements of SASS 680.

Putty shall not be too hard or soft or caked when used, and shall dry evenly without crazing or cracking.

Defective putty shall be cut out and replaced by the Contractor at his own expense, and any broken glass shall also be so replaced and putty so repainted.

PC 04.2 GLAZING

Glass shall be cut in panes to suit all glazed openings with sufficient clearance all round to prevent cracking by expansion, contraction or vibration.

In all cases the glass shall be well bedded and back-puttied and installed as specified in SASS Code of Practice 0137.

All putty shall be carefully trimmed, cleaned off and neatly finished off straight with smooth surfaces and sharp mitres. A paint primer shall be applied as soon as the putty has dried out sufficiently to prevent shrinkage cracks from forming.

The entire glazing operation shall be cleaned before the premises are handed over for occupation.

PC 05 CARPENTRY AND JOINERY**PC 05.1 GENERAL****(a) Materials**

All timber used for structural purposes shall be of merchantable grade and shall comply with the requirements of SA8S 563 and SA8S 1245. Structural timber shall be carefully selected and of the best quality, free from large or dead knots, shakes, waney edges or other defects. Purlins and bracing shall comply with the requirements of SASS 653. Finger-jointed structural timber shall comply with the requirements of SA8S 096 and laminated timber with the requirements of SA8S 1089.

Hardwoods and softwoods for joinery shall comply with SA8S 1099 and SA8S 1359 respectively and suitable species shall be used for the various purposes.

Unless otherwise specified, all materials shall conform to the appropriate SA8S or 8S Specification where such standards exist for nails, screws, bolts, adhesives. etc.

(b) Preservative treatment

All structural timber shall be given a preservative treatment suitable for the duty for which the timber is intended in accordance with SA8S 05, and no untreated timber shall be used. The preservative treatment shall not impair the final finish.

The timber shall be impregnated throughout. When surface coating is specified, the compounds applied on the surfaces of the timber shall form an unbroken film.

(c) Priming

The jointing surfaces of all joints exposed to the weather and built-in portions of frames shall be thickly primed except where adhesives are specified.

Carpentry and joinery items which are prepared for painting by the manufacturer, shall be knotted and primed before being dispatched to the Site.

Primed surfaces shall be touched up where necessary during the progress of the work or where site adjustments have been made.

PC 05.2 CARPENTRY WORK**(a) Scope of work**

Carpentry work shall be carried out in a manner consistent with good workmanship and in compliance with the drawings.

The carpenter shall perform all cutting away and making good in attendance upon all other trades and he shall provide and maintain temporary coverings required for the protection of any finished work that might be damaged if left unprotected during the progress of the work.

(b) Dimensions

Unwrought timber shall be as sawn and shall be to the dimensions and within the tolerances specified in the relevant SABS Standard Specifications mentioned in Subclause PC 05.1 (a).

(c) Jointing

Unless otherwise specified, all joints shall be secured by means of a suitable type and a sufficient number of approved connectors. All joints shall be carefully made in such a way that they will not impair the strength and stiffness of the beams or members.

(d) Timber roof construction

The plates, joists, rafters, purlins, bracing and other pieces used for the construction of the roof and trusses shall be of the dimensions, spacing and construction, as shown on the drawings.

All the joints in the framework shall be of the most appropriate type, accurately formed and adequately secured with fasteners as specified.

PC 05.3**JOINERY WORK****(a) Scope of work**

Joinery work shall consist of the manufacture, delivery to the Site, and fixing in the buildings, of all joinery shown on the drawings.

Except where a special finish is specified, the Contractor shall have all stairs, landings, doors, shelves and other joinery work cleaned and scrubbed down and shall leave all his work in a good order to the satisfaction of the Engineer.

(b) Dimensions

All wrought timber shall be sawn, planed, drilled or otherwise machined or worked to the correct sizes and shapes shown on the drawings.

Reasonable tolerance shall be provided at all connections between joinery works and the building structure to compensate adequately for any irregularities, settlements or any other movements.

