

C1.2 CONTRACT DATA

GENERAL CONDITIONS OF THE CONTRACT

The General Conditions of Contract for Construction Works, 3rd Edition (GCC 2015), published by the South African Institute of Civil Engineers, apply to this Contract.

The General Conditions of Contract are not included in this document. It can be obtained at the Contractor's expense from the Secretary of the South African Institution of Civil Engineering, Private Bag X200, Halfway House 1685, Tel: (011) 805 5947, Fax: (011) 805 5971, e-mail: civilinfo@saice.org.za. Each party to the Contract shall purchase its own copy of the correct print edition of the GCC 2015 that applies to this Contract

CONTRACT DATA

In terms of Clause 1.1.1.8 of the General Conditions of Contract for Construction Works, 3rd Edition (2015), the following Contract Data apply to this Contract. Each item of data given below is cross-referenced to the clause in the General Conditions of Contract for Construction Works to which it mainly applies.

The Contract Data consists of two parts. Part 1 contains information provided by the Employer, while Part 2 contains information to be provided by the Contractor.

PART 1: DATA PROVIDED BY THE EMPLOYER

Clause	Contract Data
1.1.1.5	Replace the contents of Clause 1.1.1.5 with the following: The "Commencement Date" means the date as set per the Form of Offer and Acceptance.
1.1.1.12	"The special non-working days are all South African statutory holidays and as further defined in Clause 5.8.1."
1.1.1.13	Add the following to the end of this definition: The Defects Liability Period is 12 months .
1.1.1.14	"This Clause shall apply mutatis mutandis to any portion or phase of the Works that may be described in the Scope of Works or the Contract Data, or agreed subsequently between the Contractor and the Employer, and committed to writing. The time for completion of the Works is indicated in Clause 5.5.1. The Due Completion Date shall be limited to 12 Months
1.1.1.15	The name of the Employer is DEPARTMENT OF HEALTH (FS)
1.1.1.16	The Employer's Agent means any Director, Associate, Professional Engineer or Professional Technologist appointed generally or specifically by the management of the firm Lequbu Specialise Services (PTY) Ltd to fulfil the functions of the Employer's Agent in terms of the Conditions of Contract.
1.1.1.17	The Employer's Agent Representative may also be referred to as the Engineer's Representative in the Contract.
1.1.1.26	The Pricing Strategy is a Re-measurement Contract
1.2.1	Add the following to the clause: 1.2.1.3 Sent by facsimile, electronic, or any like communication irrespective of it being during office hours or otherwise. 1.2.1.4 Posted to the Contractor's address and delivered by the postal authorities. 1.2.1.5 Delivered by a courier service and signed for by the recipient or his representative.
1.2.1.2	The Employer's address for receipt of communication is: Telephone: 051 408 1744

Clause	Contract Data
	Address: Department of Health (FS) Bophelo House Charlotte Maxeke and Harvey Road Bloemfontein 9301 The Employer's Agent's contact details are as follows: Telephone: 078 737 5984 e-mail christopher@lequbu.co.za Address: 26-28 Heeren Street Welkom 9459
1.3.6	Add the following new Clause: The copyright in all documents, drawings and records (prepared by the Engineer) related in any manner to the Works shall vest in the Employer or the Engineer or both (according to the dictates of the Contract that have been entered into by the Engineer and the Employer for the Works), and the Contractor shall not furnish any information in connection with the Works to any person or organization without the prior approval of the Employer to this effect.
2.5.1	Cession payments will be processed according to the following procedure: 1. A cession of contract will be initiated by the cedent who will submit a written request to the accounting officer/authority of the contracting institution for approval to cede all of his/her/their/its payments to the cessionary. 2. Cession of the contract will only come into effect upon approval by the accounting officer/authority, which may not unreasonably be withheld. 3. Before approval of a request for cession of a contract, the accounting officer/authority must undertake the following: 3.1 Review the reasons for the request for cession; 3.2 Ensure that the request for cession is not as a result of attempts at fronting, engaging in combative or anti-competitive practices, disguising fraudulent activities (e.g., Non-payment of VAT), etc. 3.3 Where possible, ensure that the cessionary is of equal or higher BBBEE status level to the cedent. If not, clear motivation must be provided for approval by the accounting officer/ authority. 3.4 Ensure that the cessionary submits the following documentation at the time of application: 3.4.1 Certified copy of business registration of the cedent with CIPC 3.4.2 Certified copy of the identification document of the owner/manager of the Business entity; i.e., cessionary. 3.4.3 Tax Compliance Status PIN of the Cessionary.

Clause	Contract Data
	3.4.4 Any other document related to the contract that the cedent was required to submit. 3.4.5 Completion of Standard Bid Documents (SBD). 4. Conduct a detailed risk analysis to ensure that the cessionary has the capability and ability, including resources to supply the goods or render the services in accordance with the terms and conditions of the original contract. The accounting officer/authority must also verify the validity of the documents referred to in paragraph 3.4 above. 5. Once the request for the cession has been approved, the cedent and cessionary must be informed in writing and requested to enter into a transfer agreement within a timeframe predetermined by the accounting officer/authority and must comply with all formalities set by law. Failure to conclude the transfer agreement within the predetermined time will result in the lapse of the approval of the cession. The transfer agreement must be vetted by the Legal Department of the contracting institution.
3.2.3	The Employer's Agent is required in terms of his appointment with the Employer to obtain the following specific approvals from the Employer: 1. Nominating the Engineer's Representative 2. Delegation of Engineer's authority 3. Providing consent for subcontracting part of the contract 4. The issuing of instructions for dealing with fossils
	5. The issuing of an instruction to accelerate progress 6. Granting permission to work during non-working times 7. The issuing of further drawings or instructions that have financial and/or time-related implications 8. Suspend the progress of the works 9. The approval of any extension of time for completion 10. The reduction of a penalty for delay 11. The issuing of a variation order 12. Issuing of instructions to carry out work on a day-to-day basis 13. The determination of additional or reduced costs arising from changes in legislation 14. The agreement of the adjustment of the sums for the general item 15. Authorizing the Contractor to undertake remedial works and reinstatement 16. The giving of a ruling on a contractor's claim 17. The agreeing of an extension to the 28-day period

Clause	Contract Data
	18. The inclusion of credits in the next payment certificate
4.1.2	ADD THE FOLLOWING TO THIS CLAUSE: "The Contractor shall provide the following to the Employer's Agent for retention by the Employer or his/her assignee in respect of all works designed by the Contractor: 4.1.2.1 A Certificate of Stability of the Works signed by a registered Professional Engineer confirming that all such works have been designed in accordance with the appropriate codes of practice. 4.1.2.2 Proof of registration and adequate and current professional indemnity insurance cover held by the designer(s). 4.1.2.3 Design calculations should the Employer's Agent request a copy thereof. 4.1.2.4 Engineering drawings and workshop details (both signed by the relevant professional engineer); in order to allow the Employer's Agent to compare the design with the specified requirements and to record any comments he may have with respect thereto. 4.1.2.5 'As-Built' drawings in DXF/DWG electronic format after completion of the Works. The Contractor shall be responsible for the design of the Temporary Works."
4.3.1	Compliance with applicable laws. ADD THE FOLLOWING TO THIS CLAUSE: "4.3.1.1 The Ministerial Determination, Special Public Works Programmes, issued in terms of the Basic Conditions of Employment Act of 1977 by the Minister of Labour in Government Notice No R63 of 25 January 2002, as appended to these Contract Data as Annexure B, shall apply to works described in the Scope of Work as being labour intensive and which are undertaken by unskilled or semi-skilled workers. 4.3.1.2 OHS requirements The Contractor shall comply with the Occupational Health and Safety Specification prepared by the Employer in terms of the Construction Regulations, 2014 promulgated in terms of Section 43 of the Occupational Health and Safety Act (Act No. 85 of 1993). Without limiting the Contractor's obligations in terms of the Contract, the Contractor shall before commencement of the Works or any part thereof, be in the possession of an approved Health and Safety Plan. The Contractor shall submit an approved Health and Safety Plan to the Employer's Agent within 14 days from the date that the Agreement made in terms of the Form of Offer and Acceptance comes into effect." 4.3.1.3 Contractor's liability as mandatory Notwithstanding any actions which the Employer may take, the Contractor accepts sole liability for due compliance with the relevant duties, obligations, prohibitions, arrangements and procedures imposed by the Occupational Health and Safety Act, 1993 (Act 85 of 1993), and all its regulations, including the Construction Regulations, 2014, for which he is liable as

Clause	Contract Data
	mandatory. By entering into this Contract, it shall be deemed that the parties have agreed in writing to the above provisions in terms of Section 37 (2) of the Act. 4.3.1.4 Contractor to notify Employer The Employer retains an interest in all inquiries conducted under this Contract in terms of Section 31 and/or 32 of the Occupational Health and Safety Act, 1993 (Act 85 of 1993) and its Regulations following any incident involving the Contractor and/or Sub- Contractor and/or their employees. The Contractor shall notify the Employer in writing of all investigations, complaints or criminal charges which may arise pursuant to work performed under this Contract in terms of the Occupational Health and Safety Act, 1993 (Act 85 of 1993) and Regulations. 4.3.1.5 Contractor's Designer The Contractor and his/her designer shall accept full responsibility and liability to comply with the Occupational Health and Safety Act, 1993 (Act 85 of 1993) and the Construction Regulations, 2014 for the design of the Temporary Works and those part of the Permanent Works which the Contractor is responsible to design in terms of the Contract."
4.4.1	4.4.1.1 A minimum of 30% of the value of the contract must be subcontracted to: (a) an EME or QSE which is at least 51% owned by black people 4.4.1.2 A list of suppliers registered on the database approved by the National Treasury to provide the required goods or services in respect of the applicable designated groups mentioned in Clause 4.4.1.1 above must be obtained from DEPARTMENT OF HEALTH (FS) from which suppliers and service providers may be selected. 4.4.1.3 If the Contractor fails to comply with Clause 4.4.1.1 and 4.4.1.2 above, the Contractor shall be liable to the employer a penalty as to be determined by the below equation. $P_{sub} = (V_{sub} - V_{act}) \times 2.5\%$ Psub: Penalty for under subcontracting Vsub: Value of work to be subcontracted according to clause 4.4.1.1 Vact: Value of work subcontracted at completion The Contractual relationship between the Contractor and the Subcontractor selected by the Contractor and in consultation with the Employer in accordance with the requirements of and procedure set out above, shall be the same as if the Contractor had appointed the subcontractor in terms of Clause 4.4.3.
4.4.4	ADD THE FOLLOWING TO THIS CLAUSE: "The Employer's Agent consent in respect of any particular subcontractor may be withdrawn at any time should reasonable grounds be given therefore in writing to the Contractor by the Employer's Agent, in which event the Contractor shall forthwith terminate the engagement of that subcontractor on the Works. The withdrawal by the Employer's Agent of his consent in respect of any particular sub-contractor that is engaged in the execution of any portion of the works, including any portions of the Works which are sub-let by the Contractor in accordance with Clause 4.4.4 shall not relieve the Contractor of any of his obligations under the Contract, nor of any of his obligations to sub-let the particular portions of the Works concerned."

Clause	Contract Data
4.9.1	The Contractor shall deliver to the Employers Agent's, on a monthly basis, a detailed inventory of Construction Equipment kept on Site, full particulars given for each day of the month. Distinction shall be made between Owned Equipment and Hired Equipment as well as Equipment in working order and Equipment out of order. Such inventory shall be submitted by the seventh day of the month following the month to be reported.
4.12	ADD THE FOLLOWING TO THIS CLAUSE 4.12.2 TO 4.12: "Where a form is included in the Contract Data for this purpose, the Tenderer shall fill in the name of the person he proposes to entrust with the post of Construction Manager on this Contract in the space provided therefore. Previous experience of this person on work of a similar nature during the past five (5) years is to be entered on the form." The Contractor's Construction Manager shall be on Site at all times when work is being performed.
5.3	The Works Execution is to be commenced within 21 days of the Commencement Date.
5.3.1	"The Contractor shall commence executing the works within a period of 22 working days from the Works Execution Date, unless otherwise agreed. The documentation required to be approved before commencement with Works Execution are: • Health and Safety Plan/Permit (Refer to Clause 4.3) • A signed Agreement between the Employer and the Contractor for the Works to be completed by the Contractor in terms of the provisions of Section 37(2) of the Occupational Health and Safety Act (Act No 85 of 1993) and the Construction Regulations promulgated thereunder (Refer to Clause 4.3). • Proof of payment to the Employer, that the Contractor has paid all contributions required in terms of the Compensation for Occupational Injuries and Diseases Act, No 130 of 1993 (Refer to Clause 4.3). • Initial programme (Refer to Clause 5.6) • Security (Refer to Clause 6.2) • Insurance (Refer to Clause 8.6) A detailed cashflow forecast (Refer to Clause 5.6.2.6)"
5.3.2	Add the following: The time to submit the documentation required (Refer to Clause 5.3.1) is 14 days from the Commencement Date, after which the Employer's Agent has 7 days to review said documentation before the commencement of the Works Execution.
5.4.2	The access and possession of the Site shall not be exclusive to the Contractor but as set out in the contract.
5.5.1	"The time for Completion shall be 12 months from Works Execution Date, including special non- working days and year-end break/s."
5.6.1	The Works detail programme is to be delivered within the tender document. Add the following to the clause: "In this regard, the Contractor shall have regard for the phases and sub-phases (if applicable) for the entirety of the scheme,) which shall also be the order in which the Permanent Works shall be constructed unless otherwise agreed between the parties and committed to in writing. Where phased construction is applicable, the phases and sub-phases will be described in the Specifications and/or will be indicated on the Phasing Plan which forms part of the Drawings."
5.7.1	"No such instruction by the Employer's Agent to expedite progress shall be the subject of additional compensation to the Contractor unless the instruction explicitly states that the Contractor is entitled to

Clause	Contract Data										
	additional compensation, and cites the amount of such compensation or the basis upon which it is to be determined."										
5.8.1	The non-working Days are Saturday and Sundays The special non-working Days are: Statutory public holidays; and All annual year-end shutdown periods as recommended by the South African Federation of Civil Engineering Contractors (SAFCEC), and which commence after the Commencement Date, and which commence before the Due Completion Date.										
5.12.5	Add the following new clause: Extension of time due to Abnormal Rainfall Extension of time for completion of the Contract shall be allowed in the event of abnormal rainfall in accordance with the following formula: $V = (Nw - Nn) + (Rw - Rn)/20$ Where: V = Extension of time in calendar days for the calendar month under consideration Nw = Actual number of days during the calendar month under consideration on which a rainfall of 10mm and more is recorded Rw = Actual total rainfall in mm recorded during the calendar month under consideration Nn = Average number of days, derived from rainfall records, on which a rainfall of 10mm and more was recorded during the relevant calendar month as per the data tabulated hereinafter Rn = Average total rainfall in mm for the relevant calendar month, derived from rainfall records, as tabulated hereinafter Where the extension of time due to abnormal rainfall has to be calculated for a portion of a calendar month, pro rata values shall be used. Should V be negative for any particular month, and should its absolute value exceed the corresponding value of Nn, then V shall be taken as being equal to minus Nn. The total extension of time to be granted shall be the algebraic sum of all the monthly extensions, provided that if this total is negative then the time for completion shall not be reduced due to subnormal rainfall. Rainfall records for the period of construction shall be taken on-site. The Contractor shall provide and install all the necessary equipment for accurately measuring the rainfall. The Contractor shall also provide, erect, and maintain a security fence plus gate, padlock and keys at each measuring station, all at his own cost. The Engineer or his Representative shall take and record the daily rainfall readings. The Contractor shall be permitted to attend these readings, in the company of the Engineer's Representative. Access to the measuring gauge(s) shall at all times be under the Engineer's control. The following values of Nn and Rn shall apply: <table border="1"> <thead> <tr> <th>Month</th><th>N_n (Days)</th></tr> </thead> <tbody> <tr> <td>January</td><td>12</td></tr> <tr> <td>February</td><td>10</td></tr> <tr> <td>March</td><td>9</td></tr> <tr> <td>April</td><td>5</td></tr> </tbody> </table>	Month	N _n (Days)	January	12	February	10	March	9	April	5
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	<table> <tr><td>May</td><td>2</td></tr> <tr><td>June</td><td>1</td></tr> <tr><td>July</td><td>1</td></tr> <tr><td>August</td><td>1</td></tr> <tr><td>September</td><td>3</td></tr> <tr><td>October</td><td>7</td></tr> <tr><td>November</td><td>9</td></tr> <tr><td>December</td><td>11</td></tr> <tr><td>Total</td><td>71</td></tr> </table>	May	2	June	1	July	1	August	1	September	3	October	7	November	9	December	11	Total	71
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Total	71																		
5.13.1	The penalty for delay is R 20 000 per calendar day or part thereof plus all the Employer's Agent and OHS Agent's costs including VAT as invoiced to the Employer for maintaining a presence on the site, from the day after the Due Completion Date up to and including the certified date of Practical Completion.																		
5.13.3	Add the following new Clause. The imposition of penalties in terms of Clause 5.13.1 shall not relieve the Contractor from his obligation to complete the works, nor from any of his obligations and liabilities under the Contract.																		
6.1.1	ADD THE FOLLOWING TO THIS CLAUSE: "Payment for works identified in the Scope of Work as being labour-intensive shall only be made in accordance with the provisions of the Contract if the works are constructed strictly in accordance with the provisions of the Scope of Work. Any non-payment for such works shall not relieve the Contractor in any way from his obligations either in contract or in delict."																		
6.2 and 8.6	The Performance Guarantee and Insurance are to be delivered within 14 days after the request to do so and the Form of Acceptance will not be signed before receipt of the Guarantee that is acceptable to the Employer. Failure to submit the guarantee within 14 days will lead to the cancellation of the appointment.																		
6.2.1	Add the following to this Clause: The amount of the Surety will be 10% of the Contract Price (including Value Added Tax) at the time that the Agreement comes into effect. The guarantee shall remain valid until the issue of the Certificate or Certificates of Completion in respect of the whole of the Permanent Works. The Pro Forma Form of Guarantee bound into the General Conditions of Contract is replaced by Performance Guarantee appended to the Contract Data. This approval or otherwise shall be based upon legal opinion to be provided by the Engineer. The Guarantee shall be returned to the Contractor within 14 days after the issue of the Certificates or Certificates of Completion in respect of the whole of the Permanent Works as per Purchase Order. Further to this, a Retention guarantee of 10% of the value of the works will also be deducted with payment certificates.																		
6.5.1.2.3	The percentage allowance to cover overhead charges is: 50 per cent for labour; and 10 per cent for materials.																		
6.8.2	The application of a Contract Price Adjustment factor will apply to this Contract. ADD THE FOLLOWING TO THIS CLAUSE: "The following coefficients/ indices/references are applicable, as per SAFCEC published recommendations: 1) The proportion not subject to adjustment: $x = 0.10$.																		

Clause	Contract Data
	2) "L" is the "Labour Index" and shall be the "Consumer Price Index" for the province nearest to the Site as stated in the Contract Data and as published in the Statistical News Release P0141, Table A of Statistics South Africa. The associated coefficient shall be 0.25. 3) "P" is the "Contractor's Equipment Index" and shall be the "Producer Price Index" for "Civil Engineering Plant" as published in the Statistical News Release P0151, Table 4 of Statistics South Africa. The associated coefficient shall be 0.15. 4) "M" is the "Materials Index" and shall be the "Consumer Price Index" for "Building and Construction / Civil Engineering", as published in the Statistical News Release P0151, Table 6 of Statistics South Africa. The associated coefficient shall be 0.55. 5) "F" is the "Fuel Index" and shall be the "Producer Price Index" for "Coal and petroleum. Products - Diesel, as published in the Statistical News Release P0142.1, Table 1 of Statistics South Africa. The associated coefficient shall be 0.05. 6) The province nearest to the site is "Free State". 7) The base months will be the month prior to the month in which Contractor's was appointed."
6.8.3	Price Adjustments for variations in the cost of special materials are not allowed.
6.8.4	In line 6 delete the words "between the Employer and the Contractor".
6.10.1.5	The percentage limit on materials not yet built into the Permanent Works is 80% . Proof of ownership is required.
6.10.3	"The percentage retention is 10% . The limit of retention money is 5% of the Contract Price at the time of the Agreement made in terms of the Form of Offer and Acceptance coming into effect."
6.10.4	The first payment certificate will only be processed after the completion of section A: P&G: Item 1 & 2 in the Bill of Quantities, to the satisfaction of the Employer and/or the Employer's Agent.
7.8.1	The Defects Liability Period is twelve (12) calendar months after the final completion date.
8.6.1.1.2 8.6.1.1.3	The amount to be included in the sum insured to cover the value of: a) Materials supplied by the employer for incorporation into the works: nil. b) Professional fees: nil.
8.6.1.2	South African Special Risks Insurance Association (SASRIA) cover must be arranged on motor vehicles, plant, site accommodation, tools and equipment.
8.6.1.3	"The limit of indemnity for liability insurance is R20 000 000 per event, the number of events being unlimited."
8.6.1.5	ADD THE FOLLOWING TO THIS CLAUSE: "In addition to the insurance required in terms of General Conditions of Contract Clause 8.6.1.1 to 8.6.1.3 the following insurance is also required: Insurance cover against any damages or loss against production due to political unrest. The Employer shall not be held responsible for such damages or losses."
8.6.6	"Proof of insurance shall be submitted to the Employer before Commencement of the Works (Clause 5.3.1), and copies of the policies and proof of due payment of all premiums shall be presented to the Employer."
9.2.1.3.8	DELETE THE FIRST TWO LINES OF THE CLAUSE AND INSERT THE FOLLOWING: "The Contractor furnished inaccurate information in the Returnable Documents or Returnable Schedules forming part of the Contract,"

Clause	Contract Data
10.5.1	Dispute resolution shall be by standing adjudication, using GCC 2015, Appendix 5.
10.5.3	The number of Adjudication Board Members to be appointed is 1 (one).
10.7	Disputes are to be referred for final settlement to arbitration.

PART 2: DATA PROVIDED BY THE CONTRACTOR

The following contract Post-Tender Information are applicable to this contract.

Clause	Contract Data						
1.1.1.9	The name of the Contractor is: 						
1.2.1.2	The address of the Contractor is: Telephone:..... Facsimile:..... E-mail:..... Address:.....						
6.2.1	The security to be provided by the Contractor shall be one of the following: <table border="1"> <thead> <tr> <th>Type of Security</th><th>Contractor's choice. Indicate "Yes" or "No"</th></tr> </thead> <tbody> <tr> <td>A cash deposit of 10% of the Contract Sum (incl. VAT).</td><td></td></tr> <tr> <td>Performance guarantee of 10 % of the Contract Sum (incl. VAT).</td><td></td></tr> </tbody> </table>	Type of Security	Contractor's choice. Indicate "Yes" or "No"	A cash deposit of 10% of the Contract Sum (incl. VAT).		Performance guarantee of 10 % of the Contract Sum (incl. VAT).	
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A cash deposit of 10% of the Contract Sum (incl. VAT).							
Performance guarantee of 10 % of the Contract Sum (incl. VAT).							

C1.3 FORM OF GUARANTEE

PRO FORMA

CONTRACT NO.: DOH (FS) 17/2026/2027

WHEREAS FREE STATE DEPARTMENT OF HEALTH (hereinafter referred to as "the Employer") entered into, _____ a _____ Contract _____ with _____ (hereinafter called "the Contractor") on the _____ day of _____ 20____ for the construction of _____ at _____

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

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

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

1. The Employer shall, without reference and/or notice to us, have complete liberty of action to act in any manner authorized and/or contemplated by the terms of the said Contract, and/or to agree to any modifications, variations, alterations, directions or extensions of the Completion Date of the Works under the said Contract, and that its rights under this guarantee shall in no way be prejudiced nor our liability hereunder be affected by reason of any steps which the Employer may take under such Contract, or of any modification, variation, alterations of the Completion Date which the Employer may make, give, concede or agree to under the said Contract.
2. This guarantee shall be limited to the payment of a sum of money
3. The Employer shall be entitled, without reference to us, to release any guarantee held by it, and to give time to or compound or make any other arrangement with the Contractor.
4. This guarantee shall remain in full force and effect until the issue of the Certificate of Completion in terms of the Contract, unless we are advised in writing by the Employer before the issue of the said Certificate of his intention to institute claims, and the particulars thereof, in which event this guarantee shall remain in full force and effect until all such claims have been paid or liquidated.
5. Our total liability hereunder shall not exceed the sum of

_____ (R _____)

The Guarantor reserves the right to withdraw from this guarantee by depositing the Guaranteed Sum with the beneficiary, whereupon the Guarantor's liability hereunder shall cease.

We hereby choose our address for the serving of all notices for all purposes arising here from as

IN WITNESS WHEREOF this guarantee has been executed by us at _____

on this _____ day of _____ 20____

As witnesses:

1. _____ Signature _____

2. _____ Signature _____

Duly authorized to sign on behalf of _____

Address _____

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

THIS AGREEMENT made at _____

on this the _____ day of _____ in the year _____

between **THE FREE STATE DEPARTMENT OF HEALTH** (hereinafter called "the **Employer**") of the one part, herein represented by

in _____ his _____ capacity _____ as

and

_____ (hereinafter called "the **Mandatory**") of the other part, herein represented by

in _____ his _____ capacity _____ as

WHEREAS the Employer is desirous that certain works be constructed, viz : **REPLACEMENT AND REHABILITATION OF INTERNAL BUILDING SEWER SYSTEM AND EXTERNAL MAIN SEWER LINE FOR BONGANI HOSPITAL, FREE STATE DEPARTMENT OF HEALTH**

and has accepted a Bid by the Mandatory for the construction, completion and maintenance of such Works and whereas the Employer and the Mandatory have agreed to certain arrangements and procedures to be followed in order to ensure compliance by the Mandatory with the provisions of the Occupational Health and Safety Act, 1993 (Act 85 of 1993);

NOW THEREFORE THIS AGREEMENT WITNESSETH AS FOLLOWS:

- 1 The Mandatory shall execute the work in accordance with the Contract Documents pertaining to this Contract.
- 2 This Agreement shall hold good from its Commencement Date, which shall be the date of a written notice from the Employer or Principle Agent requiring him to commence the execution of the Works, to either
 - (a) the date of the Final Approval Certificate issued in terms of Clause 52.1 of the General Conditions of Contract (hereinafter referred to as "the GCC"),
 - (b) the date of termination of the Contract in terms of Clauses 54, 55 or 56 of the GCC.
- 3 The Mandatory declares himself to be conversant with the following:
 - (a) All the requirements, regulations and standards of the Occupational Health and Safety Act (Act 85 of 1993), hereinafter referred to as "The Act", together with its amendments and with special reference to the following Sections of The Act:
 - (i) Section 8 : General duties of employers to their employees;
 - (ii) Section 9 : General duties of employers and self-employed persons to persons other than employees;
 - (iii) Section 37 : Acts or omissions by employees or mandataries, and
 - (iv) Subsection 37(2) relating to the purpose and meaning of this Agreement.
 - (b) The procedures and safety rules of the Employer as pertaining to the Mandatory and to all his subcontractors.
- 4 In addition to the requirements of Clause 33 of the GCC and all relevant requirements of the above-mentioned Volume 3, the Mandatory agrees to execute all the Works forming part of this Contract and to operate and utilise all machinery, plant and equipment in accordance with the Act.

- 5 The Mandatory is responsible for the compliance with the Act by all his subcontractors, whether or not selected and/or approved by the Employer.
- 6 ***The Mandatory warrants that all his and his subcontractors' workmen are covered in terms of the Compensation for Occupational Injuries and Diseases Act, 1993 which cover shall remain in force whilst any such workmen are present on site. A letter of good standing from the Compensation Commissioner to this effect must be produced to the Employer upon signature of the agreement.***
- 7 The Mandatory undertakes to ensure that he and/or subcontractors and/or their respective employers will at all times comply with the following conditions:
 - (a) The Mandatory shall assume the responsibility in terms of Section 16.1 of the Occupational Health and Safety Act. The Mandatory shall not delegate any duty in terms of Section 16.2 of this Act without the prior written approval of the Employer. If the Mandatory obtains such approval and delegates any duty in terms of section 16.2 a copy of such written delegation shall immediately be forwarded to the Employer.
 - (b) All incidents referred to in the Occupational Health and Safety Act shall be reported by the Mandatory to the Department of Labour as well as to the Employer. The Employer will further be provided with copies of all written documentation relating to any incident.
 - (c) The Employer hereby obtains an interest in the issue of any formal inquiry conducted in terms of section 32 of the Occupational Health and Safety Act into any incident involving the Mandatory and/or his employees and/or his subcontractors.

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

SIGNED FOR AND ON BEHALF OF THE DOH:

WITNESS 1

NAME 1
(IN CAPITALS)

SIGNED FOR AND ON BEHALF OF THE MANDATORY:

WITNESS 1

NAME 1
(IN CAPITALS)

CERTIFICATE OF AUTHORITY FOR SIGNATORY TO AGREEMENT IN TERMS OF OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 (ACT NO 85 OF 1993)

The signatory for the company that is the Contractor in terms of the above-mentioned Contract and the Mandatory in terms of the above-mentioned Act shall confirm his or her authority thereto by attaching to this page a duly signed and dated copy of the relevant resolution of the Board of Directors.

An example is given below:

"By resolution of the Board of Directors passed at a meeting held on _____ 200.....,

Mr/Ms _____ whose
signature

appears below, has been duly authorised to sign the AGREEMENT in terms of THE
OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 (ACT 85 of 1993) on behalf of _____

SIGNED ON BEHALF OF THE COMPANY:

IN HIS/HER CAPACITY AS :

DATE :

SIGNATURE OF SIGNATORY :

WITNESS 1

NAME 1

(IN CAPITALS)

FREE STATE DEPARTMENT OF HEALTH

DEPARTMENT NAME: INFRASTRUCTURE MANAGEMENT

CONTRACT NO: DOH (FS) 17/2026/2027

**REPLACEMENT AND REHABILITATION OF INTERNAL BUILDING SEWER SYSTEM AND EXTERNAL
MAIN SEWER LINE FOR BONGANI HOSPITAL, FREE STATE DEPARTMENT OF HEALTH**

PART C2 PRICING DATA

C2.1 PRICING INSTRUCTIONS

C2.2 BILL OF QUANTITIES

C2.3 SUMMARY OF SCHEDULES

C2.1 PRICING INSTRUCTIONS

Pricing Assumptions mean the criteria as set out below, read together with all Parts of this contract document, which it will be assumed in the contract, that the tenderer has taken into account when developing his prices.

1. This Bill of Quantities has to be read together with the Articles of the Agreement, the Conditions of Contract and Special Conditions of Contract, the Form of Tender, the General Specification, the Project Specification and the Drawings.
2. The method of measurement published by the South African Bureau of Standards in clause 8 of the Standardised Specifications for Civil Engineering Construction is applicable, subject to the variations and amendments contained in the section "Applicable SANS 1200 standardised specifications".
3. General instruction and description of the Work or materials given in the Specification will not be repeated in the Bill of Quantities. It will only be referred to in the Conditions of Contract (C-22) or, Special Conditions of Contract (SC-11), General Specification (19.1.3), Project Specification (PS 11) or to a Drawing.
4. The clauses in a specification in which further information regarding the schedule item appears under "Reference clause" in the Schedule. The reference clauses indicated are not necessarily the only sources of information in respect of scheduled items. Further information and specifications may be found elsewhere in the contract documents. Standardised Specifications are identified by the letter or letters which follow SANS in the SANS 1200 series of specifications, e.g. G for SANS 1200 G.
5. The quantities set out in the Bills of Quantities are the estimated quantities of the Contract Works, but the Contractor will be required to undertake whatever quantities may be directed by the Engineer from time to time. The Contract Price for the completed contract shall be computed from the actual quantities of work done, valued at the relevant unit rates and prices.
6. The prices and unit prices given in the Bill of Quantities, are all-embracing prices and it should cover the values of the different items completely and have to include all costs and expenses which may occur and for the building of the Work as described and costs and expenses that are required as well as all general liabilities, obligations and risks which forms a part of this contract. The prices should be given separately in the item(s) if special accountability, responsibilities and risks as in the above occur.
7. A price or unit price has to be filled in against every item in the Bill of Quantities even if the amount isn't shown. Items where no price or unit price has been filled in will be regarded as covered by the other prices and unit prices in the Bill of Quantities. VAT must not be included in the tariffs.
8. The unit rates will be regarded as correct if any calculation errors occur. The total amount will be corrected according to the product of the item quantity and the unit rate. Unit prices will be calculated arithmetically in the case of omissions.
9. Payments will be made exclusively for items listed in the Bill of Quantities (BoQ). If the Contractor identifies an item that is not included, they must seek clarification during the tender period. Alternatively, the Contractor should allocate the cost of the unlisted item under a related item within the relevant section of the BoQ and clearly record this adjustment under Section T2.2.1, "Alterations by Tenderer."
10. Except where rates only are required, insert all amounts to be included in the total tendered price in the "Amount" column and show the corresponding total tendered price.
11. The units of measurement described in the Bills of Quantities are metric units. Abbreviations which may be used in these Bills of Quantities are as follows:

Abbreviation	Meaning	Abbreviation	Meaning
%	per cent	MN	meganeuton
ha	hectare	MN.m	meganeuton-metre
h	hour	m	metre
kl	kilolitre	m ²	square metre
kg	kilogram	m ² .pass	square metre-pass
km	kilometre	mm	millimetre
kW	kilowatt	No.	number
l	litre	P C sum	Prime Cost sum
m ³	cubic metre	Prov sum	Provisional sum
m ³ .km	cubic metre-kilometre	sum	lump sum
MI	megalitre	t	ton (1000 kg)

The Employer has the right to inspect and correct any measurements and/or payments that were made before the final Payment Certificate. The Employer also has the right to deduct payment for any work not complying with the specifications before the submission of the final Payment Certificate.

C2.2 BILL OF QUANTITIES

REPLACEMENT AND REHABILITATION OF INTERNAL BUILDING SEWER SYSTEM AND EXTERNAL
MAIN SEWER LINE FOR BONGANI HOSPITAL, FREE STATE DEPARTMENT OF HEALTH



BILL OF QUANTITIES - BONGANI REGIONAL HOSPITAL

PAYMENT	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
SANS 1200 A	1	SCHEDULE 1: PRELIMINARY AND GENERAL				
PSA 8.3.1	1.1	SCHEDULED FIXED-CHARGE AND VALUE RELATED ITEMS				
8.3.1		01) Contractual Requirements	Sum	1		
8.3.2	1.2	Establishment of Facilities on the Site:				
		01) Facilities for Engineer				
		a) Engineers Office	Sum	1		
		b) Communication costs (cellular phone)	Sum	1		
		c) Nameboards (2 No.)	Sum	1		
		02) Facilities for Contractor				
		a) Offices and storage sheds	Sum	1		
		b) Workshops	Sum	1		
		c) Ablution and latrine facilities	Sum	1		
		d) Tools and equipment	Sum	1		
		e) Water supplies, electric power and communications	Sum	1		
		f) Access (Sub-clause 5.8)	Sum	1		
		j) Plant	Sum	1		
8.3.3		03) Other fixed-charge obligations	Sum	1		
8.3.4		04) Removal of Site establishment	Sum	1		
8.4	1.3	SCHEDULED TIME-RELATED ITEMS				
8.4.1	1.3.1	01) Contractual Requirements.	Month	12		
	1.3.2	Preparation, submission, updating and adherence to the Contract Programme and Construction Methodology	Month	12		
PSA 8.4.2	1.3.3	Operate and maintain facilities on the Site for duration of Construction, except where otherwise state				
		Carried forward				

REPLACEMENT AND REHABILITATION OF INTERNAL BUILDING SEWER SYSTEM AND EXTERNAL
MAIN SEWER LINE FOR BONGANI HOSPITAL, FREE STATE DEPARTMENT OF HEALTH



health
Department of
Health
FREE STATE PROVINCE

BILL OF QUANTITIES - BONGANI REGIONAL HOSPITAL

PAYMENT	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
8.4.2.1		01) Facilities for the Employer's Agent:				
		a) Engineers Office	Month	12		
		02) Facilities for Contractor:				
		a) Offices and storage sheds	Month	12		
		b) Workshops	Month	12		
		c) Ablution and latrine facilities	Month	12		
		d) Tools and equipment	Month	12		
		e) Water supplies, electric power and communications	Month	12		
		f) Access	Month	12		
8.4.3	1.3.4	01) Supervision for the Duration of Construction	Monthly Prov Sum	12	R 200 000,00	R 1 400 000,00
8.4.4	1.3.6	01) Company and Head Office Overhead Costs for Duration of Contract	Month	12		
8.4.5	1.3.6	01) Other Time Related Obligations	Month	12		
PSA 8.4.6	1.4	OHS Act Obligations				
		01) Full provision for General Safety Obligations, including but not limited to Health & Safety File, PPE and the appointment of a registered Safety Officer	Month	12	R 18 000,00	R 216 000,00
8.5	1.5	SUMS STATED PROVISIONALLY BY ENGINEER				
		01) Safeguarding of excavations as per construction regulation or as prescribed by the Engineer	Prov. Sum	1	R 80 000,00	R 80 000,00
		a) Overheads, charges and profit on item 1.5.1 above	%		R 80 000,00	
		02) Control tests by independent laboratory. Additional tests that may be required by the Engineer over and above normal quality control tests performed by the Contractor.	Prov. Sum	1	R 30 000,00	R 30 000,00
		a) Overheads, charges and profit on item 1.5.2 above	%		R 30 000,00	
		03) Additional surveys and underground service detection by nominated specialist as ordered by Engineer	Prov. Sum	1	R 50 000,00	R 50 000,00
		a) Overheads, charges and profit on item 1.5.3 above	%		R 50 000,00	
		4) Appoint a Community Liaison Officer from the community for the duration (12 months) of the contract	Prov Sum	1	R 100 000,00	R 100 000,00
		a) Overheads, charges and profit on item 1.5.4	%		R 100 000,00	
		Carried forward				

REPLACEMENT AND REHABILITATION OF INTERNAL BUILDING SEWER SYSTEM AND EXTERNAL
MAIN SEWER LINE FOR BONGANI HOSPITAL, FREE STATE DEPARTMENT OF HEALTH



health
Department of
Health
FREE STATE PROVINCE

BILL OF QUANTITIES - BONGANI REGIONAL HOSPITAL

PAYMENT	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
8.7	1,6	DAYWORKS				
8.7.1		01) LABOUR				
		a) Unskilled Labour	Days	21		
		b) Semi-skilled Labour	Days	21		
		c) Skilled	Days	21		
8.7.2		02) PLANT				
		a) Excavator	Days	21		
		b) TLB	Days	21		
		c) Water truck	Days	21		
		d) Tipper	Days	21		
		e) Plate compactor	Days	21		
		f) Bobcat	Days	21		
		g) Mobile Pump	Days	21		
8.8	1,7	TEMPORARY WORKS				
		01) Accommodation of traffic during construction	Sum	1		
PSA 8.8.9	1,8	Provision of record/as-built drawings				
		01) Provision of record/as-built drawings	Sum	1		
	1,9	Training				
		01) Accredited training for operators and local labourers	Prov Sum	1	R 100 000,00	R 100 000,00
Total Carried Forward						

REPLACEMENT AND REHABILITATION OF INTERNAL BUILDING SEWER SYSTEM AND EXTERNAL
MAIN SEWER LINE FOR BONGANI HOSPITAL, FREE STATE DEPARTMENT OF HEALTH



BILL OF QUANTITIES - BONGANI REGIONAL HOSPITAL

PAYMEN	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
SANS1200 C	2	SCHEDULE 2: SITE CLEARANCE				
8.2.1	2.1	Clear and grub				
		01) Clear and grub sewer pipeline routes up to a width of 2.5m to a	m	2688		
		02) Remove top soil to depth of 150 mm	m ²	404		
8.2.2	2.2	Remove and grub large trees and tree stumps of girth:				
		01) Over 1,0 m and up to and including 3,0 m	No.	5		
PSOB 8.3.2	2.4	Take down and re-erect existing fences	m	20		
Total Carried Forward to Summary						

REPLACEMENT AND REHABILITATION OF INTERNAL BUILDING SEWER SYSTEM AND EXTERNAL
MAIN SEWER LINE FOR BONGANI HOSPITAL, FREE STATE DEPARTMENT OF HEALTH



BILL OF QUANTITIES - BONGANI REGIONAL HOSPITAL

PAYMEN	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
SANS1200 DB	3	SCHEDULE 3: PIPE TRENCHES				
		<u>TRENCHES FOR SEWER PIPES</u>				
PSDB 8.3.2	3.1	Excavation of trenches for sewer pipelines in all materials, pipe diameter plus 600mm wide, backfill and compacted according to DB.8.3.2 including disposal of surplus material, shoring and/or protection of trench excavations as per Construction Regulations where applicable for trench depths of :				
		01) 110 mm pipeline				
		a) Up to 1m	m	250		
		b) Over 1 m up to 2,0 m	m	220		
		c) Over 2,0 m up to 3,0 m	m	43		
		02) 160 mm pipeline				
		a) Over 1 m up to 2,0 m	m	600		
		b) Over 2 m up to 3,0 m	m	514		
		c) Over 3,0 m up to 4,0 m	m	177		
		d) Over 4,0 m up to 5,0 m	m	47		
		03) 200 mm pipeline				
		a) Over 3,0 m up to 4,0 m	m	2250		
		b) Over 4,0 m up to 5,0 m	m	80		
		c) Over 5,0 m up to 6,0 m	m	33		
PSDB 8.3.2	3.2	Extra over item 3.1 above for:				
		01) Intermediate excavation	m³	140		
		02) Hard rock excavation	m³	35		
		03) Backfill stabilized with 5% cement where directed by the Engineer	m³	20		
PSDB 8.3.3	3.3	Excavation ancillaries:				
		01) Make up deficiency in backfill material				
		a) By importation from commercial or off-site sources selected by the contractor	m³	150		
		02) Compaction in road crossings	m²	20		
PSDB 8.3.4	3.4	Particular Items				
		01) Shore Trench opposite structures or Services	m	50		
		02) Stormwater, Seepage and Dewatering of Excavations	m	100		
		Carried forward				

REPLACEMENT AND REHABILITATION OF INTERNAL BUILDING SEWER SYSTEM AND EXTERNAL
MAIN SEWER LINE FOR BONGANI HOSPITAL, FREE STATE DEPARTMENT OF HEALTH



BILL OF QUANTITIES - BONGANI REGIONAL HOSPITAL

PAYMEN	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
PSDB 8.3.5	3.5	Expose Existing Services for Protection 01) Services that intersect a trench a) Electrical / Telephone Cables b) Water Lines up to 300mm dia c) Stormwater up to 500mm dia 02) Services that adjoin a trench a) Electrical / Telephone Cables b) Water Lines up to 300mm dia c) Stormwater up to 500mm dia	No. No. No. m m m	2 3 8 100 100 400		
8.3.6	3.6	Finishing: 01) Reinstate road surfaces complete with all courses a) Asphalt in Parking Area b) Asphalt in Roadways c) Paving Blocks/Bricks d) Kerbing	 m ² m ² m ² m	 87 346 50 30		
PSDB 8.3.8	3.7	Removal of existing pipes: 01) Careful removal of old sewer pipes (of all sizes) and manholes (of all depths) along the pipeline route including disposal. a) Sewer Mains b) Manholes 02) Stack manhole ring and slabs and stockpile for re-use	m No. No.	800 10 20		
Total Carried Forward						

REPLACEMENT AND REHABILITATION OF INTERNAL BUILDING SEWER SYSTEM AND EXTERNAL
MAIN SEWER LINE FOR BONGANI HOSPITAL, FREE STATE DEPARTMENT OF HEALTH



BILL OF QUANTITIES - BONGANI REGIONAL HOSPITAL

PAYMEN	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
SANS1200 LB	4	SCHEDULE 4: BEDDING PIPES				
		<u>BEDDING FOR SEWER PIPES</u>				
8.2.1	4	Provision of bedding from trench excavations:				
		01) Selected granular material	m³	22		
		02) Selected fill material	m³	47		
PSLB 8.2.3	4.2	Supply only of bedding by importation:				
		01) From commercial sources:				
		a) Selected granular material	m³	142		
		b) Selected fill material	m³	306		
		19 mm stone provisional	m³	50		
PSLB 8.2.6	4.3	Extra over items 4.1 and 4.2 for bedding stabilized with 5% cement	m³	50		
Total Carried Forward to Summary						

REPLACEMENT AND REHABILITATION OF INTERNAL BUILDING SEWER SYSTEM AND EXTERNAL
MAIN SEWER LINE FOR BONGANI HOSPITAL, FREE STATE DEPARTMENT OF HEALTH



BILL OF QUANTITIES - BONGANI REGIONAL HOSPITAL

PAYMENT	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
SANS1200 LD	5	SCHEDULE 5: SEWERS				
8.2.1	5.1	Supply, lay, test and bed in Class B bedding the following sewer pipes complete with couplings 01) uPVC Pipe Class 34 / 400kPa (smooth inner and outer wall)				
		a) 110 mm diameter	m	250		
		b) 160 mm diameter	m	600		
		c) 200 mm diameter	m	225		
8.2.3	5.2	Excavate, backfill, and construct 1.0mØ precast manholes with heavy duty concrete lid and frame complete with benching according to detail drawing.				
		01) Depth of manhole : Ø - 1.5m	No.	1		
		02) Depth of manhole : 1.51 - 2.0m	No.	4		
		03) Depth of manhole : 2.01 - 2.5m	No.	5		
		04) Depth of manhole : 2.51 - 3m	No.	7		
		05) Depth of manhole : 3.51 - 4m	No.	5		
		06) Depth of manhole : 4.01 - 4.5m	No.	2		
		07) Depth of manhole : 4.51 - 5m	No.	1		
		08) Depth of manhole : 5.5 - 6m	No.	1		
PSLD	5.3	Connection to existing sewer outfall	Sum	1		
8.2.1	5.4	MISCELLANEOUS				
		01) Flush Existing Sewer Network	m	600		
		02) CCTV Camera Inspection of Sewer Network	m	1542		
Total Carried Forward to Summary						