(c) Fabrication

The joiner shall perform all the necessary mortising, tenoning, grooving, matching, tonguing, housing, rebating and all the other works necessary for correct jointing. He shall also provide all metal plates, screws, nails and other fixings that may be necessary for doing the specified joinery work properly.

(d) Joints

Where joints are not specifically indicated, they shall be the recognized forms of joints for each position. The joints shall be so made as to comply with part 2 of BS 1186.

(e) Doors and frames

Door frames, linings, panel doors, framed, ledged and braced doors, flush doors, sliding doors, etc, shall be supplied or made by the joiner and shall be installed, fitted or hung as detailed on the drawings.

All timber shall be wrought and prepared for oiling, staining, varnishing or painting,

(f) Skirtings, cornices, etc

Skirtings, cornices, etc shall not be installed until after the wall coverings have been applied, the flooring laid and ceilings installed, unless otherwise specified,

(g) In situ joinery

In situ joinery work shall not be executed until after all floor, wall and ceiling surfaces have been fOfT'2d or constructed, unless otherwise instructed.

(h) Ceilings

Ceilings shall consist of plaster board or fibre-cement panels as shown on the drawings and shall be nailed to the brandering or suspended from the roof structure. The panels shall be separated by exposed tees and insulated with a 50mm thick fiberglass wool blanket where shown on the Drawings,

PC 06 ROOF SHEETING AND ACCESSORIES

Roof sheeting and accessories shall comply with and will be measured and paid for under SASS 1200 HC.

Roof sheeting to be IBR 686 Galvanized / Chromadek 0.8 ISQ230.

PC 07 ELECTRICAL WORK

The electrical wiring of buildings shall be carried out by registered and licensed electricians in accordance with the requirements of SASS 0142 and the regulations of the Employer.

The electrician shall work in close co-operation with the Contractor to ensure that all conduits, switchboards, plug boxes and switch boxes are installed in their correct position.

The work shall be carried out in accordance with the Drawings and to the satisfaction of the Engineer and the local authority.

PC 08 PLUMBING**PC 08.1 MATERIALS**

(a) General

All materials shall be of the best quality and shall be approved by the Engineer before installation. Cracked, chipped, dented or faulty items or materials shall be replaced at the Contractor's expense. Glazed ceramic sanitary ware shall comply with the requirements of SASS 497 and all other materials shall comply with the standards as specified, scheduled or shown on the Drawings.

(b) Water closet (VVC) suites

WC suites shall consist of a white glazed vitreous china closet with an S or P trap and seat lugs, a 14 litre low-level matching flat-bottomed flushing cistern placed and fixed on the closet, or a suspended enamelled cast-iron cistern with the flush pipe connected

to the flushing rim of the closet with rubber cone joints, and a solid heavy-duty plastic seat with cover, hinges and buffers.

(c) Urinals

Urinals shall be of the type detailed or scheduled, of white glazed vitreous china, wall mounted, with an automatic or a manual flushing system, and chromium plated fittings.

(d) Wash hand basins

Wash hand basins shall be of white glazed vitreous china or enamelled cast iron, wall mounted on a pair of cast-iron brackets, and fitted with chromium plated fittings consisting of two taps, outlet and chain, and supplied with a plug and an anti-siphon trap.

(e) Sinks

Sinks shall comply with the requirements of SASS 242 and shall be complete with cabinet, chromium-plated outlet, anti-siphon trap, plug, chain and two bib taps or one mixer tap, all as detailed or as scheduled.

(f) Pipes and tubing

Cast-iron and steel pipes used in plumbing work shall comply with the requirements of SASS 746 and SABS 62 respectively. Copper tubing shall comply with the requirements of SASS 460, and malleable cast-iron fittings with the requirements of SABS 509.

PC 08.2 CONSTRUCTION

Plumbing shall be carried out strictly in accordance with the drawings and with the National Building Regulations, with specific reference to Government Notice R1875 dated 31 August 1979.

Steel pipes and their malleable cast-iron fittings shall be joined with red lead and hemp, lead pipes shall have wiped soldered joints, and cast-iron pipes shall be joined by caulking with hemp and metallic lead.

Soil pipes from WCs shall have an internal diameter of at least 100 mm and shall be fitted with a pan connector and an access bend (or an access junction where a vent pipe is used), and carried through walls and into the ground for connection to the sewer. Vent pipes shall be fitted with approved balloon gratings.

Waste pipes from basins and sinks shall have an internal diameter of at least 32 mm and shall discharge into gulleys. Bends for waste pipes shall incorporate cleaning eyes.

Cisterns, basins and sinks shall be connected to the pipe system with 12 mm diameter copper service pipes, and chromium-plated stop-cocks shall be installed for isolation and maintenance purposes.

PC 09 PAINTING**PC 09.1 GENERAL**

No paint shall be applied to any surface containing traces of dust, grit, grease, oil, loose rust, mill scale or corrosion products of any kind or to any surface that is not free from moisture. Where necessary, surfaces shall be thoroughly washed to remove all traces of soluble salts and/or corrosive air-borne contaminants prior to painting, and the surfaces shall be dried and painted immediately thereafter.

Welding shall be completed in so far as it is possible before painting commences, but in cases where welding can be done only at a later stage, no paint shall be applied to within 75 mm of the proposed weld position unless otherwise specified. Welds and adjacent parent metal shall be abrasive blasted and/or ground and all contaminants such as flux shall be removed prior to painting.

Surfaces of members which are to rest on concrete or other floors or which will be otherwise inaccessible after erection shall receive the full paint system prior to erection.

Damaged paint areas on metal surfaces shall be cleaned, rust spots removed where applicable and the surrounding paint which is still intact shall be feathered for a distance of 20 mm beyond the damaged area. Spot priming and repair shall consist of all the coats previously applied and shall overlap the damaged area.

Damaged galvanized areas shall be cleaned and any rust spots and any flakes of the coating surrounding the damaged area removed. The coating shall then be restored by zinc spraying or soldering, or painting with a zinc-rich paint, as may be approved by the Engineer.

Where the shop coat is allowed to age for a few months before the final painting is done, light sanding or rubbing with steel wool or scrubbing with clean water using a bristle brush shall be carried out.

Steel to be embedded in concrete shall not be painted below 50 mm from the final level of the concrete.

Each priming coat and each undercoat of paint shall be inspected and approved by the Engineer before any subsequent undercoat or finishing coat is applied.

All finishing colours shall be as shown on the drawings, or as directed by the Engineer.

PC 09.2 MATERIALS

Paints shall comply with the requirements of the appropriate Specifications below:

(a) Primers

SABS 312 : Red-lead based for structural steel

SABS 678 : For wood

SABS 679 : Zinc chromate for steel

SABS 723 : Etch-wash primer for metals

SABS 912 : Calcium plumbate for galvanized iron

SABS 926 : Zinc-rich epoxy for steel

(b) Undercoats

SABS 681 : For all undercoats

(c) Finishing coats

SABS 515 : For interior use, flat and egg-shell finish

SABS 630 : For interior and exterior use, high-gloss enamel

SABS 631 : For interior and exterior use, oil gloss paint

SABS 633 : For interior use, emulsion paint

SABS 634 : For exterior use, emulsion paint

SABS 684 : For exterior use on structural steel

SABS 801 : For interior and exterior use, epoxy-tar paint

SABS 802 : For interior and exterior use, bituminous aluminium paint

SABS 887 : For interior use, glossy and egg-shell varnish.

The Contractor shall furnish the Engineer with the following information and details regarding the paints and decorative materials for the painting system he proposes to use, for written approval:

(i) The name of the manufacturer and trade name.

(ii) The brand, type or grade of paint and the appropriate SASS Specification.

(iii) Manufacturer's data sheets, colour references, instructions for use, including surface preparation, sealers, primers, undercoats, finishing coats, coat thicknesses and curing periods, which shall all be considered as being part of these Specifications if approved by the Engineer.

(iv) Safeguards to protect the applied paint from damage until the work is accepted by the Engineer.

(v) The shelf or pot life of materials, if applicable.