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
1	INTERNAL BUILDING SEWER DESCRIPTION: Bongani Hospital – Replacement of Existing Cast Iron Drainage line in various building basements with a 200mm Ø HDPE (Geberit) Pipe, including altering lateral connections to tie into the new pipe. Reattachment of pipe support structures in the multi floor Ward Block. Block C Wards A/B/C/D 01) Remove existing 200mm Ø Cast Iron pipe and supply and install a 200mm Ø HDPE (Geberit) pipe, allowing for tie-in of all connected lateral pipes (including, re-attachment of existing support system to overhead slab in Wards A/B/C/D building). In 6 sections (165m, 100m, 62m, 49m, 35m & 107m) per meter of installation, including allowance for tie-ins 02) Extend or cut back existing (as appropriate) 110mm Ø lateral pipes and connect to the new pipe, including all fittings per tie-in of lateral pipes: a. Geberit HDPE 45° branch fittings. b. Geberit HDPE 200mm Ø to 110mm Ø eccentric reducer c. 200mm HDPE Ø junctions/connectors d. Geberit HDPE 45° bend. e. Geberit HDPE 110 mm Ø length to suit. (See Appendix A for drawing and Appendix B for pipe installation specification) 03) Reattachment of pipe supports where necessary, using Hilti HKD M10x25, installed as per manufacturer's instructions and specification in Appendix C. Rate is per supplied and installed anchor. Each existing support to be tested for load bearing capacity. (See Appendix D and Appendix E)	m	782		
2	Block A (Security Office/Thuthuzela) 01) Remove existing pipe and supply and install a 200mm Ø HDPE (Geberit) pipe, allowing for tie-in of all connected lateral pipes (including, re-attachment of existing support system to overhead slab. (See Appendix A for drawing and Appendix B for pipe installation specification) 02) Extend or cut back existing (as appropriate) 110mm Ø lateral pipes and connect to the new pipe, including all fittings per tie-in of lateral pipes: a. Geberit HDPE 45° branch fittings. b. Geberit HDPE 200mm Ø to 110mm Ø eccentric reducer c. 200mm HDPE Ø junctions/connectors d. Geberit HDPE 45° bend. e. Geberit HDPE 110 mm Ø length to suit. (See Appendix A for drawing and Appendix B for pipe installation specification) 03) Reattachment of pipe supports where necessary, using Hilti HKD M10x25, installed as per manufacturer's instructions and specification in Appendix C. Rate is per supplied and installed anchor. Each existing support to be tested for load bearing capacity. (See Appendix D and Appendix E)	m	45		
3	Block B (Admissions, Casualty, X-Ray, Pharmacy, and OPD) 01) Remove existing 200mm Ø Cast Iron pipe and supply and install a 200mm Ø HDPE (Geberit) pipe, allowing for tie-in of all connected lateral pipes (including, re-attachment of existing support system to overhead slab). In 6 sections (106 m, 143 m, 63m, 60m, 24m, 60m, 40m, 45m) per meter of installation, including allowance for tie-ins 02) Extend or cut back existing (as appropriate) 110mm Ø lateral pipes and connect to the new pipe, including all fittings per tie-in of lateral pipes: a. Geberit HDPE 45° branch fittings. b. Geberit HDPE 200mm Ø to 110mm Ø eccentric reducer c. 200mm HDPE Ø junctions/connectors d. Geberit HDPE 45° bend. e. Geberit HDPE 110 mm Ø length to suit. (See Appendix A for drawing and Appendix B for pipe installation specification)	m	541		
	Carried forward				

REPLACEMENT AND REHABILITATION OF INTERNAL BUILDING SEWER SYSTEM AND EXTERNAL
MAIN SEWER LINE FOR BONGANI HOSPITAL, FREE STATE DEPARTMENT OF HEALTH



health
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Health
FREE STATE PROVINCE

BILL OF QUANTITIES - BONGANI REGIONAL HOSPITAL

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	Brought forward				
3 (cont)	Block B (Admissions, Casualty, X-Ray, Pharmacy, and OPD)				
	03) Reattachment of pipe supports where necessary, using Hilti HKD M10x25, installed as per manufacturer's instructions and specification in Appendix C. Rate is per supplied and installed anchor. Each existing support to be tested for load bearing capacity. (See Appendix D and Appendix	no	395		
4	Block F (Womans Res1,2,3,4,5)				
	01) Remove existing 200mm Ø Upvc pipe and supply and install a 200mm Ø HDPE (Geberit) pipe, allowing for tie-in of all connected lateral pipes (including, re-attachment of existing support system to overhead slab in Wards A/B/C/D building). (See Appendix A for drawing and Appendix B for pipe installation specification)	m	469		
	2) Extend or cut back existing (as appropriate) 110mm Ø lateral pipes and connect to the new pipe, including all fittings per tie-in of lateral pipes: a. Geberit HDPE 45° branch fittings. b. Geberit HDPE 200mm Ø to 110mm Ø eccentric reducer c. 200mm HDPE Ø junctions/connectors d. Geberit HDPE 45° bend. e. Geberit HDPE 110 mm Ø length to suit. (See Appendix A for drawing and Appendix B for pipe installation specification)	m	106		
	3) Reattachment of pipe supports where necessary, using Hilti HKD M10x25, installed as per manufacturer's instructions and specification in Appendix C. Rate is per supplied and installed anchor. Each existing support to be tested for load bearing capacity. (See Appendix D and Appendix E)	no	342		
5	Block G (Doctors quaters 1,2,3,4)				
	01) Remove existing 200mm Ø Cast Iron pipe and supply and install a 200mm Ø HDPE (Geberit) pipe, allowing for tie-in of all connected lateral pipes (including, re-attachment of existing support system to overhead slab). Per meter of installation, including allowance for tie-ins (See Appendix A for drawing and Appendix B for pipe installation specification)	m	264		
	2) Extend or cut back existing (as appropriate) 110mm Ø lateral pipes and connect to the new pipe, including all fittings per tie-in of lateral pipes: a. Geberit HDPE 45° branch fittings. b. Geberit HDPE 200mm Ø to 110mm Ø eccentric reducer c. 200mm HDPE Ø junctions/connectors d. Geberit HDPE 45° bend. e. Geberit HDPE 110 mm Ø length to suit. (See Appendix A for drawing and Appendix B for pipe installation specification)	m	60		
	3) Reattachment of pipe supports where necessary, using Hilti HKD M10x25, installed as per manufacturer's instructions and specification in Appendix C. Rate is per supplied and installed anchor. Each existing support to be tested for load bearing capacity. (See Appendix D and Appendix E)	no	206		
6	Terrain Clearance(All Blocks)				
	01) Clear terrain from vegetation and excess gravel within the perimeter of the basement	m³	200		
	02) Shape terrain adequately to level and insure slope for natural drainage.	m³	200		
	03) Repair drainage channel within Basement. 25mpa Concrete, Ref395. Rate includes formwork and smooth finishing as per applicable SANS specification	m³	10		
	04) Inlet Structure	Prov Sum	2	R 36 570,00	R 73 140,00
	Carried forward				

REPLACEMENT AND REHABILITATION OF INTERNAL BUILDING SEWER SYSTEM AND EXTERNAL MAIN SEWER LINE FOR BONGANI HOSPITAL, FREE STATE DEPARTMENT OF HEALTH



health
Department of
Health
FREE STATE PROVINCE

BILL OF QUANTITIES - BONGANI REGIONAL HOSPITAL

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	Brought forward				
7	05) Outlet Structure	Prov Sum	2	R 36 570,00	R 73 140,00
	06) Create Access to Basement	No.	3		
	Existing Services				
	01) Dealing with sewer from upstream system (Continuous diversion)	Block No.	5		
	02) Locate and expose existing services in a careful manner	Prov. Sum	1	R 121 900,00	R 121 900,00
	03) Draining of Basements using mobile pumps. (Treatment of raw sewerage to be include)	hr.	48		
	OHS Requirements according to the Act and its Amendments	Sum	1		
8	01) Lighting Adequate lighting in places where work is being executed e.g., stairwells and basements. Light fittings placed / installed causing no irritating/blinding glare. Stroboscopic effect eliminated (not only reduced) where moving objects or machinery is used.	Sum	1		
	02) OHS for Confined Spaces				
	a) Air monitor to be used should be able to detect all gasses likely to be present inside the confined space.	Sum	1		
	b) Calibration of air monitor	Sum	1		
	c) Training: use of air monitor	Sum	1		
	d) Emergency equipment	Sum	1		
	e) Extractor fans	Sum	1		
	f) Force fans	Sum	1		
	g) Safety Harnesses	Sum	1		
	h) Trypot and pully	Sum	1		
	i) Lifelines	Sum	1		
	j) Confined space training	Sum	1		
8	13. Implementation Monitoring	Monthly Prov Sum	6	R 101 252,00	R 607 512,00
Total Carried Forward to Summary					

REPLACEMENT AND REHABILITATION OF INTERNAL BUILDING SEWER SYSTEM AND
EXTERNAL MAIN SEWER LINE FOR BONGANI HOSPITAL, FREE STATE DEPARTMENT OF
HEALTH
BILL OF QUANTITIES



ITEM	DESCRIPTION	Amount
BILL No. 1	SCHEDULE 1: PRELIMINARY AND GENERAL	R
BILL No. 2	SCHEDULE 2: SITE CLEARANCE	R
	SCHEDULE 3: PIPE TRENCHES	R
	SCHEDULE 4: BEDDING PIPES	R
	SCHEDULE 5: SEWERS	R
BILL No. 3	INTERNAL BUILDING SEWER	R
	SUB-TOTAL	R
	Contingencies @ 15%	R
	SUB-TOTAL	R
	15% VAT	R
	TOTAL	R

C2.3 SUMMARY OF SCHEDULES

Schedule 1 – Preliminary and General for all the works

1. Tender Sum (Incl. VAT): R.....

Schedule 2 – Main Sewer Line

1. Tender Sum (Incl. VAT): R.....
2. Construction Period: (weeks)

Schedule 3 – Internal Building Sewer System

1. Tender Sum (Incl. VAT): R.....
2. Construction Period: (weeks)

FREE STATE DEPARTMENT OF HEALTH

DEPARTMENT NAME: INFRASTRUCTURE MANAGEMENT

CONTRACT NO: DOH (FS) 17/2026/2027

FOR

**REPLACEMENT AND REHABILITATION OF INTERNAL BUILDING SEWER SYSTEM AND EXTERNAL
MAIN SEWER LINE FOR BONGANI HOSPITAL, FREE STATE DEPARTMENT OF HEALTH**

PART C3 SCOPE OF WORKS

C3.1 DESCRIPTION OF THE WORKS

C3.2 STANDARD SPECIFICATIONS

C3.3 GENERAL PROJECT SPECIFICATIONS

C3.4 PARTICULAR SPECIFICATIONS

C3.5 OCCUPATIONAL HEALTH & SAFETY SPECIFICATION & BASELINE RISK ASSESSMENT

C.3.1 DESCRIPTION OF THE WORKS

PROJECT BACKGROUND

The Employer intends to undertake urgent rehabilitation and upgrade works to critical sewer infrastructure serving a hospital facility. The existing system, constructed circa 1993–1994, has exceeded its design life and is currently experiencing systemic failures including blockages, backflow, structural deterioration, and operational disruptions. The sewer network forms part of an integrated infrastructure system which includes building internal reticulation, external bulk sewer lines, stormwater interfaces, and associated civil works. Failures within this system are interdependent and cannot be addressed in isolation. The works will be executed within a live hospital environment requiring continuous operation of services and strict compliance with health and safety protocols.

C3.1.1 PROJECT OBJECTIVES

The objectives of the project are to:

- Restore full functionality of the sewer system
- Eliminate recurring blockages and backflow risks
- Improve hydraulic performance through correction of gradients
- Ensure compliance with applicable standards (SANS 1200)
- Enable safe and continuous hospital operations during construction

C3.1.2 SCOPE OVERVIEW

The Works comprise the rehabilitation, replacement, and upgrading of sewer infrastructure, including temporary works required to maintain uninterrupted service.

The scope is structured into the following components:

(a) Building Sewer Systems

- ~~Rehabilitation and/or replacement of internal and external building sewer connections~~
- Removal of defective pipework
- Installation of new pipelines to compliant gradients
- Connection to main sewer network

(b) Main Sewer Line

- Replacement or regrading of flat-gradient sewer sections
- Installation of new pipelines to ensure self-cleansing velocities
- Construction of manholes and access chambers

(c) Civil Works

- Excavation, trenching, bedding, and backfilling in accordance with SANS 1200 DB and DM
- Surface reinstatement including roads, pavements, and landscaped areas

(d) Ancillary Works

- Localised stormwater adjustments where impacting sewer performance
- Protection or relocation of existing services

C3.1.3 TEMPORARY WORKS (MANDATORY)

The Contractor shall design, supply, install, operate, and maintain all temporary works required to ensure continuous sewer operation throughout the construction period.

This shall include, but not be limited to:

- Bypass pumping systems
- Flow diversion systems
- Temporary pipelines and storage
- Emergency response systems in case of failure

No interruption of sewer services will be permitted without prior approval from the Employer.

All temporary systems shall be designed by a competent professional and submitted for approval prior to implementation.

C3.1.4 CONSTRAINTS AND OPERATING ENVIRONMENT

The project shall be executed within a fully operational hospital. The following constraints apply:

- Continuous operation of sewer and water services must be maintained
- No contamination or health risk to patients or staff is permitted
- Work areas must be isolated and controlled
- Noise, dust, and disruption must be minimised

The Contractor shall develop and implement a detailed method statement addressing these constraints.

C3.1.5 PHASING AND IMPLEMENTATION STRATEGY

The works shall be executed in phases as follows

The Contractor shall submit a detailed programme demonstrating sequencing, interdependencies, and continuity of operations.

C3.1.6 CONSTRUCTION PROGRAMME

The anticipated construction duration is approximately twelve (12) months.

The Contractor shall provide:

- Detailed baseline programme
- Critical path analysis
- Milestones for key deliverables

C3.1.7 RISK ALLOCATION AND MANAGEMENT

The following key risks have been identified:

- Live operational environment
- Unknown underground conditions
- Service interruptions

Risk allocation principles:

- Employer retains risk for ownership and third-party approvals
- Contractor retains risk for construction methodology and temporary works

The Contractor shall submit a detailed risk management plan.

C3.1.8 QUALITY ASSURANCE

All works shall comply with:

- SANS 1200 series
- Applicable municipal standards

Quality requirements include:

- Inspection and Test Plans (ITPs)
- Material certification
- CCTV inspection of installed pipelines
- Pressure and leakage testing

C3.1.9 HEALTH, SAFETY AND ENVIRONMENT

The Contractor shall comply with:

- Occupational Health and Safety Act
- Construction Regulations

Specific requirements include:

- Approved Health and Safety Plan
- Infection control measures
- Safe handling of sewage
- Environmental protection and waste disposal

C3.1.1 STAKEHOLDER COORDINATION

The Contractor shall coordinate with:

- Hospital management
- Public Works
- Municipality

Regular meetings shall be held to ensure alignment and resolve interface issues.

C3.1.11 MEASUREMENT AND PAYMENT

Measurement and payment shall be in accordance with the Bill of Quantities and SANS 1200.

Provision shall be made for:

- Provisional sums for unknown conditions
- Temporary works (measurable or lump sum as specified)

C3.1.12 EMPLOYER'S RIGHTS

The Employer reserves the right to:

- Adjust scope based on budget constraints
- Implement phased execution
- Omit or defer portions of the works

C3.1.13 DELIVERABLES

The Contractor shall provide:

- As-built drawings
- Operation and maintenance manuals
- Commissioning reports

C3.2 STANDARD SPECIFICATIONS

C3.2.1 APPLICABLE STANDARDIZED SPECIFICATIONS

1. The Standard Specifications on which this contract is based are the latest revisions of the South African Bureau of Standard's Standardized Specifications for Civil Engineering Construction (SABS 1200) and the necessary amendments to the Standard Specifications have been made and included in the Project Specifications contained in this document. Note: "SABS has been changed to "SANS".
2. The terms "Schedule of Quantities", (used throughout the Standard Specifications) and "Bill of Quantities", ***(used in all other documents forming part of this contract), are synonymous.***
3. Although not bound in nor issued with this Document, the relevant sections of the standard specifications shall form part of this Contract. These documents are available at the Contractor's expense from the SA Bureau of Standards, Private Bag X191, PRETORIA, 0001.
4. All relevant SABS 1200 Standardised Specifications for this Contract shall be applicable.
 - SANS 1200 A –: General
 - SANS 1200 C – Site Clearance
 - SANS 1200 D – Earthworks
 - SANS 1200 DB – Earthworks (Pipe Trenches)
 - SANS 1200 DK: Standardized specification for civil engineering construction - Part DK: Cable ducts
 - SANS 1200 LB - Bedding (Pipe)
 - SANS 1200 LD – Sewers
 - ~~SANS-15801-1: Document management - Information stored electronically - Part 1: Recommendations for trustworthiness and reliability~~
 - SANS 10147: Refrigerating systems including plants associated with air-conditioning systems
 - SANS 10252-2: Water supply and drainage for buildings - Part 2: Drainage installations
 - Occupational Health and Safety Act, (Act No. 85 of 1993)
 - Construction Regulations (2014)
 - SANS 10400 – The Application of the National Building Regulations
 - SANS 10108: The classification of hazardous locations and the selection of apparatus for use in such locations
 - Protection of Personal Information Act, 2013 (Act No. 4 of 2013): POPI Act
 - Electronic Communications and Transactions Act, 2002 (Act No. 25 of 2002): ECTA

C3.2 2 VARIATIONS AND ADDITIONS TO THE STANDARD AND PARTICULAR SPECIFICATIONS

The Clauses under this section are numbered "PS" and refer to the clauses in the Standard or Particular Specifications. New clauses not covered by clauses in the Standard or Particular Specifications, if included here, are also designated "PS" followed by a number.

All material used in the Works shall, where such mark has been awarded for a specific type of material, bear the SABS/SANS mark. Alternatively, the Contractor shall furnish the Engineer with certificates of compliance of materials, which bear the official mark of the appropriate standard.

PSA GENERAL

PSA 1 SCOPE

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

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

PSA 2 INTERPRETATIONS

PSA 2.3 DEFINITIONS

IN THE OPENING PHRASE, INSERT THE WORDS: "the definitions given in the Conditions of Contract and" BETWEEN THE WORDS "specification" AND "the following".

a) General

ADD THE FOLLOWING DEFINITIONS:

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

'Specified': As specified in the Standardized Specifications, the Drawings or the Project Specifications.

'Specifications' shall have the corresponding meaning'.

b) Measurement and Payment

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

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

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

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

ADD THE FOLLOWING SUBCLAUSE TO CLAUSE 2.3:

PSA 2.3.1 DELAY DUE TO SUPPLY OF MATERIALS AND ORDERING

The Contractor shall ensure that the work is not delayed, due to the lack of materials on the site of the works, by placing orders with suppliers for the materials required under his contract as soon as possible after the acceptance of this tender.

The Contractor shall, by producing copies of written orders or written enquiries for supplies, prove to the satisfaction of the Engineer that any delay occasioned by the non-availability of materials has been caused by the ability of suppliers to supply and not by his own lack of timely ordering or lack of exhaustive enquiry

for supplies before any extensions of the contract time will be allowed due to such delays.

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

PSA 2.4 ABBREVIATIONS

a) Abbreviations relating to standard documents

ADD THE FOLLOWING ABBREVIATION:

"CKS: SABS Co-ordinating Specification."

PSA 3 MATERIALS

PSA 3.1 QUALITY OF MATERIALS

ADD THE FOLLOWING AT THE END OF SUBCLAUSE 3.1:

"All materials are to be the best of their respective kinds, new, undamaged, sound and free from defects and shall comply with the relevant clauses of the Specification.

All references to Standard Specifications are to be the latest amendment to such specifications.

Materials bearing the SANS or BS mark will not be subjected to tests to determine whether they comply with the relevant specifications. The Engineer may in his discretion require any material not bearing such mark to be tested in accordance with the relevant specifications; should he do so the Contractor shall arrange for such tests to be carried out to the Contractor's cost by the South African Bureau of Standards or other approved body.

Whether or not the material bears the mark or is tested, any material found not to be in accordance with the specification shall be rejected and replaced by the Contractor at his own cost.

Tenderers may be required, at their own expense to submit samples of the material offered to the Engineer for his approval and the material supplied under his contract shall be of a standard equal to that of the samples so submitted and approved. Samples will remain the property of the Tenderers, who shall remove them when called upon to do so by the Engineer."

ADD THE FOLLOWING SUBCLAUSE TO CLAUSE 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 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 utilized on the Site for the purposes of the Contract shall be fenced off and shall contain all offices, stores, workshops, testing laboratories, toilet facilities, etc. as may be required by the Contractor. The facilities shall always be kept in a neat and orderly condition.

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 night soil."

ADD THE FOLLOWING SUBCLAUSE TO CLAUSE 4:

PSA 4.3 CONSTRUCTION PLANT

Construction plant, where the use thereof is permitted, shall be of a suitable type for carrying out the work for which it is required. Its capacity shall be sufficient to meet the requirements of the work within the contract time. It shall be kept at all times in full working order and repair.

PSA 5 CONSTRUCTION

PSA 5.1 SURVEY

PSA 5.1.1 Setting Out of the Works

ADD THE FOLLOWING:

The Contractor shall be responsible for the setting out of the works.

If at any time during the progress of the Works, any error shall appear or arise in the position, levels, dimensions or alignment of any part of the Works, the Contractor, on being required to do so by the Engineer, shall at this own expense rectify such error to the satisfaction of the Engineer.

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

PSA 5.3 PROTECTION OF EXISTING STRUCTURES

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

PSA 5.4 PROTECTION OF OVERHEAD AND UNDERGROUND SERVICES

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

PSA 5.4 LOCATION AND PROTECTION OF EXISTING SERVICES

PSA 5.4.1 Location of existing services

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

Without in any way limiting 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 utilization 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 SANS 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 cognizance being taken of such deviations in line and level which may reasonably be anticipated; and
- b) any other service which ought reasonably to have been a Known Service in accordance with the provisions of this clause;

as well as for consequential damage, whether caused directly by the Contractor's operators 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 utilizing 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 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 therefrom for the public and/or workmen, all in accordance with the requirements of the prevailing legislation and related regulations.

Unless otherwise instructed by the Engineer, no services shall be left exposed after its exact position has been determined and all excavations carried out for the purpose of exposing underground services shall be promptly backfilled and compacted.

PSA 5.4.3 Alterations and repairs to existing services

Unless the contrary is clearly specified or ordered, the Contractor shall not carry out alterations to existing services. When this is necessary, the Contractor shall 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.

When the Contractor damages existing services, he shall immediately inform the Engineer or the relevant authority and obtain instructions as to who should carry out repairs. In urgent cases the Contractor shall take the necessary steps to minimize damage to and interruption of the service. No repairs of telecommunication cables or electric power lines and cables shall be attempted.