(vi) An undertaking that the proposed paint system is suitable for its intended use and that the various coats of paint are compatible with one another.

Where proprietary brands are used, the manufacturer's priming and all subsequent coats of paint suitable for that particular brand shall be employed in accordance with the manufacturer's instructions.

No other materials of a similar nature and quality or from another manufacturer may be used instead of those approved unless permission to do so has been obtained from the Engineer, in writing.

All materials shall be brought onto the Site in containers sealed by the manufacturer. Paints shall not be mixed with another paint of a different quality, type, brand or colour, or thinned or adulterated in any way, but shall be used as supplied by the manufacturer. Any mixing or tinting required shall be carried out by the manufacturer.

Tinting of paint on the Site by the Contractor will only be allowed with the written permission of the manufacturer and the Engineer.

PC 09.3 INSPECTION AND PRELIMINARY WORK

Before commencing paintwork, the Contractor shall carefully inspect the surfaces to be painted to satisfy him that the surfaces are in a satisfactory or acceptable condition to receive the paint system specified.

All metal fittings and fastenings shall be removed where applicable before the preparatory processes are commenced. On completion, the metal fittings and fastenings shall be cleaned and refitted in position.

PC 09.4 WORKMANSHIP AND FINISHES

Paint may be applied by spray, brush or roller depending on the materials used, the surface to be painted, and the manufacturer's instructions.

Every coat of paint, irrespective of the method of application, shall be adequately and permanently keyed or bonded to the base material or previously applied coat, and shall be evenly distributed, continuous, free from sags, runs, brush marks, pin holes or other imperfections, and shall dry to a smooth finish.

An approved water trap and air-regulating valve shall be furnished and installed on all equipment used in spray painting.

Before painting the interiors of buildings, they shall be cleaned and the floors shall be washed and kept free from dust during the progress of the interior work.

The Contractor shall protect all nearby surfaces against disfigurement by spatters, splashes and smirches of paint or paint materials. The Contractor shall be responsible for any damage by paint or dirt caused by his operations to vehicles or property or injury to persons and he will be required to provide

protective measures to prevent any such damage or injury and make good, where required, at his own expense.

If passing traffic creates dust which may harm or spoil the appearance of external painted surfaces, the Contractor shall sprinkle the adjacent areas with water, at his own cost, for a sufficient distance on each side of the location where painting is being done.

Undercoats shall be tinted by the manufacturer to distinguish between successive coats.

The final coats or finishing coats of paint shall be applied after all the other work in the vicinity has been completed.

The painter shall keep some of the final paint in reserve in the event of his having to make good any patching which may be required as a result of damage or unforeseen circumstances.

Upon completion, the Contractor shall, in the case of buildings, clean all glass, remove all paint spots from walls, floors and fittings, and leave the premises clean and fit for occupation.

All inflammable materials, comprising solvents, thinners, wiping cloths, etc, shall be placed in tightly closed containers and properly disposed of.

PC 09.5

PAINTING OF PLASTER, CONCRETE OR BRICK SURFACES

(a) Surface preparation

Surfaces for painting shall be prepared by sandpapering, scraping or wire brushing to remove loose material, dust, laitance, scum or other deleterious materials or high spots. Defective areas shall be cut out where necessary and made good with approved non-shrink filler. Cracks shall be cut out, suitably keyed, and given a coat of an approved bonding agent before the filler is applied. All patches shall be rubbed down to an even surface. Surfaces shall be washed and allowed to dry.

Surfaces shall be treated with neutralizing liquid for walls, and if the surface is coarse or textured, either one full coat of pigmented wall sealer or one full filler coat shall be applied in addition to the neutralizing liquid.

(b) Paint application

Prior to the emulsion paint being applied, the surface shall be sealed with an approved clear sealer and primed with an undercoat diluted to 50%. Emulsion paint (PVA or acrylic) shall then be applied in two finishing coats.

Egg-shell finish (alkyd oil based), oil gloss paint or enamel gloss paint shall be applied as follows: one coat of universal undercoat shall be

applied and it shall be followed by one coat of a mixture comprising 50% of the undercoat and 50% of the paint to be used for the finishing coat. A finishing coat of semi-gloss eggshell, or oil gloss paint or enamel gloss paint shall then be applied.