The Employer will accept no liability for damages due to a delay in having such alterations or repairs affected. 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 its 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)":

- a) Provide to its Employees on the Site of the Works, all safety materials, clothing and equipment necessary to ensure full compliance with the provisions of the Occupational Health and Safety Act (Act No 85 of 1993) as amended (hereinafter referred to as the Act) at all times, and shall institute appropriate and effective measures to ensure the proper usage of such safety materials, clothing and equipment at all times; and
- b) ~~Provide, install and maintain on 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; and~~
- 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; and
- d) Implement all necessary measures as to ensure compliance of the Act by all subcontractors engaged by the Contractor and their employees engaged on the Works; and
- e) Comply fully with all other requirements pertaining to safety as may be specified in the Contract.

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

Where any such investigations reveal, or where it comes to the Engineer's attention that the Contractor is in any way in breach of the requirements of the Act or is failing to comply with the provisions of this clause, the Engineer shall, in accordance with the provisions of Clause 42 of the Conditions of Contract, be entitled to suspend progress on the Works or any part thereof until such time as the Contractor has demonstrated to the satisfaction of the Engineer, that such breach has been rectified.

The Contractor shall have no grounds for a claim against the Employer for extension of time and/or additional costs if the progress on the Works or any part thereof is suspended by the

Engineer in terms of this clause and the Contractor shall remain fully liable in respect of the payment of penalties for late completion in accordance with the provisions of Clause 46(1) of the Conditions of Contract should the Contractor fail to complete the Works on or before the specified Due Date for Completion in consequence of the suspension.

Persistent and repeated breach by the Contractor of the requirements of the Act and/or this clause shall constitute grounds for the Engineer to act in terms of Clause 9.2.1.3.5 (GCC 2015 3rd Edition) of the Conditions of Contract and for the Employer to cancel the Contract in accordance with the further provisions of the said Clause 9.2 (GCC 2015 3rd Edition)."

ADD THE FOLLOWING NEW SUB-CLAUSE:

All work and particularly work carried out in the proximity of buildings, bridges, tanks or other structures shall be carried out in conformance with the regulations framed under the Occupational Health and Safety Act, 1993 and the Minerals Act, (Act 50 of 1991) to ensure the safety of structures that are risk.

The Contractor shall make available for the duration of the contract safety helmets, gumboots and any other necessary safety equipment for sole use by the Engineer and his representative(s).

ADD THE FOLLOWING NEW SUB-CLAUSES TO CLAUSE 5:

PSA 5.8 SITE MEETINGS

The Contractor or its authorized agent will be required to attend regular site meetings, which shall normally be held monthly 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.

PSA5.9 CARE OF THE SITE AND PUBLIC

At all times during construction of the Works and upon completion thereof, the Site of the Works shall be kept and left in a clean and orderly condition. The Contractor shall store all materials and equipment for which he is responsible in an orderly manner and shall keep the Site free from debris and obstructions.

Any rock or debris falling from trucks on the roads in use by the public shall be removed immediately. Precautions shall be taken to prevent fouling of public roads and other works by vehicles, and the roads shall be kept clean by the Contractor.

Allowance should be made by the Contractor in his construction programme for delays that may result from foreseen and unforeseen actions that are required to ensure the safety and convenience of the public.

PSA5.10 CONTRACTOR'S REPRESENTATIVE AND SUPERINTENDENCE

The Contractor shall submit to the Employer and Engineer within 14 days of the Commencement Date a list of addresses and telephone numbers of its Representative and key personnel who may be contacted both during and outside normal working hours in connection with the Works.

PSA5.12 NOTICES, SIGNS, BARRICADES AND ADVERTISEMENTS

Notices, signs and barricades as well as advertisements may only be erected where approved by the Engineer. The Contractor shall be responsible for their supply, erection, maintenance and ultimate removal and shall make provision for this in his tendered rates.

The Engineer shall have the right to have any sign, notice or advertisement moved to another location, or to have it removed from the Site of the Works, should it in any way prove to be unsatisfactory, inconvenient or a safety hazard.

PSA5.13 GENERAL ENVIRONMENTAL REQUIREMENTS

All chemicals, lubricants and fuels shall be stored in secondary containment units that are capable of storing 110% of the contents stored. These secondary containment units must be impermeable, fire proof and constructed to the approval of the Engineer.

Washing of tools and/or equipment shall take place at dedicated washing facilities within the construction camps. Suitable wash facilities must be provided at all construction camps and all wastewater must be treated before discharge into any natural watercourse.

The Contractor shall prevent the discharge of any pollutants, such as cement, concrete, lime, chemicals and fuels into any water sources. Runoff from fuel storage areas/ workshops/vehicle washing areas and concrete swills shall be directed via an oil separator into a settlement pond and this will be disposed of at a site approved by the Engineer. Appropriate measures to prevent water pollution at/from batching plants must be implemented.

The Contractor shall be responsible to safeguard the plant and areas adjacent to the Contractor's camp against fire caused in any way by the construction activities on Site. The Contractor shall be responsible for any damage or loss suffered in this regard.

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 work.

Except where the contrary is specified, or when clearly not applicable, all quantities for measurement and payment shall be determined from the 'authorized' 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) with respect to the nature and type of testing to be undertaken for the purposes of the Contract;
- b) any testing laboratory owned, managed or operated by the Employer or the Engineer;
- c) any testing laboratory established and operated on the Site by or on behalf of the Employer or the Engineer.
- d) Any other laboratory that the Engineer approves in his absolute discretion."

PSA 8 MEASUREMENT AND PAYMENT

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

"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 standardized 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, and 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.
- compliance with Occupational Health and Safety

PSA 8.2 PAYMENT

PSA 8.2.1 Fixed-Charge and Value-Related Items

REPLACE THE CONTENTS OF SUBCLAUSE 8.2.1 WITH THE FOLLOWING:

PSA 8.2.1.1 Fixed Charge Items

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

- a) EIGHTY PERCENT (80%) of the sum tendered will be paid when the facilities have been provided and approved; and
- b) The remaining TWENTY PERCENT (20%) will be paid when the Works have been completed, the facilities have been removed and the site of the Contractor's establishment has been cleared and cleaned to the satisfaction of the Engineer.
- c) No adjustment will be made to the sum tendered in respect of item 8.3.1 should the value of the Works finally executed or the Time for Completion vary in any way from that specified in the Tender.

PSA 8.2.2 Time-related items

REPLACE THE CONTENTS OF SUBCLAUSE 8.2.2 WITH THE FOLLOWING:

"Subject to the provisions of Subclauses 8.2.3 and 8.2.4, payment under item 8.4.1 (time-related item) will be made monthly in equal amounts, calculated by dividing the sum tendered for the item by the tendered contract period in months;

Provided always that the total of the monthly amounts so paid for the item is not out of proportion with the value of the progress of the Works as a whole.

ADDITIONAL CLAUSES: ADD THE FOLLOWING

PSA9 HEALTH AND SAFETY

The Works to comply with the Occupational Health and Safety Act (Act 85 of 1993), the Construction Regulations GNR.84 of 7 February 2014 and the Employer's Safety Specifications.

The maintenance of safe work practices at all times and in all sections of the execution of the works shall form part of the day-to-day site activities of all the Contractor's management, staff and workforce on the contract.

The Construction Regulations require the Employer to ensure that the Contractor has made adequate provision for the execution of the works within the Act, Regulations and Specifications. The items listed below have been identified as critical towards ensuring the minimum standards of safe work practice. It must however be noted that the list below is not exhaustive and that it is the Contractor's responsibility to allow for all costs involved to comply with the requirements in terms of the Contract.

Also, refer to health and safety requirements in Section 3.5.B (Management).

Rates given for items under this section should ensure compliance with the relevant requirements in the Occupational Health and Safety Act, 1993 (OHSA), Construction Regulations, 2014 (CR), General Administrative Regulations, 2003 (GAR) and the General Safety Regulations, 2003 (GSR).

PSA9.1 Fixed-charge items

ADD THE FOLLOWING NEW CLAUSE (Clause 8.3.5):

Compliance with the Occupational Health and Safety Act

(Act 85 of 1993) and its Regulations and with the Employer's

Health and Safety SpecificationUnit: Sum

The fixed charge item shall include but shall not be limited to the following:

- Preparation and implementation of Health and Safety Plan,
- Establishment of Health and Safety File,
- Health and Safety Training
- Personal Protective Clothing and Equipment
- Fences, Signs and Barricades
- Establishment of Safety Administration
- Compliance with all Health and Safety regulations in terms of COVID-19
- Other Health and Safety Fixed-charge Obligations

PSA9.2 Time-related Items

ADD THE FOLLOWING NEW CLAUSE (Clause 8.4.6):

Compliance with the Occupational Health and Safety Act

(Act 85 of 1993) and its Regulations and with the Employer's

Health and Safety Specification Unit:month

The time-related item shall include but shall not be limited to the following:

- The employment cost of all health and safety personnel including consultants, health and safety officers, inspectors, supervisors and issuers required in terms of the Contractor's Health and Safety Plan,
- Updating the Health and Safety Plan as needed,
- Carrying out periodic own audits and follow-up audits,
- Compiling ongoing risk assessments and risk assessment reports as required by the Works,
- Convening of regular safety meetings with the Safety Representatives,
- Accompanying and supporting the Employer or his Safety Agent during ad hoc audits,
- Compilation of monthly safety reports and statistics for the Employer or his Safety Agent,
- Implementation and maintenance of Training
- Maintenance of personal protective clothing and equipment
- Maintenance of fences, signs and barricades
- Implementation and maintenance of safety administration
- Maintain compliance with all Health and Safety regulations in terms of COVID-19
- Other Health and Safety Time-related Obligations

PSA10 ENVIRONMENTAL MANAGEMENT PLAN

The Contractor shall comply with all the conditions of the Environmental Authorisation (Record of Decision) and the Environmental Management Plan.

PSA10.1 Fixed-charge Items

ADD THE FOLLOWING CLAUSE (Clause 8.3.6):

Compliance with the Environmental Management Plan and

Environmental Authorisation (Record of Decision)Unit: Sum

The sum tendered shall cover all costs, overheads, profits and charges incurred in complying with all the conditions of the Environmental Management Plan and Environmental Authorisation.

PSA10.2 Time-related Items

ADD THE FOLLOWING CLAUSE (Clause 8.4.7):

Compliance with the Environmental Management Plan

and Environmental Authorisation Unit: month

The sum tendered shall cover all costs, overheads, profits and charges incurred in complying with all the conditions of the Environmental Management Plan and Environmental Authorisation.

PSA1 SUMS STATED PROVISIONALLY (Clause 8.5)

PSA11.1 Contingencies

If applicable, a Provisional Sum has been included in the Summary of Schedules for contingencies. No percentage markup will be applicable to any payments made using contingency money other than the markup included in prices for variations determined in terms of the Conditions of Contract.

PSAB ENGINEER'S OFFICE

PSAB1 NAME BOARDS (Clause 3.1)

Name board(s) conforming to the standard requirements of the South African Association of Consulting Engineers and as shown on the relevant drawing must be provided and erected at points to be designated by the Engineer. A contract name board drawing is included with the tender drawings.

PSC SITE CLEARANCE

PSC3 MATERIALS

PSC3.1 DISPOSAL OF MATERIAL

ADD THE FOLLOWING:

"Materials arising from clearing and grubbing shall be disposed of at a suitable spoil site. The Contractor shall be responsible for making his own arrangements for a suitable spoil site. Trees and stumps necessarily removed shall not be burnt unless authorised by the Engineer but shall be cut and stacked at areas designated by the Engineer."

PSC5 CONSTRUCTION

PSC5.1 AREAS TO BE CLEARED AND GRUBBED

ADD THE FOLLOWING:

"Pipeline routes shall be cleared to a distance of 1.25m on both sides of the pipeline centre line. Route pegs or markers shall not be destroyed or damaged during clearing operations."

PSD EARTHWORKS

PSD3 MATERIALS

PSD3.1 CLASSIFICATION FOR EXCAVATION PURPOSES

PSD3.1.1 Method of Classifying

REPLACE THE CONTENTS OF SUBCLAUSE 3.1.1 WITH THE FOLLOWING:

"The Contractor may use any method he chooses to excavate any class of material but his chosen method of excavation shall not determine the classification of the excavation. The Engineer will decide on the classification of the materials. Said classification will be based on the criteria as stated in PSD 3.1.2 as described below. All equipment described in PSD 3.1.2 is to be in good mechanical condition and be operated efficiently by an experienced and licenced operator. "Efficiently" means "in a manner that can reasonably be expected of a contractor, having regard for the production achieved". In the event of a disagreement between the Engineer and the Contractor, it shall be the responsibility of the Contractor, if so required and subject to the provisions of 4.1, to make available at his own expense such equipment as is specified in PSD 3.1.2 in order to assess the reasonable removability or otherwise of the material. The Engineers decision shall then, subject to the provisions of the contract, be final and binding."

PSD3.1.2 Classes of Excavation

REPLACE THE CONTENTS OF SUBCLAUSE 3.1.2(a), (b) and (c) WITH THE FOLLOWING:

"The excavation of material will be classified as follows for purposes of measurement and payment:

(a) Soft excavation

1. Soft excavation shall be excavation in material that can be efficiently removed or loaded, ~~without prior ripping, by the following plant:~~
 - i. a track-type back-acting excavator unit with a total mass of approximately 30t and flywheel power of approximately 150kW.

(b) Hard rock excavation

1. Material shall be deemed to be hard rock when a track-type back-acting excavator unit with a total mass of approximately 30t and a flywheel power of approximately 150 kW fails to achieve a trenching production rate of 10m³ per hour.
2. Hard rock excavation shall be excavation in material that cannot be efficiently removed without blasting or without wedging and splitting.
3. Small quantities of hard material which can be removed by means of pneumatic equipment such as an excavator-mounted hydraulic hammer or pneumatic hand tools will also be classified as hard rock.

(c) Intermediate excavation

1. There will be no intermediate classification of material for this contract. The material will be either soft excavation or hard excavation and will be classified as described in (a) and (b) above.

(d) Approval for Blasting

1. Permission for the use of explosives will only be given once the engineer has been notified that the hard excavation conditions have been encountered and when he has verified that excavation by conventional means is not possible.
2. All blasting will take place in accordance with the safety and security regulations applicable to such activities.

PSD5 CONSTRUCTION

PSD5.1. PRECAUTIONS

PSD5.1.1. SAFETY

PSD5.1.1.1 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)

PSD5.1.1.2 Safeguarding of excavation

REPLACE "Machinery and Occupational Safety Act" WITH "Occupational Health and Safety Act, 1993 (Act 85 of 1993)

PSD5.1.1.3 Explosives

Add the following:

"Blasting sites should be properly covered to the satisfaction of the Engineer and the Contractor will be held responsible for any damages which occur due to blasting." Certificates of Competency and Permits must be available and should be produced for inspection at the request of the Engineer.

PSD5.2 METHODS AND PROCEDURES

PSD5.2.2 EXCAVATION

PSD5.2.2.3 Disposal

ADD THE FOLLOWING:

"Surplus material will be disposed and finished off on site or at an approved site in compliance with the Engineers requirements"

PSD5.2.5.1 Free-haul

REPLACE THE CONTENTS OF SUBCLAUSE 5.2.5.1(a) and (b) WITH THE FOLLOWING:

"The freehaul distance within which the Contractor will be required to move material without separate compensation shall be 1.5km."

PSD.7 TESTING

PSD.7.2 TAKING AND TESTING OF SAMPLES

ADD THE FOLLOWING:

"The Contractor shall include in his rate for the cost of density testing. These tests will be carried out on each layer of material utilized for filling."

PSDB SANS 1200DB: EARTHWORKS (PIPE TRENCHES)

**PSDB.3 MATERIALS
PSDB 3.7 SELECTION**

Add the following:

"Where suitable backfilling material is available in layers of 150mm or more, it will be separated during excavation and utilized for backfilling. Should this material not be utilized, an estimation of the available quantity will be made and deducted from the material which was imported."

PSDB 5.6 BACKFILLING
PSDB 5.6.2 Material for Backfilling
Add the following:

"Rocks and rubble removed from the trench exceeding 250mm in diameter will be deemed unsuitable for backfilling above the bedding (cradle and blanket) and should be separated and removed to spoil."

PSDB 5.6.4 Disposal of Hard Rock and Intermediate Material
Add the following:

"It is the Contractors responsibility to level the disposed spoil heaps and tip the following loads on the levelled material. The Contractor will not be permitted to dispose of unsuitable material by just dumping it onto the horizontal surface. Excess material which cannot be flattened sufficiently will be removed from site to an approved spoil site. All excavated rock material exceeding 250mm in diameter is to be removed to an approved spoilsite."

PSDB8 MEASUREMENT AND PAYMENT

PSDB8.3 SCHEDULED ITEMS

PSDB8.3.2 Excavation

~~(a) Excavate in all materials for trenches, backfill compact and dispose of surplus material~~

REPLACE "of 1.0m" IN THE FIRST SENTENCE OF 8.3.2(a) WITH: 'as specified in the Schedule of Quantities'

PSDB 8.3.8 Removal of Existing Sewer Infrastructure

8.3.8.1.1 REMOVAL OF EXISTING SEWER PIPES

Rate includes excavation, breakout, removal, and disposal of pipes (all diameters/materials),

8.3.8.1.2 Demolition and removal of existing manholes (Not for reuse)

Rate includes total demolition, removal of all components (frame, shaft, and base), disposal at approved sites, and backfilling/compaction of the cavity per **PSDB 3.5**. Measurement: Number (No.).

8.3.8.2 Modification of existing manholes for reuse

Rate includes breaking out for new entries, cleaning/desilting,

PSDB 8.3.14 Barricading

The rate shall include for the supply, erection, and maintenance of all necessary safety barricades

PSL 7 TEST
PSL 7.3 Standard Hydraulic Pipe Test
PSL 7.3.1 Test Pressure and Time of Test

PSL 7.3.1.2

Test Pressure

ADD THE FOLLOWING:

"Before any connections are made, pipes are to be tested to 1.5 times the working pressure of the specific class of pipe. After connections have been done, the complete network is to be tested at the maximum static pressure as specified by the Engineer."

PSL 8

MEASUREMENT AND PAYMENT

PSL 8.2.6

Specials

ADD THE FOLLOWING:

"Where the new works are to be connected to existing pipelines or fittings, all costs associated with the excavation, removal of fittings, cutting in, joining, labour and complete finishing are deemed to be included in the tendered price."

SANS 1200LB: BEDDING PIPES

PSLB 3 MATERIAL

PSLB 3.3

Bedding

ADD THE FOLLOWING:

"Class B bedding as applicable to rigid pipes is required. Material for the Class B bedding will only be imported where insufficient suitable material is obtainable from the excavated material.

PSLB 3.4

Selection

PSLB 3.4.2

Suitable Material not available from the trench excavation

ADD THE FOLLOWING:

"Should there during selective excavation methods (including screening) with the correct tools still be insufficient suitable material available for the bedding, material must be imported. The Contractor will find a suitable source of bedding material under the guidance of the project appointed Environmental Control Officer and submit it to the Engineer for approval.

The finding of a suitable source/quarry/borrow pit, loading, transport, placement and compaction of the imported material is deemed to be included in the rate tendered by the Contractor."

PSLB 5

CONSTRUCTION

PSLB 5.1.4

Compaction

ADD THE FOLLOWING:

"After excavation of the trench, the trench bottom will be levelled by means of a rake and compacted. Compaction may be conducted by hand tools. The required compaction to be achieved must exceed or equal 90% Mod ASHTO density or as specified on the drawing.

After installation of the pipes, similar compaction must be applied to the blanket material. Now the final backfilling to 100mm above the adjacent soil levels may be carried out. The total working area shall then be finished off.

C.3.3 GENERAL PROJECT SPECIFICATIONS

The Project Specifications (PS) form an integral part of the contract and supplement the Standard Specifications. They contain a general description of the works, the site and the requirements to be met.

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

Any reference to "the Engineer" in this document is to be read as "the Employer's Agent" in terms of the definition 1.1.1.16 of the General Conditions of Contract for Construction Works as issued by SAICE - Third edition (2015).

PS 1	CONSTRUCTION PROGRAMME
PS 2	SITE FACILITIES AVAILABLE
PS 3	SITE FACILITIES REQUIRED
PS 4	FEATURES REQUIRING SPECIAL ATTENTION
PS 5	INFORMATION SUPPLIED BY EMPLOYER
PS 6	EXTENSION OF TIME ARISING FROM ABNORMAL RAINFALL
PS 7	CERTIFICATES OF PAYMENT
PS 8	CONSTRUCTION IN LIMITED AREAS
PS 9	NON-WORKING DAYS
PS 10	SPOIL MATERIAL
PS 11	DRAWINGS
PS 12	LENGTH OF TRENCHES
PS 13	SAMPLES
PS 14	MANUFACTURER'S INSTRUCTIONS
PS 15	MATERIALS AND PLANT
PS 16	NOTICES, SIGNS, BARRICADES AND ADVERTISEMENTS
PS 17	SETTING OUT OF WORK
PS 18	WORKMANSHIP AND QUALITY CONTROL
PS 19	TRANSPORT OF MATERIAL
PS 20	LIAISON WITH LOCAL AUTHORITIES
PS 21	LOCAL LABOUR AND LOCAL SUBCONTRACTORS
PS 22	TRAINING SCHEMES
PS 23	PRESCRIPTIONS IN RESPECT OF EXISTING SERVICES
PS 24	ENGINEERING
PS 25	PROCUREMENT

PS 1: CONSTRUCTION PROGRAMME

It is a prerequisite of this contract that minimal disruption to the working of the water supply systems is ensured during construction. Construction methods must be of such a nature to allow for works to be carried out in phases to allow for the system to be put back into operation for a certain time period to allow for water storage capacity recovery in the supply system. The Contractor himself is responsible for liaison and arrangements with the Engineer in connection with the finalization and approval of the construction programme.

The construction must be completed within a strict 12-month timeframe from the commencement of the new contract works. This accelerated programme is driven by the need to safeguard overall project timelines following the descoping of works from the previous contractor due to non-performance and procurement delays.

The Contractor shall submit a programme of work to the Engineer not later than 14 (fourteen) days after the Contractor has been notified of the acceptance of his tender. This programme must take into account, and allow for phased completion of the work. The Engineer may instruct the Contractor to stop construction work at any stage and time, as may be dictated by financial constraints highlighted by the Employers Cost Control Programme.

If necessary, the Engineer may instruct the Contractor to adjust his programme to suit other activities.

The programme shall not be in the form of a bar chart only, but shall clearly show the anticipated quantities, the production rates and the value of work to be performed each month.

A network-based programme according to the precedence method shall also be provided showing the various activities and critical path in such detail as may be required by the Engineer. The programme shall be updated monthly in accordance with the progress made by the Contractor.

Failure to comply with these requirements will entitle the Engineer to use a programme based on his own assumptions for the purpose of evaluating claims for extension of time or additional payments.

If the programme submitted by the Contractor in terms of Clause 5.6.1 of the General Conditions of Contract, 2015, has to be revised because the Contractor is falling behind in his programme, he shall submit a revised programme of how he intends to regain lost time to ensure completion of the Works within the period defined in Clause 5.3.3 of the General Conditions of Contract or within a granted extension of time. A proposal to increase the tempo of work must incorporate positive steps to increase production either by more labour and plant on the site, or by using the available labour and plant in a more efficient manner.

Failure on the part of the Contractor to submit or to work according to the programme or revised programmes shall be sufficient reason for the Engineer to take steps as set out in Clause 9.2 of the General Conditions of Contract.

The approval by the Engineer of a programme shall have no contractual significance other than the Engineer will be satisfied if the work is carried out according to the programme. The said approval shall not limit the right of the Engineer to instruct the Contractor to vary the programme if necessary. The Contractor shall allow for the effect of normal rainfall and special non-working days in his programme.

(CRITICAL PATH MUST BE INDICATED ON PROGRAMME)

PS 2: SITE FACILITIES AVAILABLE

PS 2.1: Campsite

The Contractor shall negotiate with property owners and make his own arrangements to obtain sites for the erection of offices, laboratories, yards, etc. Written approval must be obtained from the owners on whose property the camp is to be situated. The choice of all sites for the establishment of camps is subject to the approval of the Engineer. Campsites within the road reserve will not be permitted.

PS 2.2: Water, electricity and sewage

The Contractor shall make his own arrangements concerning the supply of electrical power, water, telephone and all other services, both for use at the site establishment area as well as for the use in the construction of the Works. No direct payment shall be made for the provision of any service and the cost thereof shall be deemed to be included in the rates tendered for the various items of work for which these services are required.

PS 2.3: Rain gauge

The contractor must set up his own rainfall gauge. This item is included in the Schedule of Quantities under other fixed-charge obligations.

PS 3: SITE FACILITIES REQUIRED**PS 3.1: Facilities for the Engineer**

An office is required for the use of the Employer's Agent representative on site. (See SABS 1200 AB and as amended in the project specifications).

It will be a requirement of this contract that all work pertaining to the provision of the office of the Employer's Agent shall be completed in full prior to the Contractor being permitted to commence work on site.

PS 3.3: Water, electricity and sewage

The Contractor shall, at his own expense, be responsible for obtaining and distributing the water and electricity required for construction and domestic use. The distribution of water and electricity shall be carried out in accordance with the applicable laws and regulations.

No separate payment will be made for obtaining and distributing water and electricity, the cost of which will be deemed to be included in the tendered rates.

PS 3.4: Site instruction book

A triplicate book shall be provided by the Engineer to be used for site instructions. It shall at all times be kept on the site.

PS 4: FEATURES REQUIRING SPECIAL ATTENTION**PS 4.1: Access to properties**

The Contractor shall organize the work in such a manner as to cause the least possible inconvenience to the public and to the property owners adjacent to or affected by the work included in this contract.

PS 4.3: Facilities to other Contractors

In addition to the requirements of clause 5.4.2 of the General Conditions of Contract, the Contractor must make allowance for the presence of other Contractors engaged on other contracts on the site, which may involve, inter alia, the adoption of his programme to fit in with work to be done by the other Contractors, as well as assuring other Contractors access to their sites along prescribed routes which may fall within the site of this contract.

PS 4.4: Contractor's vehicles

All equipment and vehicles used by the Contractor shall always be roadworthy and all drivers and operators shall be in possession of valid drivers' licence.

PS 4.5: Site maintenance

During the progress of the work and upon its completion, the site of the works shall be kept and left in a clean and orderly condition. The Contractor shall at all times store materials and equipment for which he is responsible in an orderly manner and shall keep the site free from debris and obstruction. Workers shall lunch or have tea breaks only in a designated area with approved refuse and toilet facilities.

No open fires shall be permitted on the site.

Vehicles and workers must adhere to property-demarcated access routes and not take or make shortcuts.

PS 4.6: Testing and quality control

The Contractor shall engage the services of an approved independent testing laboratory for the testing of materials and the quality testing of layer works, to ensure that his work conforms to the specifications.

No separate payment will be made for such testing by an approved independent laboratory, the costs of which will be deemed to be included in the Contractor's tendered rates for the various items of work requiring testing in accordance with the specifications.

Certificates shall be submitted to the Engineer for all materials and equipment included in the works, where applicable.

PS 4.7: Subcontractors

The Contractor is responsible for work carried out on his behalf by subcontractors. The Engineer will not liaise directly with such subcontractors, and all problems relating to payments, programming, workmanship, etc, shall be the concern of the Contractor and the subcontractor, and the Engineer will not be involved.

Attendance to sub-contractors is to comply with the Conditions of Contract.

PS 4.8: Existing Services

Before the Contractor commences operations, he must discuss with and have the approval of the Employer, authority or owner concerned regarding the method he proposes to use for relocating or safeguarding any services and existing works he may encounter during construction.

The positions of existing services shown on the Drawings are given in good faith and no guarantee can be given that:

- (a) these services actually are in the approximate positions indicated.
- (b) that these are the only services in the vicinity, and
- (c) that the nature and description of these services are correct.

Attention is drawn to the fact that whilst the position of the existing pipelines in servitudes, as well as other services in the vicinity of servitudes, and all other services are indicated on the drawings have been provided as accurately as possible, this information may not be completely accurate and it will be necessary for the Contractor to communicate with the service providers and to prove, trace and expose services which the Contractor has been made aware of as a result of his interaction with service providers. The Contractor shall coordinate meetings with all relevant service providers before construction commences and take all the necessary steps to ascertain the location of existing services before commencing work on any section of the Works. The rates tendered for the location of services and proving of same as well as the updating of existing records of services, shall be deemed to include for these meetings.

The Contractor shall establish at the meetings with service providers, the lead times required to update records and he shall include for this activity in his Construction Programme.

The Contractor shall take all the necessary steps to ascertain the location of existing services before commencing any section of the Works and shall exercise the greatest care when working in the vicinity of such services. Before commencing his operations in any particular area, the Contractor shall request the latest available drawings from the relevant local Service Authorities, showing the location of their services already installed. The Contractor shall ensure that adequate time is allowed for making contact with the relevant Service Authorities in order for them to respond meaningfully. The Contractor shall compare the latest service locations obtained from the Service Authorities with the drawings provided for construction and where required, such construction drawings shall be updated. The Engineer shall be notified of any changes in service locations found on the construction drawings.

The Contractor shall take all necessary steps to protect any existing works or service whatsoever, against damage which may arise as a result of his operations on Site. The Contractor shall bear the cost of the repair of damage to any known service, the possible existence of which could reasonably have been ascertained by him beforehand.

The Contractor shall procure the required equipment which will enable him to prove services.

The Contractor shall locate existing pipes, optic fibres cables, electric cables and/or any other services by hand excavation without the use of picks, to minimise the risk of damaging existing services. The Contractor shall be held responsible for any damage caused to existing services that can reasonably be traced and located.

Whilst the location of power, telephone and optic fibre cables, as well as pipelines and other services are indicated on the plan and longitudinal section drawings, this may not be comprehensive. It is the Contractor's responsibility to obtain the latest known information on services, at all times.

The cost of this work is to be included in the tendered rates for trench excavation or any other excavation and all tendered rates shall be deemed to include for the exposing of known services and the proving of its location. No additional payment will be considered for the exposing and proving of services as payment for this shall be deemed to be included in existing payment items as specified in the Bill of Quantities for all types of excavation and the Lump Sum provided for this purpose under Preliminary and General. The item for excavation by hand to expose unknown and known services where instructed by the Engineer is for use by the Engineer only on an as-and-when-required basis.

The Contractor shall be required to prove each and every service, indicating X, Y and Z coordinates. Claims for delays etc. arising from non-compliance with this requirement will not be entertained.

In addition to the marking/pinpointing of known services, the Contractor is to screen the line of the proposed excavations by means of appropriate electronic tracing apparatus for other buried services, such as pipes or cables that may not be shown in services records. All services found in this manner shall be classified as known services and shall be proved as set out above.

Should any services which are not on the existing services layout drawings be located, the Contractor shall add the new information to the services layout drawings in order for the employer to update his information. All tendered rates for trench excavations and road works shall include the location of services and the updating of services drawings for the Employer.

The Contractor shall be responsible for immediately notifying the Engineer and the authorities concerned regarding any damage caused to public services and existing works.

Any alteration to public services shall be carried out by the Authority concerned unless the Contractor is instructed otherwise.

The Contractor shall provide the necessary assistance during any operations necessary in connection with the removal, alteration or safe guarding of any public service.

PS 4.9 Safety

The Contractor shall apply suitable proven methods for construction so that his activities will not constitute a hazard to the public or any adjacent property. All excavations shall be suitably safeguarded and barricaded especially during nighttime, weekends or holidays and any other day of inactivity by the Contractor.

PS 5: INFORMATION SUPPLIED BY EMPLOYER

Certain information contained in these contract documents, or provided separately, is being offered in good faith. However, in the circumstances pertaining to the type of information supplied, no guarantee can be given that all the information is necessarily correct or representative. More specifically this applies to all material surveys and reports and similar information, the accuracy of which is necessarily subject to the limitation of testing, sampling, the natural variation of material or formations being investigated and the measure of confidence with which conclusions can be drawn from any investigations carried out. It also applies to the positions of existing services as indicated on the drawings.

The Employer accepts no liability for the correctness or otherwise of the information supplied or for any resulting damages, whether direct or consequential, should it prove during the course of the contract that the information supplied is either incorrect or not representative. Any reliance placed by the tenderer on this information shall be at his own risk.

PS 6: EXTENSION OF TIME ARISING FROM ABNORMAL RAINFALL

If abnormal rainfall or wet conditions occur during the course of the Contract, the Employer may grant an extension of time in accordance with Clause 5.12 of the General Conditions of Contract, calculated in accordance with the formula given below for each calendar month or part thereof:

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

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

The symbols shall have the following meanings:

V = Extension of time in calendar days for the calendar month under consideration.
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 on which a rainfall of Y mm or more were recorded.

Nn = Average number of days, derived from existing rainfall records, on which a rainfall of Y mm or more were 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 rainfall records.

The total extension of time is the algebraic sum of all the monthly totals for the period under consideration, but if the total is negative, the time for completion will not be reduced on account of subnormal rainfall. Extensions of time for part of a month will be calculated by using pro rata values for Nn and Rn.

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

The factor (Rw - Rn)/X is considered 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 average rainfall record for the past 10 years at the nearest rainfall station shall be for the purposes of this Contract are taken as normal rainfall refer to table below. Rn and Nn for this period shall be used and the values of X and Y are 20 and 10 respectively.

The average number of days on which 10 mm of rain or more has been measured by the weather station in close proximity to the site were used to determine the monthly averages (Rn and Na) for this period and shall for the purposes of this Contract be taken as normal.

Month	N _o (Days)
January	12
February	10
March	9
April	5
May	2
June	1
July	1
August	1
September	3
October	7
November	9
December	11
Total	71

It was agreed that the master copy of the payment certificates would be drawn up and processed by the Contractor. All costs to this effect, as well as reproduction costs shall be to the account of the Contractor. It was agreed that the first month's certificate will be evaluated and if in order, the same format will be used throughout the contract.

Measurement for payment purposes will take place between the 18th and 20th of each month. The Contractor needs to submit his monthly payment claim to the Engineer by the 26th of each month.

Should any of these noted dates fall on a non-working day or a special non-working day, the following working day shall be applicable.

PS 8: CONSTRUCTION IN LIMITED AREAS

In certain cases, working space may be limited. The method of construction in these restricted areas will depend largely on the Contractor's plant. However, the Contractor must note that measurement and payment will be according to the specified cross-sections and dimensions irrespective of the method used to achieve these cross-sections and dimensions, and that the rates and prices tendered shall be deemed to include full compensation for any difficulty encountered while working in limited areas and narrow widths, and that no extra payment will be made, nor will any claim for payment due to these difficulties be considered.

PS 9: NON-WORKING DAYS

The Contractor shall not work on Sundays or on the following statutory Public Holidays: New Years Day, Human Rights Day, Good Friday, Family Day, Freedom Day, Workers Day, Youth Day, National Women's Day, Heritage Day, Day of Reconciliation, Christmas Day and Day of Goodwill. Whenever any of the above statutory Public Holidays fall on a Sunday, the following Monday shall be a Public Holiday.

PS 10: SPOIL MATERIAL

Disposal of spoil and surplus material needs to conform with the requirements of the Environmental Specification.

~~Spoil may only be dumped at registered spoil disposal sites, and the Contractor is responsible for determining which registered sites he/she would like to utilise.~~

All costs pertaining to removal and dumping of spoil are to be included in the Contractors rates for the construction of the Works.

The Employer will not accept spoiling on a third-party property, regardless of arrangements concluded upon between the Contractor and such third-party property owner, as spoiling needs to conform with legislative environmental requirements and short-term arrangements normally do not see such requirements being met.

PS 11: DRAWINGS

The drawings issued to Tenderers as part of the tender documents must be regarded as provisional and preliminary for the Tender's benefit to generally assess the scope of work and to develop his pricing strategy. These drawings are marked as "Tender Drawings".

The construction of the Works shall be carried out against drawing revisions marked as "for construction purposes". The Contractor has to ensure that he always refers to the latest construction drawing revision issued by the Engineer.

The Engineer shall, at commencement of the Contract, deliver to the Contractor, copies of the construction drawings and any associated instructions required for the commencement of the Works.

The Engineer may issue, from time to time, during the construction of the Works, revisions to previously issued drawings as may be required for adequate construction and completion of the Works. The Contractor shall ensure he has a drawing register listing the revisions of each drawing issued.

The drawings for the construction of the Works have been prepared by the Employers Agent

The contractor shall be supplied with two sets of A1 hard copies of the construction drawings. The Contractor shall at his own costs produce additional copies required for the construction of the work.

All "as built" information, as listed below, must be submitted to the Engineer's Representative before a certificate of completion will be issued. No separate payment will be made for the "as built" drawings

List of "as built" information required

- (a) Exact coordinates or chainage on the centre line of the pipeline including the information regarding parallel or crossing of electrical, Telkom, Sewer and irrigation services.
- (b) Exact coordinates, cover levels and invert levels of all constructionwork

Only figured dimensions shall be used on the drawings; scaling from the drawings is not permitted unless explicitly instructed by the Engineer.

If any figured dimensions are omitted from the drawings, the Engineer will supply the necessary details.

PS 13: SAMPLES

The Contractor shall at his own cost, supply all samples or tests that may be required. Material or work not conforming to the approved tests shall be rejected. The Engineer reserves himself the right to submit samples to any tests to ensure that the material represented by the sample conforms to the requirements of the specifications. The cost of all tests failed shall be for the Contractor's account.

PS 14: MANUFACTURER'S INSTRUCTIONS

The recommendations of the manufacturers of patented materials must be strictly adhered to regarding the use, mixing, application, fastening, etc. thereof except when otherwise instructed in writing by the Engineer.

PS 15: MATERIALS AND PLANT

The contractor, when using materials that are required to comply with any standard specification, shall, if so ordered, furnish the engineer with certificates of compliance.

Where so specified, materials shall bear the official mark of the appropriate authority. Samples ordered or specified shall be delivered to the engineer's office on the site free of charge.

Where proprietary products have been specified, similar products may be used subject to the prior written approval of the engineer.

Unless otherwise specified, all proprietary materials shall be used and placed in strict accordance with the relevant manufacturer's current published instructions.

Unless anything to the contrary is specified, all manufactured articles or materials supplied by the contractor for the permanent works shall be unused.

Existing structures on the site shall remain the property of the employer and except as and to the extent required elsewhere in the contract, shall not be interfered with by the contractor in any way.

Materials to be included in the works shall not be damaged in any way and, should they be damaged on delivery or by the contractor during handling, transportation, storage, installation or testing they shall be replaced by the contractor at his own expense.

All places where materials are being manufactured or obtained for use in the works, and all the processes in their entirety connected therewith shall be open to inspection by the engineer (or other persons authorised by the engineer) at all reasonable times, and the engineer shall be at liberty to suspend any portion of work which is not being executed in conformity with these specifications.

The contractor shall satisfy himself that any quarry selected for use provides the necessary mined material in accordance with the specification.

PS 16: NOTICES, SIGNS, BARRICADES AND ADVERTISEMENTS

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.

Notices, signs and barricades as well as advertisements may be used only upon approval by the Engineer, and the Contractor shall be responsible for their supply, erection, maintenance and ultimate removal and shall make provision for this in his tendered rates.

The Engineer shall have the right to have any sign, notice or advertisement moved to another position or to have it removed from the site of the works, should it in any way prove to be unsatisfactory, inconvenient or dangerous to the general public.

Such notices, signs and barricades shall be provided and erected at the Contractor's own expense.

PS 17: SETTING OUT OF WORK

Reference and level beacons will be shown to the Contractor by the Engineer at the commencement of the Contract and the Contractor will be responsible for transferring the data to the Site of Works.

The Contractor shall check the condition and accuracy of all reference and level beacons and satisfy himself that they have not been disturbed and are true with regard to position and level. A beacon that has been disturbed shall not be used until its true position and level have been re-established and the new values have been certified by the Engineer. The Contractor shall thereafter be held entirely responsible for the protection of all reference and level beacons.

The Contractor shall employ a capable surveyor to set out the Works to the required lines and levels. The Engineer shall be informed immediately should any discrepancy be discovered between the levels or dimensions obtained by the Contractor and those shown on the drawings.

Where a beacon is likely to be disturbed during construction operations, the Contractor shall establish suitable reference beacons at locations where they will not be disturbed during construction. No beacons shall be covered over, disturbed or destroyed before accurate reference beacons have been established and details of the positions and levels of such beacons have been submitted to the Engineer. The Contractor's reference beacons shall be of at least the same accuracy and sturdiness of construction as the existing beacons.

The Contractor shall submit the method of setting out he proposes to employ to the Engineer. Accurate control of line and level shall be provided by the Contractor at all stages of construction.

Work set out by the Contractor may be checked by the Engineer and any errors found shall be rectified by the Contractor at his own expense. The Contractor shall supply any instrument, equipment, material and labour required by the Engineer for this survey work. Any assistance, including checking given to the Contractor by the Engineer or any setting out done by the Engineer for Contractor shall not be held as relieving the Contractor of his responsibility for the accurate construction of the Works.

The Contractor's survey instruments and survey equipment shall be suitable for the accurate setting out of the Works and shall be subject to the approval of the Engineer. They shall furthermore be checked and correctly adjusted by the authorized agents before the commencement of the contract and subsequently when required by the Engineer and when otherwise necessary.

When required the Contractor shall, at his own expense, provide two labourers to assist the Engineer. The Engineer shall have the sole right to approve of such a labourer.

Survey work shall not be measured and paid for directly and compensation for the work involved in setting out shall be deemed to be covered by the rates tendered and paid for the various items of work included under the contract.

PS 18: WORKMANSHIP AND QUALITY CONTROL

The onus to produce work which conforms in quality and accuracy of detail to the requirements of the Specifications and Drawings rests with the Contractor, and the Contractor shall, at his own expense, institute a quality-control system and provide experienced Engineers, foremen, surveyors, materials technicians, other technicians and technical staff, together with all transport, instruments and equipment, to ensure adequate supervision and positive control of the works at all times.

The costs of all supervision and process control, including testing thus carried out by the Contractor shall be deemed to be included in the rates tendered for the related items of work.

The Contractor's attention is drawn to the provisions of the various standardized specifications regarding the minimum frequency of testing that will be required for process control. The Contractor shall, at his own discretion, increase this frequency where necessary to ensure adequate control.

On completion of every part of the work and submission thereof to the Engineer for examination, the Contractor shall furnish the Engineer with the results of all relevant tests, measurements and levels to indicate compliance with the specifications.

PS 19: TRANSPORT OF MATERIAL

All costs of transporting material shall be included in the applicable tendered rates.

PS 20 LOCAL LABOUR AND LOCAL SUBCONTRACTORS

PS 20.1 Introduction

It is envisaged that the works will be constructed by one Contractor employing local labour to construct the work by applying the principles of the Expanded Public Works Programme (EPWP).

PS 20.2 Workload

The Contractor is required to execute certain components of this contract with labour-based construction methods.

PS 20.3 Local Labour

It is the intention that this Contract should make maximum use of the local labour force that is presently under-employed. To this end, the Contractor is expected to limit non-local employees to key personnel only and to employ and train local labour on this Contract.

The Contractor shall complete Form T2.2.5 and state how many non-local key personnel he intends to employ in the various categories. The numbers stated on the above-mentioned form will be strictly controlled during the Contract period and any increase in numbers is subject to the approval of the Employer.

The Contractor will be required to arrange his own documentation regarding a contract for locally employed labour and must include provisions for the Occupational Health and Safety Act (1993) and the Compensation for Occupational Injuries and Diseases Act. The minimum daily wage to be paid in accordance with the Wage Bill for the geographical area shall be as stated in the Government Gazette in terms of Wage Determination for the Civil Engineering Industry.

PS 20.4 Contractors Obligations

The Contractor is to supply the Engineer with copies of the agreements between himself/herself and his/her subcontractors within twenty-one (21) days of the contract being awarded.

Should the Contractor be unable to or unwilling to:

- i) Subcontract the required Works as detailed in his/her tender document;
- ii) Submit the necessary documentation to prove that he/she is subcontracting the work as specified in paragraph PS 25.1.
- iii) Implement his/her proposed training scheme or any other scheme agreed to by the relevant parties; The Employer reserves the right to:

- a) nullify the said contract and re-issue it to tender;
 - b) nominate available local subcontractors for the required Works;
 - c) deduct payment from the monthly certificates, the value of which will be calculated as follows:
- X = Y – Z
- X = Amount of deduction from the monthly certificate
- Y = Value of the work that should have been undertaken by the subcontractor during the month
- Z = Value of the work actually undertaken by the Subcontractor during the month;
- (d) = Nominate agents to undertake the proposed training at the expense of the Contractor.

PS 21.5 Work Considered to be Labour Based

It is a condition of this contract that the following components of work must be executed using labour-based construction methods.

- 1) Excavation of soft/ intermediate / hard material in trenches not deeper than 1,5 m.
- 2) Location of existing services.

Note:

The abovementioned work must either be done by local labourers employed by the Contractor or by local subcontractors. In the Schedule of Quantities, as an alternative to machine excavation, the cost of a compulsory labour-based construction activity is covered by using the standard Colto payment item (where applicable). Site conditions and material present will dictate the application of labour-based trench excavation or machine excavation. A prerequisite for payment of these labour-based excavation items is that the Contractor keeps daily written records with names of labourers, tasks completed, man-hours spent and payments made.

Items excluded from labour-based items:

- 1) Excavation in Boulders and rock material - Mechanical excavators and blasting allowed.
- 2) ~~Compaction of bedding and backfilling - Rollers and plate compactors allowed.~~
- 3) Transport of materials LDV, dumpers and other transport equipment allowed.
- 4) Mixing of concrete - Mechanical mixers allowed.
- 5) Vibration of concrete - Vibrators compulsory.

PS 22 TRAINING SCHEMES

Certain members of the Contractors staff will be selected from the locally recruited employees, to be subjected to training in tasks related to the execution of the contract. An item with a provisional sum to cover the cost of training is included in the Schedule of Quantities.