PC 09.6 PAINTING OF WOODWORK

(a) Surface preparation

The surfaces shall be cleaned, sandpapered and rubbed down to a smooth, even face before painting. The moisture content of the timber shall not be more than 20% at the time when the first coat is applied. All cracks, shakes or scars shall be filled flush with filler approved by the Engineer before painting. The surface shall then be washed with cleaner and allowed to dry.

(b) Primer application

One coat of an approved wood primer shall be applied.

After open-grained timber has been prepared and primed, the grain shall be stopped and filled with synthetic filler and rubbed down with water paper.

All new woodwork shall be properly primed on all surfaces and edges before being fixed in position. All woodwork not previously painted shall be given a prime coat, well brushed in.

(c) Paint application

One coat of universal undercoat shall be applied followed by one coat of mixture comprising 50% of the undercoat and 50% of the paint to be used for the finishing coat. A finishing coat of oil gloss paint or enamel gloss paint or semi gloss egg-shell (alkyd oil based) paint shall then be applied.

(d) Varnish finish

Prepare, stop and apply two coats of gloss varnish or egg-shell varnish.

PC 09.7 PAINTING OF METAL SURFACES (EXCL. STRUCTURAL STEEL)

(a) General

Wherever possible, all painting shall be done at the fabricator's works, but where this is not feasible, the Engineer may permit the application of the undercoat and finishing coats to be carried out on the Site, in which case a prime coat shall be applied at the fabricator's works prior to the members being dispatched to the Works.

(b) Surface preparation

The preparation of metal surfaces shall comply with SASS Code of Practice 064 and shall receive the greatest care to ensure rust-free conditions prior to the paint system being applied.

All surfaces shall be prepared by loose paint, rust, plaster, scale, dust, dirt, grease, etc, being removed and by the defective paint surfaces being repaired or patched before painting or repainting. Damaged shop-primed surfaces shall be thoroughly cleaned of rust and patched with a prime coat.

(c) Paint application

(i) Iron and steel work

All iron and steel work shall be properly primed with a red-lead-based primer where steel work is likely to be exposed to the elements for longer than 30 days. Zinc-chromate primer may be used where over painting will be completed within 30 days of priming. Metal-etch wash primers may be used under dry conditions where over painting will be completed within 24 hours of priming. The dry-film thickness of the prime coat shall not be less than 0,300 mm.

After priming, one coat of universal undercoat shall be applied. If necessary, the undercoat shall be tinted to a shade just lighter than the desired finish with approved liquid stainers. The dry-film thickness shall not be less than 0,250 mm.

The two finishing coats shall either be of alkyd resin-based synthetic enamel, gloss or matt oil paint, or as specified elsewhere. The dry-film thickness shall not be less than 0,250 mm per coat.

When mating surfaces are brought together, both surfaces shall have been given the full treatment specified, but where this cannot be done, each surface shall be given a copious coating of primer and the surfaces drawn together while the paint is still wet.

The portion of structural steel members to be buried in soil, and all bases to a height of 500 mm shall be given two coats of an epoxy-tar primer instead of the zinc-chromate primer specified for other surfaces.

The surfaces of steel and cast-iron articles, such as floor gratings, grids and manhole covers, shall, after a thorough brushing to remove loose rust, be painted with two coats of epoxy-tar paint, each at least 0,230 mm thick.

(ii) Galvanized iron and steel

All traces of protective coating shall be removed with galvanized iron cleaner, and two coats of calcium plumbate primer shall be applied.

One coat of tinted universal undercoat and two finishing coats of alkyd resin based synthetic enamel gloss paint shall be applied.

(iii) Non-ferrous metals

Surfaces of aluminium, copper, etc, shall be prepared and cleaned, and one coat of self-etch zinc-chromate wash primer shall be applied. One coat of universal tinted undercoat and two finishing coats of enamel gloss paint shall then be applied. Where non-ferrous metals are not to be painted, the surfaces shall be cleaned, polished and two coats of lacquer applied.