The PSC will select the trainees and decide upon the specific training for each of them. The Contractor must guide PSC in this regard and make all the necessary arrangements with the training institution and the trainees, to ensure that the process runs smoothly. This training must be completed before the Contractor will receive any payments. The provisional sum in the Schedule of Quantities is to cover the fees of the training institution and a R30 per day allowance for each trainee during training. All other costs, including transport of trainees, will be borne by the Contractor and should be included in the percentage handling fee of the Contractor.

PS 23 PRESCRIPTIONS IN RESPECT OF EXISTING SERVICES

The scope of works for this contract could be affected by existing services. Where necessary the contractor must familiarize himself with the position and extent of existing services and to carry out the works in such a manner as not to cause damage to existing services.

PS 23.1 Water and Storm Water Services

Any cost of repairs, replacement and/or installation of services and equipment resulting from the contractor's negligence or unauthorized action shall be to the contractor's account.

PS 23.2 Electrical Services

The following procedures will apply:

1. The Contractor will in all instances submit construction drawings to the Electricity Supply Authority (ESA) for comments and for ESA to indicate known electrical services. These drawings will in all instances be available on site during the construction period or in the possession of the supervisor of the construction workers.
2. The cable's precise position on the terrain, with reference to the approximate position as indicated on the drawing, must be confirmed on terrain by means of cable tracing equipment to be supplied or arranged by the Contractor for this purpose. In the case of primary cables (11 kV and 33kV), as indicated on the drawings, it is essential that cable tracing be conducted by ESA. The Contractor will provide sufficient white lime to mark the cable on the ground. The contact persons and telephone numbers for cable tracing personnel shall be obtained from ESA by the Contractor.
3. The Contractor must thereafter, very carefully, open up the cable by hand in at least two places, of which the in-between distances will not exceed 50 meters.
4. At any position, between any two points of the exposed cable, as described in 1.3 above, that cable shall be identified as a known service if it lies within 0,5 meters of a straight line drawn between these two points
5. If the cable lies further than 0,5 meters away from a straight line drawn between the two exposed points, it shall be identified as an unknown service.
6. With reference to the approximate position of cables on the drawing, the Contractor will be responsible for confirming the location of such cables on the terrain by means of the equipment referred to in 1.2 above, and by careful digging by hand. If the exact position of the cables cannot be determined without a doubt, ESA can be approached for help.
7. When existing electrical cables fall within the excavation area of the new service, the Contractor will be responsible for protecting and supporting such cable. During the backfilling of the trench, the Contractor will ensure that the cable is not damaged and repositioned at the original position and depth with the necessary bedding and markertape.
8. Before any exposed cables are backfilled, such cables shall be inspected for possible damage by the terrain agent, in the presence of the Engineer or his/her representative. A complete record of all positions where cables were exposed must be indicated on the drawing.
9. The Contractor is responsible for keeping a complete record of incidents where electrical cables (known or unknown) were damaged that includes the following:
 - Date when damaged and the reason
 - Date when repaired
 - The extent of repairs, for instance cable size, number of joints necessary, the length of cable replaced
 - The exact cable position and depth indicated on the plan
10. The Engineer's representative must check these records. The above-mentioned record will be an annexure to the minutes of the monthly site meetings. All repairs of damaged cables (known or unknown) will be conducted by ESA. The account for repairs done on known services (cables) will be delivered to the Contractor via the Engineer. On the basis of accounts delivered monthly by ESA, the repair cost of a known service (electrical cable) that was damaged, will be recovered from the Contractor's certificate.
11. 33 kV Cables

In no instances will any Contractor be allowed to expose cover 33kV cables or excavate closer to 500mm (by hand) and 2000 mm (mechanical excavation) from the centre of a 33 kV cable. ESA will do the required excavation for the Contractor's account.

12. Overhead Service

Excavation and backfill shall be such that no foundation of overhead structures (power lines, streetlights, high mast lights, stays etc.) will be disturbed. If disturbed, the Contractor will inform ESA in writing and will reinstate the foundation to its original state.

13. Maintenance Period

During the defects liability period, the Contractor's responsibility shall include:

- All electrical cables that were exposed or handled by him
- Excavations in the vicinity of poles and stays, at the time of the construction activities

This makes provision for instances where damaged cables were covered up without informing ESA which may cause many problems later on. The Contractor is responsible for repairing all disturbed poles and stay foundations and reinstating them to their original condition (electrical and structural), as they are disturbed.

PS24 ENGINEERING

PS24.1 CONTRACTORS DESIGN

The Contractor is responsible for the design of all temporary works and all construction methods. It is the Contractor's responsibility to prepare method statements and to prepare designs for the removal, relocation and/or reconstruction of infrastructure and facilities on employer that will be affected by the construction of the Works.

PS24.2 DRAWINGS

The drawings issued to Tenderers as part of the tender documents must be regarded as provisional and preliminary for the Tender's benefit to generally assess the scope of work and to develop his pricing strategy. These drawings are marked as "Tender Drawings".

The construction of the Works shall be carried out against drawing revisions marked as "for construction purposes". The Contractor has to ensure that he always refers to the latest construction drawing revision issued by the Engineer.

The Engineer shall, at the commencement of the Contract, deliver to the Contractor, copies of the construction drawings and any associated instructions required for the commencement of the Works.

The Engineer may issue, from time to time, during the construction of the Works, revisions to previously issued drawings as may be required for adequate construction and completion of the Works. The Contractor shall ensure he has a drawing register listing the revisions of each drawing issued.

The drawings for the construction of the Works have been prepared by the Employers Agent.

PS25 PROCUREMENT

PS25.1 SCOPE OF MANDATORY SUB-CONTRACTING

It's Mandatory that the Contractor select local sub-contractors from the affected wards under this Contract. The sub-contractors known as SMME'S shall be mentored by the main contractor.

PS25.2 ATTENDANCE TO SUB-CONTRACTORS

Attendance to sub-contractors is to comply with the Conditions of Contract.

C3.4 PARTICULAR SPECIFICATIONS

3.4.1 PARTICULAR SPECIFICATION – Internal Building Sewer

General

All pipes and fittings shall be installed strictly in accordance with the requirements of the relevant SABS Standards, Codes of Practice, Institutional Requirements, and the Manufacturers'/Suppliers' requirements, all of which shall be approved by the Engineer prior to construction.

- Pipes shall be "fixed" and not allowed to "swing", and ONLY approved prefabricated double hanger pipe supports/brackets shall be used and installed according to the manufacturer's installation and requirements.
- The approved manufacturer shall specify and guarantee the method of fixing to concrete and other structures including the support spacing for the various pipe sizes and mass (with its contents).
- Minimum support spacing shall be specified by the pipe manufacturer for the various pipe diameters.
- Appropriate provisions shall be made for thermal expansion of the piping installation, air releasing and backflow prevention, where necessary.
- Pipes shall be installed in such a manner as to allow easy access for maintenance and operation.
- All pipes where fixed or supported with metal supports or brackets, shall be insulated with a suitable material, where necessary for dissimilar materials.
- Only pipes from one approved manufacturer shall be used and no other pipes from other manufacturers shall be allowed on site or mixed with any other brand or type. Unless otherwise specified.
- The mark of the approved manufacturer shall be clearly displayed. If any problem occurs on the piping during or after the completion of the installation, then it shall be deemed that the pipes have been provided by the approved manufacturer.
- The approved manufacturer shall provide guarantees for the integrity and suitability and compatibility of the pipes and with the water to be used in the installation.
- The pipes and fittings shall be guaranteed against any structural failure, pitting or any form of corrosion or microbial attack.
- The approved manufacturer shall submit in writing all his requirements and specifications for the plumber/subcontractor to install the pipe work and to enable him to provide the guarantee.
- The manufacturer shall specify the method of jointing and guarantee it.
- The subcontractor shall provide and install a schematic diagram of the water pipe installation on block board with a plastic cover to be mounted on a wall in an appropriate position. All valves and important fittings and equipment shall be numbered and indicated their functions explained. The operation and emergency steps to be taken in case of emergency.
- All pipes installed across expansion joints of the building shall be provided with suitable expansion fittings. Pipes shall not be fixed in these positions but shall be supported to allow movement.

Materials

- All sewer and sanitation pipes, fittings, and associated plant shall be manufactured from materials suitable for conveying domestic wastewater.
- Materials shall be resistant to corrosion, abrasion, and the aggressiveness of wastewater chemistry.

- All components shall require low maintenance, be safe to use and operate, and be compatible with the intended service conditions and project requirements.
- All internal building sewer pipes shall be of HDPE material.

Manufacture Training

- The pipe manufacturer shall provide training to all plumbers employed by the contractor on the installation of the approved sewer piping system, including jointing, bedding, alignment, and leak-testing procedures.
- Only plumbers who have successfully completed such training and hold valid identification issued by the manufacturer shall be permitted to install sewer piping on-site.
- Such identification shall always be carried on-site and shall be produced for inspection upon request.
- No untrained plumber shall be permitted to undertake any pipe installation work.

Inspection prior to Concealment

- The contractor shall ensure that all piping is fully inspected for correct gradient, joint integrity, and support prior to the closure of ceilings, trenches or any other concealment.
- No piping shall be concealed until such inspection has been completed and documented.

Testing

- Testing of sewer piping systems shall be carried out progressively on completed sections and shall not be deferred until final completion of the works.

Pressure Testing

- Sewer piping shall be 'pressure' tested in accordance with the pipe manufacturer's written requirements and SANS 10252-1, whichever imposes the more stringent test criteria.
- Test pressures and duration shall be as specified in the applicable standard, and the system shall demonstrate no loss of pressure beyond allowable tolerances.

Testing Procedure

- The pressure shall be conducted in accordance with the standards
- All testing shall be witnessed and photo recorded by an independent approved QA officer (approved means approved by the Engineer).
- The piping system shall be charged with water constantly and the as-built position shall be marked on a drawing to prevent damage when other installation is done at a later stage.
- Only material from ONE MANUFACTURER shall be used in the various categories below (unless otherwise noted). This affords the supplier the opportunity to provide regular QA checks and issue reports.
- The piping manufacturer shall be accepted by the engineer and owner prior to commencement of construction.

Material used and Joints

- The material of choice for above-ground, cast-in-concrete, and underground drainage shall be HDPE (High Density Polyethylene) piping and fittings joined by fusion butt-welding.

- All HDPE pipes shall be heat tempered after the production process to ensure a neat installation.
- Pipes and fittings shall be of the same HDPE grade to ensure sound and consistent fusion welds.
- All HDPE piping shall be installed in accordance with the manufacturer's written specifications.
- Underground HDPE piping shall be joined by fusion butt-welding performed by plumbers who have been trained and approved by the pipe manufacturer.
- Above-ground HDPE piping shall also be joined by fusion butt-welding, installed by plumbers trained in accordance with the manufacturer's specifications.
- Where drainage systems convey high-temperature effluent (60°C and above), metallic piping shall be used upstream of any connection to HDPE piping. Acceptable metallic materials include Stainless Steel 316, copper, or other materials approved in writing by the engineer.

Quality Standards

- All materials shall carry the necessary guarantees and comply with the local applicable SABS standards.
- Pipes to be laid and backfilled according to SANS 10400 and SANS 1200.

Specification for the Installation of Pipe Supports Anchors

Anchors to be used

- Anchors shall be Hilti HKD M10x25 (refer to Appendix E) or an approved equivalent.
- Any proposed equivalent shall be submitted to the engineer for written approval prior to procurement or installation.

Installation Contractor

- The appointed installation contractor shall have demonstrated experience in the installation of specialist structural fixings and shall provide a team of competent installers.
- Evidence of relevant past projects shall be submitted upon request.

Installer

- All persons carrying out the installation shall be suitably skilled and experienced in the installation of structural elements.
- Qualifications and training records shall be made available for inspection.

Pipe installation configuration

- The contractor shall adhere to the pipe installation configuration as shown on the drawings.
- Any proposed rerouting shall be communicated to the Engineer for approval prior to implementation.
- Refer to Appendix A and the relevant detail drawings.

Supplier Input

- The appointed installation contractor shall contact the anchor supplier (Hilti or approved equivalent) prior to commencement to request training and advice on the installation process.
- A contact person for Hilti will be provided to the successful contractor upon appointment.

Supplier Installation Specifications



- The installation shall be in accordance with supplier specification, as provided in the appendices to this specification, or in accordance with the approved equivalent anchor product.

Number of Anchors per structure

- A minimum of three anchors shall be installed per support structure, with anchors spaced at a maximum of 400 mm centres, unless otherwise approved in writing by the client representative.
- Where additional holes are required to be drilled in supports to achieve the specified anchor configuration, the galvanized coating shall be repaired using properly applied cold galvanizing (zinc-rich) paint.

Washers

- A suitably sized washer shall be installed between the anchor head and the support structure for all anchor points.

Location of Anchor Holes (in overhead concrete slab)

- It is important that the holes are drilled between the prestressing wires and that they are not damaged during installation. Therefore, a cover meter or a rebar meter shall be used to determine the location of steel in the concrete.
 - The positioning and spacing of the holes shall be arranged to avoid clashes with the prestressing wire, or any other reinforcing bars, and to comply with number of anchors per structure above, as above.
 - Any damage to prestressing wires or structural reinforcement shall be immediately reported to the engineer and remedied as directed.
 - (Refer to Appendix D and E for more details)
-

C3.5 OCCUPATIONAL HEALTH & SAFETY SPECIFICATION & BASELINE RISK ASSESSMENT

The Occupational Health and Safety Specification and Baseline Risk Assessment are attached to this document as Annexure C.

DEPARTMENT OF HEALTH FREE STATE

DEPARTMENT NAME: INFRASTRUCTURE MANAGEMENT

CONTRACT NO: DOH (FS) 17/2026/2027
FOR

REPLACEMENT AND REHABILITATION OF INTERNAL BUILDING SEWER SYSTEM AND EXTERNAL MAIN SEWER LINE FOR BONGANI HOSPITAL, FREE STATE DEPARTMENT OF HEALTH

PART C4 SITE INFORMATION

The Bongani Regional Hospital project is situated within the Lejweleputswa District Municipality in the Free State Province, South Africa. The facility serves as a key healthcare institution in the region, providing medical services to surrounding communities.

1. Ground Location Details

- **Region:** Lejweleputswa District Municipality, Free State Province, South Africa.
- **Proximity:** Located in Welkom, a major urban center within the district.
- **Primary Access:** Easily accessible via the R34 and R30 regional roads

Coordinates of Key Facilities

Facility	Longitude	Latitude
Bongani Hospital (Lejweleputswa District)	28° 58' 33.58" S	18° 05' 44.29" E

2. General Conditions

The site is generally built up and looks relatively flat.

3. Underground Services

There are existing underground services on site as this is facility is in operation.

4. Environmental Issues

The management of live sewage.

5. Adjacent Buildings

There are adjacent buildings to the site but these should not affect construction work.

6. Occupied Site

The Hospital Building is currently occupied and is operational.

DEPARTMENT OF HEALTH FREE STATE

DEPARTMENT NAME: INFRASTRUCTURE MANAGEMENT

CONTRACT NO: DOH (FS) 17/2026/2027

FOR

REPLACEMENT AND REHABILITATION OF INTERNAL BUILDING SEWER SYSTEM AND EXTERNAL MAIN SEWER LINE FOR BONGANI HOSPITAL, FREE STATE DEPARTMENT OF HEALTH

PART C5 TENDER DRAWINGS

Drawing Number	Drawing Details
WSP-DR-CV-SE1000	BONGANI HOSPITAL REFURBISHMENTS: SEWER LAYOUT
WSP-DR-CV-SE1001	BONGANI HOSPITAL REFURBISHMENTS: SEWER TABLES
WSP-DR-CV-SE1002	BONGANI HOSPITAL REFURBISHMENTS: SEWER LONG SECTIONS
WSP-DR-CV-SE1003	BONGANI HOSPITAL REFURBISHMENTS: SEWER LONG SECTIONS
WSP-DR-CV-D4000	BONGANI HOSPITAL REFURBISHMENTS: SEWER TYPICAL DETAILS
WSP-DR-CV-D4001	BONGANI HOSPITAL REFURBISHMENTS: SEWER TYPICAL DETAILS
XXXX	Internal Building

-
- Will be handed over at the compulsory site meeting

DEPARTMENT OF HEALTH FREE STATE

DEPARTMENT NAME: INFRASTRUCTURE MANAGEMENT

CONTRACT NO: DOH (FS) 17/2026/2027

FOR

**REPLACEMENT AND REHABILITATION OF INTERNAL BUILDING SEWER SYSTEM AND EXTERNAL
MAIN SEWER LINE FOR BONGANI HOSPITAL, FREE STATE DEPARTMENT OF HEALTH**

ANNEXURE C

OCCUPATIONAL HEALTH & SAFETY SPECIFICATION AND BASELINE RISK ASSESSMENT

1. Introduction

This document describes the requirements of compliance to which the PRINCIPAL CONTRACTOR / CONTRACTOR is to adhere in relation to the scope of works.

This document defines the minimum management requirement that is to be implemented by the PRINCIPAL CONTRACTOR / CONTRACTOR for the management of Health and Safety on the project.

The aim of this document is to present the safety aspects that need to be controlled and managed on the project.

It is a requirement of Department of Health Free State that the Contractor shall provide a safe and healthy working environment and to direct all his activities in such a manner that his employees and any other persons, who may be directly affected by his activities, are not exposed to hazards to their health and safety. To this end the contractor shall take full responsibility to conform to all the provisions of the occupational health and safety Act (Act 85 of 1993), and all relevant regulations as stated in section 44 of Occupational Health and Safety Act 85 of 1993.

For the purpose of this contract the Contractor is required to confirm his status as mandatory to Department of Health Free State and employer representatives in his own right for the execution of the contract.

2. Scope of Application

This specification includes health and safety elements in terms of the Act and to satisfy the requirements of the Construction Regulation (CR), which will be applicable to the Principal Contractor and all sub-contractors for the safe execution of the following construction work:

- The demolition of a structure exceeding a height of 3 meters; or
- The use of explosives to perform construction work; or
- The dismantling of fixed plant at a height greater than 3 meters; or
- The work exceeds 30 days or will involve more than 300 person days of construction work; and
- Includes excavation work deeper than 1 meter; or
- Includes working at a height greater than 3 meters above ground or a landing.

3. Purpose

The purpose of this specification is to ensure that the Principal Contractor and all sub-contractors provides and maintains, as far as reasonably a safe working environment for all employees and the public at large during the construction work.

4. Project Description

The project includes all activities shown on the project drawings and provisional schedule of quantities. Additional work or changes to the contract may result in a change to the scope of work. The principal contractor shall make allowance for this in his Health and Safety Plan.

Principal Contractor is required to submit detailed plan outlining the provision for the cost of health and safety measures.

The principle health and safety risks involved on this specific site will be that of:-

- Working at elevated position
- Along the road side and crossing of the road
- Uncovered drilled holes, excavation and drilling
- String of overhead conductor that may fell to passing traffic and public members
- Back age due handling material and fatigue while working at height
- Hand cuts due carrying steel for cross arms
- Mobile plants in and out from the site
- Environmental problem due chemicals to be used
- Scaffold

- Ladder usage
- Usage of a crane and crane truck
- Usage of explosive power device (Hilti)
- Usage of hand tools

5. Details of Specifications

5.1 Site Standards and Rules

- The contractor shall be responsible for enforcing and respecting all applicable health and safety rules in performance of all work covered by the contract, particularly those relative to the OHS Act and relevant regulations made under them;
- The principal contractor shall be responsible to ensure that the area is fenced during site establishment;
- The principal Contractor shall develop a set of security rules and procedure to be maintained by all for entry of the project site;
- **Any deviation found shall be reported to the Health and Safety Manager of Department of Health Free State, Consultant representative or by government authorised body like Department of Labour inspector etc;**
- Access to site is controlled so that no children or unauthorised person may enter the site. All visitors shall leave their contact details and sign site visit register;
- No employees/visitor shall enter construction site without undergoing induction training and be equipped with proper personal protective equipments;
- All times there shall be three spares personal protective equipments for visitors and be marked visitors;
- Two toilets for male and female separately be provided and clearly marked to identify male and female gender;
- There shall be site office(s) built structure, change room for both male and female and they can be used for shelter for eating facility;
- Proper drinking water at the strategic location shall be provided for employees;
- **Health and Safety Committee meetings that involve Department of Health Free State Health and Safety division representative shall be held on the monthly basis;**
- The Principal Contractor(s) safety officer shall also in collaboration with the sub-contractor personnel develop traffic plan for the site to ensure the safe movement of all construction related mobile plant and employees at large and this plan is to be reviewed at monthly safety meeting to ensure its applicability;
- Contractor shall provide their workers with proper training so that they can perform their work safely. Train all staff to be aware of their own responsibilities for, and to provide information, instruction, and training on, the particular hazards and risks in relation to the scope of work; and
- The contractor shall demarcate the route along which their employees may proceed when coming or going off shift and all security requirements shall be highlighted at the induction given by the Principal Contractor.

6. Safety File

The contractor shall appoint a suitable qualified person to prepare the Health and Safety File and to keep it to date for the duration of the contract. The health and Safety File shall include the following information:

- Notification of construction Work
- Copy of OHS Act (updated) (General Administrative Regulation 4) and relevant regulations as stated by section 44 of OHS Act 85 of 1993.
- Proof of Registration and good standing with a COID Insurer.
- **The contractor need to provide full details of where his/her employee should be referred in case of an injury on duty.**
- Copy Health and Safety plan that include the followings:-

6.1 Applicable requirements

- a. List of equipment and specialised equipment.
- b. List of PPE issued
- c. Recent inspection lists
- d. Training records
- e. Psychological tests
- f. Hazards identification and risk assessment
- g. Safe work procedure include fall protection plan, permits, locks-out procedures, method statements
- h. Test records for equipment and work

- i Incident history
- j Notices issued
- k Health and safety expenses in respect of the project
- l OHS programme agreed with client including the underpinning Risk Assessment and Method Statements (Construction Regulation 5(1))
- m. Design/ drawings (Construction Regulation 5(8))
- n. A list of Contractors (subcontractors) including copies of the agreements between the parties and the type of work being done by each Contractor (Construction Regulation 9)
- o. Appointment/Designation forms required by the ACT and Regulations
- p. Registers as follows:

6.2 Register required

- OHS Representatives Inspection Register (monthly)
- Excavation inspection (daily when excavating)
- Lifting equipment (before use and monthly)
- Designers Inspection of Structure record
- Arc and Gas welding and Flame Cutting Equipment Inspections (before use daily)
- Construction Vehicles and mobile plant Inspections (Daily)
- Fire equipment inspection and maintenance (monthly)
- First aid (monthly)
- Hazardous Chemical Substances (MSDS and listing of chemicals)
- Lifting Tackle and Equipment inspections (before use daily and monthly)
- Inspection of cranes (daily before use and yearly inspection records)
- Inspection of ladders (daily before use and monthly)
- Inspection of vessels and pressure (monthly and 3 yearly)
- Machinery inspections (before use and monthly)
- Drivers/Operators of mobile plant/construction vehicles daily inspections

The Health and Safety File shall be handed over to the client on completion of the contract. It must contain all the documentation handed to the contractor by any contractors together with a record of all drawings, designs, materials used and other similar information concerning the completed project

6.3 Written Safe Work Procedures and Risk Assessments

- Written Safe Work Procedures are to be available in order to mitigate, reduce or control the hazards and risks identified in the Risk Assessment.
- Initially a generic document can be produced, by the first three weeks of operation a task based document must be produced and be updated as per changes in tasks.