PC 09.8 PAINTING OF FLOOR SCREEDS

Where chemicals could cause damage to floors, such floors shall be painted with approved epoxy paint. The type of paint to be used will be shown on the Drawings and will depend on the types of chemicals that are used.

The preparation of such floor screeds for painting and the subsequent application of paints shall be carried out strictly in accordance with the manufacturer's instructions.

PC 09.9 PAINT THICKNESS

Unless otherwise specified, all coats of paint, whether prime coat, undercoat or finishing coat, shall have a dry-film thickness of not less than 0,200 mm, irrespective of the method of application.

PC 09.10 INSPECTION

The Contractor shall provide the necessary equipment to establish whether the primers, undercoats and finishing coats have been applied to the correct thickness and at the correct applications. The Engineer may take samples of the paints during painting operations for testing and quality control.

PC 10 MEASUREMENT AND PAYMENT

PC.01 BRICKWORK:

(a) (Thickness, type and class indicated) Unit: "m²

(b) Etc for other thicknesses, types and classes

The unit of measurement shall be the square metre of each type of brickwork built, calculated from the leading dimensions of the brickwork. Areas of pipes, etc, built into brickwork shall not be included in the areas measured. At corners and intersections common to more than one brick wall, the areas shall be measured only once.

The tendered rates shall include full compensation for the construction of the brickwork complete as specified, including pointing, the building-in of conduits, beams, lintels, pipe sleeves, doors, windows, the raking-out of joints, damp-proof course, brick force reinforced as specified, etc.

PC.02 PLASTER WORK:

- (a) (Thickness of plaster and finish indicated) Unit: m²
- (b) Etc for other thicknesses and finishes

The unit of measurement shall be the square metre of each type of coat completed as specified.

The tendered rates shall include full compensation for the construction of the plaster work, including the supply of all materials, mixing, applying, finishing, forming reveals, joints, narrow widths, rounded angles, v-joints, etc, complete as specified.

PC.03 FLOOR SCREEDS:

- (a) (Thickness indicated) Unit: m²
- (b) Etc for other thicknesses

The unit of measurement shall be the square metre of floor screed laid, as specified, on floors, steps or areas shown on the Drawings or as designated by the Engineer.

The tendered rates shall include full compensation for the construction of the floor screeds, including the supply of all materials, mixing, laying, finishing, the forming of nosings, reedings, skirtings, etc.

PC.04 DOORS AND WINDOWS:

- (a) (Type and size indicated) Unit: number
- (b) Etc for other types and sizes

The unit of measurement shall be the number of doors and windows installed complete as specified.

The tendered rates shall include full compensation for the manufacturing and installation of the steel doors, windows, and frames complete with hinges, - handles, locks, barrel bolts, retaining devices, door stops, stays and any other work necessary to complete the work as specified or as shown on the Drawings. The tendered rate for windows shall also include full compensation for glazing, window sills as specified, and damp-proof sheeting.

PC. 05 STRUCTURAL TIMBER:

- (a) Plates (sizes indicated) Unit: m
- (b) Beams (sizes indicated) Unit: m
- (c) Joists (sizes indicated) Unit: m
- (d) Rafters (sizes indicated) Unit: m

- (e) Purlins (sizes indicated) Unit: m
- (f) Roof trusses complete (drawing No indicated) .. Unit: number

The unit of measurement shall be the metre of individual types of timber elements or number of complete trusses installed.

The tendered rates shall include full compensation for the supply of all materials, manufacture, cutting, waste, jointing and installation of the timber as shown on the Drawings.

PC.06

CEILINGS:

- (a) Plaster-board ceiling (type and thickness indicated):
 - (i) Fixed ceiling..... Unit: m²
 - (ii) Suspended ceiling..... Unit: m²
- (b) Fibre-cement ceiling (thickness indicated):
 - (i) Fixed ceiling..... Unit: m²
 - (ii) Suspended ceiling..... Unit: m²

The unit of measurement shall be the square metre of fixed or suspended ceiling installed complete as scheduled.