6.4 Personal Protective Equipment

The Principal Contractor shall ensure that the following minimum personal protective equipment and wear are issued to his employees:

- No person is allowed to be on site without the required PPE as prescribed by risk assessments. This must be discussed at the safety meeting and adhered to by all contractors on site.
- Principal Contractor must ensure that PPE is being used as a last resort upon trying all reasonable means to remove the hazard.
- All contractors are required to keep an updated register of all PPE issued.
- Strict compliance measures must be administered to ensure employees use PPE.
- Hard hats, safety shoes with steel toe caps and protective clothing shall be provided by the contractor free of charge for all his employees and shall be worn at all times. Employees working on site must not wear metallic helmets. Other protective equipment such as gloves, safety glasses, face shield, dust mask, ear plugs etc shall be issued and used when required as per tasks in the risk assessment and safe work procedure. The contractor shall ensure that his employees understand why the PPE is necessary and that they use them correctly and sign for receiving them.
- Only double lanyard safety harnesses are allowed and must be used when conducting work at elevated positions except on properly built scaffold platform.
- When handling corrosive liquids e.g. acids or caustic suitable eye protection, gloves, and special overalls shall be worn.

- Ear protection shall be worn in any designated noise zone and a signage needs to be placed in the conspicuous place.
- Suitable respirators shall be provided where gas or dust pose a hazard
- Any person refusing to wear protective clothing when instructed to do so by the responsible person shall be removed from the site.

Item	Appointment	Responsible Person
1.	Principal contractor for each phase or project	DoHFS/Consultant
2.	Contractor	Principal Contractor
3.	Contractor	Contractor
4.	Construction supervisor	Contractor
5.	Construction supervisor sub-ordinates	Contractor
6.	Construction Safety Officer	Contractor
7.	Person to carry out risk assessment	Contractor
8.	Trainer/Instructor	Contractor
9.	Fall protection planner	Contractor
10.	Formwork & support work supervisor	Contractor
11.	Formwork & support work examiner	Contractor
12.	Excavation supervisor	Contractor
13.	Professional engineer or technologist	Contractor
18.	Scaffold supervisor	Contractor
19.	Suspended platform supervisor	Contractor
20.	Compliance plan developer	Contractor
21.	Suspended platform expert	Contractor
22.	Outrigger expert	Contractor
23.	Material hoist inspector	Contractor
24.	Batch plant supervisor	Contractor
25.	Batch plant operator	Contractor
26.	Power tool expert	Contractor
27.	Power tool controller	Contractor
28.	Tower crane operator	Contractor
29.	Construction vehicle and mobile plant operator	Contractor
30.	Construction vehicle and mobile plant inspector	Contractor
31.	Temporary electrical installations inspector	Contractor
32.	Temporary electrical installations controller	Contractor
33.	Stacking and storage supervisor	Contractor
34.	Fire equipment inspector	Contractor

- Clearly outline the procedure to be followed when PPE is 1. Lost or stolen; 2. Worn-out or Damaged.

6.5 Appointment of Health and Safety Personnel

- The Contractor and Sub Contractors shall ensure that all relevant appointments specified in the Occupational Health and Safety Act 85 of 1993 and Construction Regulations are made in writing prior to commencement of the Project.

- The Principal contractor shall provide adequate levels of suitable trained, experienced and competent management and supervision to ensure that the works proceed and without risks to health or environment and that all operations and personnel for whom the contractor is responsible are adequately monitored and supervised.

The Principal Contractor shall ensure that the appointments listed below are made where applicable:

Required appointments as per the Construction Regulations (CR):-

6.6 Notification to Department of Labour

It is essential for the PRINCIPAL CONTRACTOR / CONTRACTOR to notify the Provincial Director of the Department of Labour, immediately upon receipt of the Letter of Acceptance of project commencement in accordance with the following requirements:

- The demolition of a structure exceeding a height of 3 meters; or
- The use of explosives to perform construction work; or
- The dismantling of fixed plant at a height greater than 3 meters; or
- The work exceeds 30 days or will involve more than 300 person days of construction work; and
- Includes excavation work deeper than 1 meter; or
- Includes working at a height greater than 3 meters above ground or a landing.

The notification must be done in Annexure A form for notification of construction work attached in this document in index.

A copy of the notification must be kept on site, available for inspection by inspectors, occupational health and safety unit representatives, employer, engineer, employees and persons on site.

6.7 Establishment of Health and Safety Committee

The Principal Contractor shall establish a Health and Safety Committee in terms of Section 19 of the Occupational Health and Safety Act 85 of 1993.

The Principal Contractor shall hold meeting at least once a month with appointed supervisors, Health and Safety Reps and the chairperson of the Health and Safety Committee and copies of the safety meeting to be forwarded to Department of Health Free State and the Department of Health Free State OHS Manager need to be informed and invited to such meetings.

Matters that are to be discussed should include at least the following as minimum:

- Make recommendations to resolve health and safety matters (i.e. internally by representatives or externally by DOL inspector)
- Accident/safety incident and they must be recorded for audit and for reporting to Department of Health Free State OHS Manager.
- Hazardous conditions
- Hazardous material/substances
- Work procedures
- PPE
- Housekeeping
- Work permits
- Non conformances
- Emergency preparedness
- Traffic control
- Access control
- Medicals
- Training

- Forthcoming high hazard activities
- Liquor and drugs
- Occupational health and hygiene issues
- General health and safety issues
- Matters arising from principal contractor safety meetings

6.8 Health and Safety Hazards

The Principal Contractor shall take cognisance of the following hazards that are prevalent in the project:

6.8.1 Hazardous Environment

- Asbestos work
- Dust
- Fumes
- Noise
- Insufficient lighting
- Confined space
- Weather conditions – Heat/Rain/Wind/Cold
- Working at height and on elevated structures for work above 2-meter height (fall protection plans required)
- Working in and around deep excavations (shoring and bracing required)
- Working next to revolving equipment
- Working next to moving plant
- Working with chemical products

6.8.2. Hazardous Equipment

- Cranes
- Earth moving equipment
- Excavators
- Trucks
- Batch plant
- Ladders
- ~~Lifting equipment~~
- Pressure vessels
- Scaffolding
- Air compressors
- Chains and slings
- Fall protection equipments

6.8.3. Hazardous Operations

- Crane lifts (sometimes in windy conditions)
- DB Installations
- Excavations
- Welding
- Erecting and dismantling scaffolding
- Use of step ladder
- Usage of the carry picker by unauthorised personnel

6.8.4. Hazardous Tools

- Angle grinders
- Electric hand tools
- Circular saws
- Welding units – arc and gas
- Explosive power tool

6.8.5. Hazardous Substances

- Chemicals & solvents
- Liquid petroleum
- Diesel

7 Arrangements for controlling significant site risks

The following are some examples requiring arrangements for controlling the most significant site risks.

7.1 Safety Risks

- Services, including temporary electrical installations
- Preventing employees from falling into excavations, from trucks etc
- Control of lifting operations
- The maintenance of plant and equipment
- Poor ground conditions
- Traffic routes and segregation of vehicles and pedestrians
- Storage of hazardous materials
- Dealing with existing unstable structures/land
- Accommodating adjacent land use
- Other significant safety risks as and when identified
- ``Usage of mobile plant

7.2 Health Risks

- Storage and use of hazardous chemical substances
- Dealing with contaminated land or material
- Manual handling
- Reducing noise and vibration
- Provision of adequate lighting
- Extreme heat and cold temperature considerations
- Dealing with HIV/Aids and other illnesses
- Provision of maintaining ablution and eating facilities
- Other significant health risks as and when identified

All safe operating procedures, method statements or rules implemented mitigate the risk whilst performing hazardous tasks are to be effectively communicated to the contractor's staff performing the tasks.

It is to be noted that these are some of the hazards that may be prevalent in this Project.

Others may be identified during the Risk Assessment.

8. Fire precautions on construction sites

The provisions of the environmental Regulations for Workplaces (Government Notice R2281 of 16 October 1987) shall apply

In addition, the necessary precautions shall be taken to prevent the incidence of fires, to provide adequate and sufficient fire protection equipment, sirens, escape routes etc. all in accordance with Regulation 27 of the Construction Regulations.

No open fire will be allowed on site, unless a proper arrangement with site manager and authority has been made.

All fire extinguishers shall be:

- clearly labelled;
- conspicuously numbered;
- entered in a register;
- inspected monthly by a competent person; and
- tested and serviced at recommended intervals by an accredited supplier.

9. Communication & Liaison

• Occupational Health and Safety Liaison between the Employer, the Principal Contractor, the other Contractors, the Designer and other concerned parties shall be through the H&S Committee as per the procedures determined by the H&S Committee. If possible emergency committee meeting will be held to address emergency issues.

• In addition to the above, communication may be directly to the Department of Health Free State OHS Manager or his appointed Agent, verbally or in writing, as and when the need arises.

- Consultation with the workforce on Occupational Health and Safety matters will be through their Supervisors and H&S Representatives ('SHE – Reps')
- The Principal Contractor will be responsible for the distribution of all relevant Occupational Health and Safety information to other Contractors.

10. Fall protection plan

A comprehensive fall protection plan is to be established in order to prevent employees from falling from elevated positions

- The contractor shall stop all persons working with the usage of a ladder during periods of inclement weather or if the possibility of lightning is present;
- Safety harness as fall arrest devices will be worn when working at an elevation, unless working from a safe platform;
- Working on elevated positions shall only be carried out under the supervision of a competent person;
- Provision must be made to prevent objects and material from falling from elevated areas and the protection of persons working below;
- All unprotected openings in floors, edges, slabs, hatchways and stairs will be adequately barricaded and suitable visible means will be used to demarcate such barricading;
- Where necessary life lines will be installed for the purpose of fall protection;
- All unprotected opening need to be protected and barricaded.
- All personnel working at height exceeding 2 metres will be declared medically and psychological fit and records being kept in the safety file.
- All personnel working at the elevated position shall be trained and records thereof be kept inside the safety file.

11. Permit to work

The contractor is to ensure that the proper permit is in hand and duly authorised by appointed person before commencing with the work in question, some of the activities that require a permit to work are:

- Hot works
- Working in confined spaces
- Excavation work more than 1.5 meters deep
- Work being done next to live overhead power line
- Use of hazardous chemical substances (all MSDS shall be available and kept in the safety file), Department of Health Free State OHS Manager shall be informed of all chemicals used on site or to be used.
- Work to be carried near/adjacent to live electrical network. Work permit shall be requested by the project manager representing Department of Health Free State and it shall be issued by Department of Health Free State OHS Manager. Work will be carried out under the supervision of Department of Health Free State representative project manager and contractor shall sign acknowledgement letter to understand the risks associated with that specific work.

Contractor shall liaise with project manager from Department of Health Free State for the issue of work permit.

12. Housekeeping on Site

The Principal Contractor shall ensure a high level of housekeeping on site. Adequate care must be taken by the contractor to ensure that storage and stacking is correctly and safely carried out. On completion the contractor is responsible for clearing the site of all material, scrap, temporary building to the satisfaction of the Department of Health Free State representative.

13. First Aid Facilities

- Conspicuous sign shall be placed where first aid equipment is kept and stored. The name of the responsible person shall be placed against the first aid box.
- Adequate first aid facilities are to be available on site.
- Individuals that are trained and certified competent to administer first aid are to be on site at all times, serving as First Aid Officer.
- The following welfare facilities must be provided for and kept in clean and suitable condition, shower facility, sanitary facility, changing facility, sheltered eating facility and drinking water at strategic locations on site.

14. Health and Safety Induction

- The Principal Contractor shall ensure that all employees undergo a health and safety induction.
- Proof of induction is to be included in the "Safety File".
- The contractor is expected to have a daily safety "tool box" meeting. Subject topics that are applicable to the job at hand e.g. near misses that have happened, accident and up and coming work will be discussed along suggestion and comments.
- These meetings can be used as a training meeting with the central idea of educating employees.

15. ACCIDENT/INCIDENT REPORTING AND INVESTIGATIONS

15.1 REPORTING OF INCIDENTS AND OCCUPATIONAL DISEASES

All accidents and incidents shall be reported the same day to Department of Health Free State OHS Manager.

Section 24 of the Act refers to certain incidents occurring at the workplace, or in connection with the use of machinery whereby a person dies or is injured to be extent where he is likely to die or could have resulted in a major incident. Such incidents should be reported to the Provincial Director on a WCL 1 or WCL 2 form within seven days.

Certain other types of incidents must be reported to the Provincial Director telephonically, facsimile or similar means of communication and these types of incidents are as follows—

(a) Where a person, as a result of the incident;

- i) Dies;
- ii) Becomes unconscious;
- iii) Suffers the loss of a limb or part thereof;
- iv) Is injured to the extent that he is likely to die;
- v) Is injured to the extent that he is likely to be permanently disabled;
- vi) Is injured to the extent that he is likely to be off for a period of 14 days or more;
- vii) Cannot perform his normal duties (those duties for which he was employed).

(b) An incident of major consequence arising out of the use of industrial equipment or machinery or industrial practices at a workplace.

(c) The health and safety of any person is endangered and where –

- i) A dangerous substance was spilled;
- ii) The uncontrolled release of any substance under pressure (pressure greater than 1 atmosphere) took place;
- iii) Machinery or any part thereof fractured or failed, resulting in flying, falling or uncontrolled moving objects; or
- iv) Machines, which ran out of control.

These incidents should also be recorded and investigated in accordance to Regulation 8 of the General Administrative Regulations.

If an injured person is to die as a result of an incident, which has already been reported in terms of the above, the employer or user should report such death to the Provincial Director.

Any registered medical practitioner should, in terms of Section 25 of the Act, report all (to the employer and Chief Inspector) cases of occupational diseases or any other disease, which he believes arose out of a person's employment, which he/she has treated. This must be done within 14 days in the form of a WCL 22 form.

Any other person may in writing, give notice of any disease suspected to be an occupational disease, to the employer and chief inspector.

15.2. RECORDING AND INVESTIGATION OF INCIDENTS I

The employer or user of machinery should keep record and investigate all incidents referred to in terms of Section 24 of the Act together with any other incident, which resulted in the person concerned having had to receive medical treatment other than first aid.

These incidents must be recorded in the form of Annexure 1 of these regulations and be kept for a period of at least 3 years. This record shall be kept on the premises and available for perusal by an inspector.

The contractor, a designated person, a health and safety representative or a member of the health and safety committee must investigate the above-mentioned incidents. This investigation should take place within 7 days from the date of incident and completed as soon as is reasonable practicable or within the contracted period of contract workers. The employer should record the result of the investigation in the Annexure 1. The purpose of the investigation is to establish the cause of the incident together with the safety measures that can be implemented to prevent the re-occurrence of such incidents in the future.

The health and safety committee shall examine this record at their next meeting.

- Accidents/incidents are to be reported to Department of Health Free State Project Manager.
- All reportable incidents in terms of Section 24 of the OHS ACT shall be investigated and recorded by the contractor as required by the Act and also reported to Department of Labour.
- The contractor shall compile an investigation report and ensure that all the preventative actions recommended are in place.

16 RESPONSIBILITIES

16.1. Client

16.1.1 The Client or his appointed Agent on his behalf will appoint each Principal Contractor for this project or phase/section of the project in writing for assuming the role of Principal Contractor as intended by the Construction Regulations and determined by the Bills of Quantities.

16.1.2 The Client or his appointed Agent on his behalf shall discuss and negotiate with the Principal Contractor the contents of the health and safety plan of the both Principal Contractor and Contractor for approval.

16.1.3 The Client or his appointed Agent on his behalf will take reasonable steps to ensure that the health and safety plan of both the Principal Contractor and Contractor is implemented and maintained. The steps taken will include periodic audits at intervals of at least once every month.

16.1.4 The Client or his appointed Agent on his behalf will prevent the Principal Contractor and/or the Contractor from commencing or continuing with construction work should the Principal Contractor and/or the Contractor at any stage in the execution of the works be found to:

- have failed to have complied with any of the administrative measures required by the Construction Regulations in preparation for the construction project or any physical preparations necessary in terms of the Act;
- have failed to implement or maintain their health and safety plan;
- have executed construction work which is not in accordance with their health and safety plan; or
- act in any way which may pose a threat to the health and safety of any person(s) present on the site of the works or in its vicinity, irrespective of him/them being employed or legitimately on the site of the works or in its vicinity.

16.2 Principal Contractor

16.2.1 The Principal Contractor shall accept the appointment under the terms and Conditions of Contract. The Principal Contractor shall sign and agree to those terms and conditions and shall, before commencing work, notify the Department of Labour of the intended construction work in terms of Regulation 3 of the Construction Regulations. Annexure B of this Specification contains a "Notification of Construction Work" form. The Principal Contractor shall submit the notification in writing prior to commencement of work and inform the Client or his Agent accordingly.

16.2.2 The Principal Contractor shall ensure that he is fully conversant with the requirements of this Specification and all relevant health and safety legislation. This Specification is not intended to supersede the Act nor the Construction Regulations or any part of either. Those sections of the Act and the Construction Regulations which apply to the scope of work to be performed by the Principal Contractor in terms of this contract (entirely or in part) will continue to be legally required of the Principal Contractor to comply with. The Principal Contractor will in

no manner or means be absolved from the responsibility to comply with all applicable sections of the Act, the Construction Regulations or any Regulations proclaimed under the Act or which may perceivable be applicable to this contract.

16.2.3 The Principal Contractor shall provide and demonstrate to Department of Health OHS Manager a suitable and sufficiently documented health and safety plan based on this Specification, the Act and the Construction Regulations, which shall be applied from the date of commencement of and for the duration of execution of the works. This plan shall, as appendices, include the health and safety plans of all Sub-contractors for which he has to take responsibility in terms of this contract.

16.2.4 The Principal Contractor shall provide proof of his registration and good standing with the Compensation Fund or with a licensed compensation insurer prior to commencement with the works.

16.2.5 The Potential Principal Contractor shall, in submitting his tender, demonstrate that he has made provision for the cost of compliance with the specified health and safety requirements, the Act and Construction Regulations. (Note: This shall have to be contained in the conditions of tender upon which a tenderer's offer is based.)

16.2.6 The Principal Contractor shall consistently demonstrate his competence and the adequacy of his resources to perform the duties imposed on the Principal Contractor in terms of this Specification, the Act and the Construction Regulations.

16.2.7 The Principal Contractor shall ensure that a copy of his health and safety plan is available on site and is presented upon request to the Client, an Inspector, Employee or Sub-contractor.

16.2.8 The Principal Contractor shall ensure that a health and safety file, which shall include all documentation required in terms of the provisions of this Specification, the Act and the Construction Regulations, is opened and kept on site and made available to the Client or Inspector upon request. Upon completion of the works, the Principal Contractor shall hand over a consolidated health and safety file to the Client.

16.2.9 The Principal Contractor shall, throughout execution of the contract, ensure that all conditions imposed on his Sub-contractors in terms of the Act and the Construction Regulations are complied with as if they were the Principal Contractor.

16.2.10 The Principal Contractor shall from time to time evaluate the relevance of the Health and Safety Plan and revise the same as required, following which revised plan shall be submitted to the Client and/or his/her Agent for approval.

17. Health and Safety Inspections/Audits

- The Principal Contractor shall ensure that the work area, equipment, machinery, safety equipment and wear, etc are inspected on a regular basis.
- Proof of such inspections are to be maintained in the "Safety File"
- All non conformances revealed during the inspections are to be noted and rectified as soon as possible. The client, health and safety unit will also conduct formal audits at least once a month and deviations that are revealed must be rectified within the required time frame.
- All portable tools shall be inspected daily by the user as well as weekly recorded inspections and testing to be done.

18. Emergency Preparedness

The Principal Contractor shall develop and implement an emergency plan for site in collaboration with sub-contractors and the client representative. The plan would have to be revised due to the changing environment on construction site. Specific requirements for first aid and medical as well as fire and rescue will be addressed. The contractor is to ensure that the necessary fire fighting equipment is in place in respective areas and proper signages placed at the conspicuous places. Emergency preparedness plan shall ensure that all emergency contact details are placed in a conspicuous place where they can be easily seen and accessed by employees.

19. Demolition Work

- 19.1 Demolition work must be carried out under the supervision of a competent person who has been appointed in writing.
- 19.2 A detailed structural engineering survey of the structure to be demolished must be carried out and a method statement on the procedure to be followed in demolishing the structure must be developed by a competent person, before any demolition may be commenced.
- 19.3 As demolishing progresses the structural integrity of the structure must be checked at intervals as determined in the method statement by the appointed competent person in order to prevent any premature collapse.
- 19.4 Steps must be taken to ensure that where a structure is being demolished:
- no floor, roof or any other part of the structure is overloaded with debris or material that would make it unsafe;
 - precautions are taken to prevent the collapse of the structure when any frame or support is cut or removed;
 - shoring or propping is applied where necessary;
 - no employee is required or allowed to work under unsupported overhanging material; and
 - the stability of an adjacent building, structure or road is maintained at all times.
- 19.5 The location and nature of any existing services such as water, electricity, gas etcetera must be established before any demolition is commenced with and any service that may be affected by the demolition must be protected and made safe for employees and other persons.
- 19.6 Every stairwell in a building being demolished must be adequately illuminated.
- 19.7 Convenient and safe means of access must be provided.
- 19.8 A catch platform or net must be erected over every entrance to the building or structure being demolished where the likelihood exists of material or debris falling on employees and/or persons entering and leaving and every other area where the likelihood exists of material or debris falling on employees and/or persons must be fenced or barricaded
- 19.9 No material may be dropped on the outside of the building unless the area into which it is dropped is fenced off or barricaded.
- 19.10 Waste and debris may only be disposed of from a height in a chute
- 19.11 Lead related work must be conducted to the requirements of the Lead Regulations promulgated under the OHS ACT 85/93.
- 19.12 Where demolition works will involve the use of explosives, a method statement must be developed by a competent person in accordance with applicable explosives legislation.

20. Asbestos related work

- 20.1. Asbestos related work must be conducted to the requirements of the Asbestos Regulations promulgated under the OHS ACT and in particular Asbestos Regulation 21, i.e.:
- demolition of asbestos may only be carried out by a registered (with the Department of Labour) asbestos contractor;
 - all asbestos materials likely to become airborne must be identified; and
 - a plan of work must be submitted for approval to an Approved Asbestos Inspection Authority (AIA), whom is approved by the Department of Labour, 30 days prior to commencement of demolishing work unless the plan was drawn up by an AIA and a signed (by all parties) copy is submitted to the Department of Labour 14 days before commencement of the demolishing.
- 20.2. During demolition work:
- all asbestos containing material must be disposed of safely;
 - employees must be issued with appropriate PPE and the proper use thereof enforced; and
 - after the demolition has been completed the area/premises must be thoroughly checked to ensure that all asbestos waste has been removed.
- 20.3. No employee is allowed to:
- use compressed air or permit the use of compressed air to remove asbestos dust from any surface or employee or person;
 - smoke, eat, drink or keep food or beverages in an area not specifically designated for this; and
 - apply asbestos by spraying.