The tendered rates shall also include full compensation for the construction of the ceilings, including the exposed tees, insulation blanket and bandering as specified, as well as the suspension system where applicable.

PC.07

JOINERY:

- (a) Items measured by number:
 - (i) Doors (type and size indicated)Unit: number
 - (ii) Etc for other items measured by number
- (b) Items measured by length:
 - (i) Skirtings (size indicated) Unit: m
 - (ii) Etc for other items measured by length

The units of measurement shall be the metre of each type and/or size of joinery item specified.

The tendered rates shall include full compensation for the supply of all materials, manufacture, cutting, waste, fixing and installation of the joinery items.

PC.08 BRICKFORCE

- (a) (Section indicated) Unit: m²
- (b) Etc for other sections

The unit of measurement shall be the area of brickforce installed complete as specified.

The tendered rates shall include full compensation for the supply of all materials, manufacture, cutting, waste, jointing and installation.

PC.09 ROOF SHEETING

- (a) (Section indicated) Unit: m²
- (b) Etc for other sections
- (c) Insulation..... Unit: number, m, m²

The unit of measurement shall be the area of roof sheeting installed complete as specified.

The tendered rates shall include full compensation for the supply of all materials, manufacture, cutting, waste, jointing and installation as well as flashings, ridge caps, etc.

PC.10 WATERPROOFING

- (a) (Membrane type) Unit: m²
- (b) Etc for other types

The unit of measurement shall be the area of membrane installed complete as specified.

The tendered rates shall include full compensation for the supply of all materials, manufacture, cutting, waste, jointing and installation.

PC.11 MISCELLANEOUS WORK:

- (a) Paintwork.....Unit: sum
- (b) Plumbing..... Unit: sum
- (c) Electrical work..... Unit: sum
- (d) Dry walling (2 hour fire rating), including rhinolite.....Unit: m²

The tendered sums shall include full compensation for supply all materials, for transport, for storage, for all equipment and labour, for all temporary work and safety precautions, for replacing defective work, for protecting completed work and for cleaning up after completion.

5. PREPARATION OF TENDER DOCUMENTS

5.1. PROGRAMME

The Tenderer shall attach hereto and sign a preliminary programme reflecting the proposed sequence and tempo of execution of the various activities comprising the work for this Contract. The programme shall be in accordance with the requirements of the Project Specifications, and with all other aspects of this Tender.

5.2. SCHEDULE OF DRAWING

The tender drawings are included in **Appendix A**.

The provisional and preliminary Drawings as listed in the book of drawings are issued for the Tenderer's benefit to generally assess the Scope of Work. This preliminary drawing list may not be complete, nor comprehensive.

Construction Drawings for this Contract will be prepared during the execution of the Contract as detailed design is being finalised and will be issued to the Contractor as the execution of the Works proceeds.

5.3. SCHEDULE OF QUANTITIES

5.3.1. Preamble to the Schedule of Quantities

5.3.1.1 General

The Schedule of Quantities is included in **Appendix B**.

Bidders are required to quote prices according to the price schedules and specifications.

Price(s) quoted must be firm and must be inclusive of VAT.

All prices must include delivery cost.

The Conditions of Tender, General Conditions of Contract, the Special Conditions of Contract, the Specifications (including the Project Specification) and the Drawings are to be read in conjunction with the Schedule of Quantities.

The general requirements and descriptions of the Works and materials given in the Specifications are not repeated in the Schedule of Quantities and Tenderers shall refer to the other parts of the Documents for this information.

The cost of complying with all conditions, obligations and liabilities specified in the Conditions of Tender, General Conditions of Contract, Special Conditions of Contract, Specifications and Schedule of Quantities, including all overhead charges of profit, and the cost of carrying out the work as shown on the Drawings, shall be deemed to be included in the rates and sums quoted in the Schedule of Quantities.

5.3.1.2 Description of Items in the Schedule

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

Descriptions in the Schedule of Quantities are abbreviated and the schedule has been drawn up generally in accordance with the latest issue of Standard System of Measurement of Civil Engineering Quantities. Should any requirement of the measurement and payment clause of the applicable Standardized Specification, or the Project Specification or the Particular Specification conflict with the terms of the Schedule or, when relevant, of Standard System of Measurement of Civil Engineering Quantities for S.A, the requirement of the Standardized, Project or Particular Specification, is applicable, shall prevail.

The short descriptions of the items in the Schedule of Quantities are for identification purposes only. Clause 8 of each Standardized Specification and the measurement and payment clause of each Particular Specification, read together with the relevant clauses of the Project Specification, set out what ancillary or associated work and activities are included in the rates for the operations specified.

5.3.1.3 Quantities Reflected in the Schedule

The quantities of work and material set forth in the Schedule of Quantities are estimates only, and shall not be considered as limited or extending the amount of work to be done and material to be supplied by the Contractor, nor shall these quantities be regarded as constituting authority to the Contractor to order material or to execute work.

The Contractor shall obtain the Engineer's detailed instructions for all work before ordering any materials or executing work or making arrangements for it. The Works as finally completed in accordance with the Contract shall be measured and paid for as specified in the Schedule of Quantities and in accordance with the General Conditions of Contract, the Special Conditions of Contract, the Specifications and the Drawings. Unless otherwise stated, items are measured net in accordance with the Drawings, and no allowance has been made for waste.

5.3.1.4 Pricing of the Schedule

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 and as illustrated on the Drawings. Such rates and prices shall cover all costs and expenses that may be required in and for the construction of the work described and illustrated, 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.

The Tenderer is at liberty to insert a rate of his own choosing for each item in the Schedule and his attention is drawn to the fact that the Contractor has the right, under various circumstances, to payment for additional Works carried out and that the Engineer is obliged to base his assessment of the rates to be paid for such additional work on the rates inserted in the Schedule by the Contractor.

Each item shall be priced and extended to the "Amount" column by the Tenderer, with the exception of the items for which only rates are required, or which already have Provisional Sums affixed thereto. If the Contractor omits to price any items in the Schedule of Quantities, then these items will be considered to have a nil rate or price.

All items for which terminology such as "inclusive" or "not applicable" have been added by the Tenderer will be regarded as having a nil rate, and shall be valid irrespective of any change in quantities during the execution of the Contract.

The Tenderer shall fill in rates for all items where the words "rate only" appears in the "Amount" column. The intention is that although no work is foreseen under such an item, and no quantities are accordingly given in the "Quantity" column, the quoted rate shall apply in the event of work under this item being actually required.

The Tenderer shall price each item in the Schedule of Quantities in ink.

All rates and amounts quoted in the Schedule of Quantities shall be in South African Rand.

"THE TOTAL COST ESTIMATE" as calculated per the summary of schedule of quantities shall be carried forward to the correct place on the Form of Tender.

5.3.1.5 Monthly Payments

Progress payments in the Interim Certificates, in respect of "sum" items in the Schedule of Quantities shall be by means of interim progress instalments, such instalments not exceeding in aggregate the total of each "sum" item. Such interim progress instalments shall be assessed by the Engineer based on the measure in which any work, liabilities, or charges actually carried out or incurred by the Contractor under each "sum" item from time to time, relates to the extent of the work to be done or liabilities or charges to be incurred by the Contractor under the description of each item.

5.3.1.6 Units of Measurement

The units of measurement described in the Schedule of Quantities are metric units. Abbreviations used in the Schedule of Quantities are as follows:

- mm = millimetre
- m = metre
- km = kilometre
- km-pass = kilometre-pass
- m² = square metre
- m²-pass = square metre-pass
- ha = hectare
- m³ = cubic metre
- m³-km = cubic metre-kilometre
- l = litre
- kl = kilolitre
- h = hour
- r-day = roller-day
- kg = kilogram
- t = ton (1,000 kg)
- No. = number
- MN-m = mega newton-metre
- Prov sum = Provisional sum
- % = percent
- kW = kilowatt

TECHNICAL SPECIFICATION – APPENDIX A

Tender Drawings

TECHNICAL SPECIFICATION – APPENDIX B

Schedule of Quantities