21. Non-Compliance to Health and Safety Standards

Department of Health Free State OHS Manager reserve the right to stop the operations of the Principal Contractor should it be found that the operations are being undertaken in non-compliance with the laid down health and safety plan based on this specification.

It should be noted to the contractors that any expenses incurred due to non-compliance shall be for Contractor's account in question.

Safety officers and other personnel have the authority to stop work if there is a life-threatening situation or danger of material loss/damage and direct immediate remedial action under the supervision of contractor's manager is required.

Any "stop work order" shall be followed up and the site manager shall present a written report including remedial actions to avoid the re-occurrence and disciplinary action for contravening safety regulation and if considered necessary to instruct the site manager to remove certain of his personnel from site.

Deputy Director: Occupational Health and Safety
Details of Free State Department of Health OHS Manager:

Mr. H. Maloisane

Infrastructure and Engineering Services Management

Tel: 051 408 1136

E-Mail: MaloisanTH@fshealth.gov.za

3rd floor A – East, Bophelo House, Cnr of Charles and Harvey Road, Bloemfontein

Approval of Health and Safety Specifications for Project:

Name of Project Manager: _____

Expected commencement date: _____

Official Stamp of OHS OFFICIAL from Free State Department of Health Infrastructure:



ANNEXURE 2

Regulation 4 of the Construction Regulations, 2014 NOTIFICATION OF CONSTRUCTION WORK

1. (a) Name and postal address of principal contractor:

.....

- (b) Name and telephone number of principal contractor's contact person:

.....

2. Principal contractor's compensation registration number:

.....

3. (a) Name and postal address of client:

.....

- (b) Name and telephone number of client's contact person or agent:

.....

4. (a) Name and postal address of designer(s) for the project:

.....

- (b) Name and telephone number of designer's contact person:

.....

-
5. Name and telephone number of principal contractor's construction supervisor on site appointed in terms of regulation 6(1):

.....

6. Name/s of principal contractor's sub-ordinate supervisors on site appointed in terms of regulation 6(2):

.....

7. Exact physical address of the construction site or site office:

.....

8. Nature of the construction work:

.....

.....

9. Expected commencement date:

10. Expected completion date:

11. Estimated maximum number of persons on the construction site:

.....

12. Planned number of contractors on the construction site accountable to principal contractor:

.....

13. Name(s) of contractors already chosen:

.....

.....

.....

.....

.....

.....
Principal Contractor

.....
Date

.....
Client

.....
Date

- THIS DOCUMENT IS TO BE FORWARDED TO THE OFFICE OF THE DEPARTMENT OF LABOUR **PRIOR TO COMMENCEMENT** OF WORK ON SITE.

cidb B.U.I.L.D PROGRAMME: STANDARD FOR INDIRECT TARGETING TARGETED ENTERPRISE DECLARATION														
To be completed for each targeted enterprise														
Section A: Employer Information														
cldb Employer Number														
Employer Name	 													
Section B: Contract Data														
cldb Contract Number														
Contract Title	 													
Date of Practical Completion														
Contract Amount at Award(Inclusive of VAT)	R													.00
Section C: Main/Lead Contractor / JV Information														
cldb Contractor Registration Number of main / lead contractor														
Name of contractor	 													
cldb Contractor Registration Number of Joint Venture Partner 2														
Name of contractor /Joint Venture	 													
cldb Contractor Registration Number of Joint Venture Partner 3														
Name of contractor /Joint Venture	 													
cldb Contractor Registration Number of Joint Venture Partner 4														
Name of contractor /Joint Venture	 													
cldb Contractor Registration Number of Joint Venture Partner 5														
Name of contractor /Joint Venture	 													
e-mail	 													
Mobile		-		-		-								
Office Telephone		-		-		-								
Section D: Targeted Enterprise Information														
JV partner	☐	or sub-contractor	☐											
cldb Contractor Registration														
Name of contractor	 													
Contact Person Title		Initials:		Surname										
Designation	 													
e-mail	 													
Mobile		-		-		-								
Office Telephone		-		-		-								
Number of full time employees other than the owner														
Section E(i): Shareholding by cidb Registered Contractors (Targeted Enterprise)														
Name		cidb registration										Equity (%)		

7

Section G: Declaration; Enterprise Development Co-ordinator									
Name of Co-ordinator		Title	Initials		Surname				
Designation									
ID / Passport									
e-mail									
Mobile									
Office Telephone									
I, the undersigned warrant that: • I am duly authorised to submit this notice on behalf of the Main/Lead Contractor / JV; and • The contents of this notice are within my personal knowledge, and are to the best of my belief both true and correct									
Signature									
Date completed									
Section H: Declaration; Targeted Enterprise Representative									
Name of Representative		Title	Initials		Surname				
Designation									
ID / Passport									
e-mail									
Mobile									
Office Telephone									
I / we agree ☐ disagree ☐ with the Enterprise Development Co-ordinator's assessment of compliance with the Enterprise Development support provided I / we appeal the assessment by the Enterprise Development Co-ordinator ☐ Y ☐ N									
I, the undersigned warrant that: • I am duly authorised to submit this notice on behalf of the Targeted Enterprise • The contents of this notice are within my personal knowledge, and are to the best of my belief both true and correct									
Signature									
Date completed									



health

Department of
Health
FREE STATE PROVINCE

HEALTH AND SAFETY SPECIFICATION

Occupational Health and Safety Act, 85 of 1993

Construction Regulation 5(1)(b); Health and Safety Specification for

Bongani Regional Hospital Welkom



Contents

1. Scope Of Specification.....	4
2. Purpose Of Specification	4
3. Description Of the Project.....	4
4. Construction Site.....	5
5. Applications and Interpretation	5
6. Implementation.....	5
7. Duties of Principal Contractor	6
8. Management and Supervision of Construction Work.....	6
9. Competency for Contractor's Responsible Persons.....	7
10. Compensation of Occupational Injuries and Diseases Act 130 of 1993	8
11. Occupational Health and Safety Policy	8
12. Health and Safety Organogram.....	8
13. Hazards Identification and Risk Assessment	8
13.1 Risk Assessment (Task Specific).....	8
13.2 Safe Work Procedure.....	9
13.3 Health and Safety Representative(s)	9
13.4 Health and Safety Committee.....	9
13.5 Medical Certificate of Fitness	10
14. Training, Awareness and Competence	10
14.1 Induction	10
14.2 Awareness.....	11
14.3 Competency	11
14.4 General Record Keeping.....	11
14.5 General Inspection, Monitoring and Reporting	11
14.6 Audits.....	11
14.7 Emergency Procedures	12
15. First Aid Box and First Aid Equipment.....	12
16. Accident/Incident Management	12
16.1 Recording of incidents	12
16.2 Reporting of incidents	13
16.3 Record keeping.....	13
16.4 Occupational Health and Safety Signage.....	14



18	Management of Contractors by Principal Contractor	14
19	Fall protection / Working at heights	15
20	Structures	15
21	Temporary works.....	16
22	Excavation and Trenches	16
23	Scaffolding.....	17
24	Cranes Lifting machines Lifting devices.....	17
25	Construction Vehicle and Mobile Plant.....	18
26	Portable Electrical Tools	18
27	Hazardous Chemical Substances (HCS)	19
28	Housekeeping and General Safeguarding	19
29	Stacking of Materials	19
30	Fire precautions on Construction Sites.....	20
31.	Construction Employee' Facilities.....	20
32.	Waste Management.....	20
33.	Personal Protective Equipment (PPE).....	20
34.	Fire Extinguishers and Fire Fighting Equipment	21
35.	Ladders and Ladders work	21
36.	General Machinery.....	21
37.	Pressure Equipment	22
38.	Electrical Installation.....	22
39.	Public Health and Safety.....	22
40.	Lighting	22
41.	Environmental Conditions	23
42.	Occupational Health.....	23
43.	Barricading	24
44.	Construction Health and Safety Budget	24
45.	Non Compliance to Health and Safety on site	24



1. Scope Of Specification

This Health and Safety Specification covers construction / excavation and associated activities that have the potential to affect, positively or negatively, the health and safety of all persons involved with the above-mentioned project.

As an employer in their own right, it remains the responsibility of the Principal Contractor to do what is reasonable and practicable to ensure that they themselves, and other persons who may be affected by their operations, health and safety, are not endangered.

2. Purpose Of Specification

The purpose of the Health and Safety Specifications is to provide a guideline for the Principal Contractor in complying with the requirements of the Occupational Health and Safety Act 85 of 1993 (OHS Act) and the relevant regulations, with particular reference to the Construction Regulations 2014.

The Health and Safety Specifications do not replace the OHS Act and relevant regulations, but is a supplementary document to the requirements of relevant legislation and the conditions of the contract agreement between the Department of Health Free State and the Principal Contractor.

It does not imply that sections of legislation not referred to in full in this document are of less importance and/or not relevant. The Contractor remains responsible to comply with the Act, regulations and their health and safety plan.

Note - It must be noted that the Client may stop the contractor from executing construction work, which is not in accordance with this health and safety specifications or rules for the project or which poses a threat to the health and safety on site.

3. Description Of the Project

REPLACEMENT AND REHABILITATION OF INTERNAL BUILDING SEWER
SYSTEM AND EXTERNAL MAIN SEWER LINE FOR BONGANI HOSPITAL



4. Construction Site

- The Contractor must ensure that the construction site is suitably and sufficiently barricaded/fenced off

5. Applications and Interpretation

This Health and Safety Specification is a compliance document drawn up in terms of the South African legislation and is therefore binding. It must be read in conjunction with the relevant legislation and any other applicable health and safety standards as provided for in Section 44 of the Occupational Health and Safety Act, 85 of 1993.

The Health and Safety Specification contains clauses that are generally applicable to building/construction and to impose pro-active controls associated with activities that impact on human health and safety as it relates to construction activities and the use of plant and machinery.

Each contractor appointed on the project is required to outline how they will achieve compliance to the OHS Act and Regulations and the Client's Health and Safety Specification in relation to their individual scope of work, as well as control measures that will be implemented and maintained to reduce and manage the risk associated with execution of the project.

The Principal Contractor must ensure and demonstrate to Client that he/she, and all contractors to be appointed on this construction project, has adequately allowed for the cost of health and safety measures which may be required during the construction work.

6. Implementation

This Health and Safety Specification forms an integral part of the Contract, and Principal Contractor shall make it an integral part of their Contracts with Sub Contractors and Suppliers. Principal Contractor employed by the Client to ensure that the provisions of the Health and Safety Specification are applied both on the site and in respect of all off site activities relating to the project, in particular the transport activities and project dedicated off site fabrication works.

The Principal Contractor shall enforce the provision of the Health and Safety Specification **amongst** all sub-contractors and supplies for the project.



7. Duties of Principal Contractor

The Principal Contractor shall;

- prepare a site-specific health and safety plan;
 - open and keep on site a health and safety file, which must include all documentation required in terms of the Act and Regulations.
 - on appointing any other contractor, ensure that the contractor comply with the provision of the Act and with the relevant sections of the health and safety specifications pertaining to the construction work which has to be performed;
 - ensure that monthly site health and safety audits and document verification are conducted.
 - hand over a consolidated health and safety file to the client upon completion of the construction work,
 - ensure that all his or her employees have a valid medical certificate of fitness specify to the construction work to be performed and issued by an occupational health practitioner in the form of Annexure 3.
-
- ensure that all visitors to a construction site undergo health and safety induction pertaining to the hazards prevalent on the site and must ensure that such visitors have the necessary personal protective equipment.

8. Management and Supervision of Construction Work

The Principal Contractor must, in writing, appoint:

- 8.1. Construction Manager— CR 8(1)- The Principal Contractor shall appoint a full-time competent person as the construction manager to manage all the construction work on site, including the duty of ensuring occupational health and safety compliance.
- 8.2. Assistant construction manager — CR 8(2) - The Principal Contractor shall upon considering the size of the project, in writing appoint one or more assistant construction managers for different sections thereof.
- 8.3. Construction health and safety officer — CR 8(5) - A full-time safety officer registered with SACPCMP shall be appointed for implementation of the health and safety plan on site.
- 8.4. Construction Supervisors — CR 8(7) - The construction manager shall in writing appoint construction supervisors responsible for construction activities and ensuring occupational health and safety compliance on the construction site.



-
- 8.5. Risk Assessor — CR 9(1) - A competent risk assessor shall be appointed in writing to perform risk assessments before any work is commenced.
- 8.6. Incident Investigator — GAR 9(2) - A competent incident investigator shall be appointed in writing to appoint all incidents which must be recorded in terms of the General Administrative Regulations 9
- 8.7. First - GSR 3(4) - Where there are more than 10 employees employed the employer shall appoint a first aider in possession of a valid first aid certificate for every group up to 50 employees.

8.8. SHE Rep- OHSA 17(1) - Appoint a SHE representatives.

8.9. Other appointments

Other appointments that will be applicable to the project but not limited to:

- Mobile Plant/Machinery Supervisor - (Construction Regulation 23)
- Electrical Installation and Appliances Inspector (Construction Regulation 24)
- ~~Emergency/Security/Fire Coordinator (Construction Regulation 29)~~
- Excavation Supervisor (Construction Regulation 13)
- Fall Protection Plan Developer (Construction Regulation 10)
- Temporary Works Supervisor (Construction Regulation 12)
- Ladder Inspector (General Safety Regulation 13A)
- OH&S Committee (OHS Act Section 19)
- Scaffolding Supervisor (Construction Regulation 16)
- Stacking & Storage Supervisor (Construction Regulation 28)

The competency of each of these appointed competent persons must be provided and should include knowledge, training, experience & qualifications specific to the appointment.

No work involving any of the listed appointments may be performed without the knowledge and approval of an appointed competent person.

9. Competency for Contractor's Responsible Persons

The Principal Contractor's responsible persons shall be competent in health and safety and be familiar with the Occupational Health and Safety Act 1993, and applicable regulations. Valid proof of pertinent health and safety courses attended by such persons will be required to be presented.



10. Compensation of Occupational Injuries and Diseases Act 130 of 1993

The Principal Contractor shall submit to the Client a valid letter of good standing with the Compensation Insurer prior to appointment.

11. Occupational Health and Safety Policy

The Principal Contractor shall submit their Health and Safety Policy, signed by the Chief Executive Officer. The Policy must outline objectives and how they will be achieved and implemented within the operations.

12. Health and Safety Organogram

The Principal Contractor shall submit an organogram, outlining the Health and Safety Site Team that will be assigned to the project.

In cases where appointments have not been made, the organogram shall reflect the position. The organogram shall be updated, when there is a change in the site team.

13. Hazards Identification and Risk Assessment

13.1 Risk Assessment (Task Specific)

The Principal Contractor shall conduct Hazard Identification and Risk Assessments anticipated and/or encountering during the project. The Risk Assessment must include the Safe Working Procedure, and Method Statement.

The Principal Contractor shall ensure that during any construction work or work associated with the aforesaid construction work; ensure that a Task Specific Risk Assessment is undertaken by a competent appointed person. These risk assessments shall be communicated to all employees involved in the task before commencement of the task.

The issue-based risk assessments (task specific risk assessments) should clearly stipulate the:

- Hazards identified
- Analysed Risks
- Evaluation of risks —Risk assessment matrix should clearly indicate how risks are assessed.
- Controls:



Once the risks have been evaluated and the significance of the risks has been identified it is important that controls are implemented based on the hierarchy of controls:

- Eliminate
- Substitute
- Engineering controls
- Administrative controls
- PPE

Safe operating procedures (SOP's) / safe working procedures (SWP'S) shall be generated based on the task specific risk assessments and communicated to all employees.

The Principal Contractor must ensure that copies of risk assessment for this site are available on site for inspection purpose.

13.2 Safe Work Procedure

Safe Work Procedures are to form part of the Risk Assessment and must be compiled for all the Identified activities.

The safe work procedures must address the following elements:

-
- The work method to be followed to conduct work safely.
 - Mitigation of identified risks.
 - Reducing and controlling risks and hazards that have been identified.
 - Responsibilities of competent persons.
 - Required personal protective equipment.
 - Correct equipment/tools/machinery to be used.

13.3 Health and Safety Representative(s)

The Principal Contractor shall ensure that Health and Safety Representative is elected and trained to carry out his/her functions, as per legislation.

The Health and Safety Representation shall carry out regular inspections, keep records and report to the supervisor to take appropriate action. He/she shall attend Health and Safety Committee Meetings. The Health and Safety Representative shall be part of the team that will investigate incidents, accidents and non-conformances.

13.4 Health and Safety Committee

Where two or more Health and Safety Representatives have been appointed on site, the Contractor shall ensure that monthly health and safety meetings are held with such representatives and minutes are kept. Meetings must be organized and chaired by the Contractor's Health and Safety Committee Chairperson.



13.5 Medical Certificate of Fitness

The Principal Contractor must ensure that their employees on site have a valid medical certificate of fitness, issued by an occupational health practitioner.

Medical examinations must be done on all employees based on the exposure identified on the annexure 3 as specified in the Construction Regulations. The annexure 3 must be completed based on the scope of works and submitted to the occupational medicine practitioner / occupational health nursing practitioner.

The annexure 3 must be attached to all medical certificates of fitness- No employees will be allowed to perform any work on site if found unfit. Due to the fact that the medical is only valid for one year the principal contractor and contractors must keep the duration of the project in consideration when developing the OHS budget. Medicals will be conducted:

- Before the start of a project
- During a project (Annually)
- Exit medical — once the project is completed / contract is terminated / employee resigned.

The following employees must be declared medically fit without any conditions:

- Employees working at heights
- Driven machinery operator
- Crane operators
- Workers working in confined spaces
- Scaffold erectors and inspectors

If an employee was declared fit with prescribe restrictions and recommendations it is the responsibility of the employer to constantly monitor the employee. Based on section 14 of the OHS Act an employee that was declared fit with restrictions and recommendations is responsible to look after his own health and safety. This refers to taking medication when needed, using correct PPE prescribed and avoiding restricted areas that might have an influence on the health of an employee.

14. Training, Awareness and Competence

14.1 Induction

All persons on site to attend general induction training presented by the contractor. Attendance registers to be signed by all attendees and kept on safety file.



14.2 Awareness

The Principal Contactor must also conduct periodic toolbox talks on site, preferably weekly or before any hazardous work takes place. The talks shall cover the relevant activity and an attendance register must be signed by all attendees and kept on safety

14.3 Competency

After the Contractor has identified the training to be conducted as part of the competency requirement and based on Risk Assessment, he shall send the relevant person on appropriate course and keep certificate of training for reference. Familiarity with the Health and Safety Act and Regulations is an integral part of the definition of competence.

14.4 General Record Keeping

The Principal Contractor shall keep and maintain Health and Safety records to demonstrate compliance with the Health and Safety Specifications and the Occupational Health and Safety Act.

The Contractor shall ensure that all records of incidents, inspections, audits, registers, training etc. are kept on site.

14.5 General Inspection, Monitoring and Reporting

The Principal Contractor shall carry out monthly inspections and auditing of the construction site.

Monthly reports applicable to the project must be drafted and send to the Client by the 20th of each month. The monthly report must include:

- Total Employees on Site
- Number of Injuries
- Incidents reported
- Corrective actions taken for deviations identified during the Client's audit.

14.6 Audits

Monthly audits may be conducted by Client to verify compliance to legal and other requirements. Based on the audit and deviations identified, action plans shall be drawn up by Principal Contractor's responsible person and due date.

The principal contractor shall conduct monthly self-audits to identify gaps, shortcomings and to ensure continual improvement.

The principal contractor shall conduct monthly audit on all contractors. Action plans will be drawn up, discussed with subcontractors.



Audit reports compiled during external audits, self-audits and audits on contractors shall be minted and discussed during the OHS committee meeting.

14.7 Emergency Procedures

The Contractor shall provide Emergency Plan / Procedure.

The procedure shall detail the response plan including the following:

- List of key personnel;
- Details of emergency services;
- Actions or steps to be taken in the event of the emergency; and
- Information on hazardous materials/situation.

Emergency procedure(s) shall include, but shall not be limited to, fire, spills, accidents to employees, use of hazardous substance, dangers as a result of riot/service deliver protests/intimidation, etc.

A contact list of all service providers (Fire Department, Ambulance, Police, Medical, Hospital, etc.) must be maintained and available to site.

15. First Aid Box and First Aid Equipment

The Principal Contractor shall provide first aid box and appoint, in writing, First Aider for this project with a valid certificate. First Aid box must be adequately stocked at all time, accessible and be controlled by a qualified First Aider.

16. Accident/Incident Management

16.1 Recording of incidents

All incidents that occur, whether a near miss, first aid case, medical case or section 24 incident, shall be recorded and investigated by a competent person as prescribed by the General Administrative Regulations 9.

Section 24 incidents must be investigated within 7 days by a competent person and be finalised as soon as possible. The findings of the investigation must be entered in to the annexure 1. All records of the investigation must be examined during the OHS committee meeting and actions implemented and followed up to prevent reoccurrences.



16.2 Reporting of incidents

Incidents shall be reported as follows:

Type of incident	Reporting
Near Miss	- Principal contractor to follow internal reporting procedure as indicated in the OHS plan.
Near Miss that could have resulted in a section 24 incident	- Principal contractor to follow internal reporting procedure as indicated in the OHS plan - Report to the CHS Agent.
First Aid case	- Principal contractor to follow internal reporting procedure as indicated in the OHS plan.
Medical treatment case	- Principal contractor to follow internal reporting procedure as indicated in the OHS plan. - FEM I Compensation commissioner.
Lost Time Injury	- Principal contractor to follow internal reporting procedure as indicated in the OHS plan. - Report to the Client OHS Manager. - FEM I Compensation commissioner.
Section 24 incidents	Principal contractor to follow internal reporting procedure as indicated in the OHS plan. - Report to the client OHS Manager. - FEM / Compensation commissioner. - DOL — within 7 days for section 24 incidents / within 14 days for occupational diseases. Notification must be done via email on similar means of communication.

16.3 Record keeping

The following records but not limited to should be kept up to date and available for inspections and audits;

- Up to date incident register
- Up to date dressing record
- WCL 1 & 2 forms
- Incident investigation forms with supporting documents
- Annexure 1: Should be kept for at least 3 years.



16.4 Occupational Health and Safety Signage

The Principal Contractor shall ascertain and provide adequate on site health and safety signage.

This signage shall include, but not be limited to, Hard Hat Area; Safety Shoes to be worn on site; Dust Masks to be worn in areas where there might be exposure to excessive dust; Ear

Plugs/Muffs to be worn where there might be noise exposure over 85 db.; Gloves; Safety Goggles; Safety Harness, Excavation, etc.

The Contractor shall be responsible to maintain the quality and replacement of signage.

18 Management of Contractors by Principal Contractor

The Principal Contractor shall ensure that all contractors under his control are complying with this Health and Safety Specification, as well as Health and Safety Legislation.

When appointing contractors, the principal contractor shall:

- Provide any contractor tendering with the OHS specifications & baseline risk assessment
- Ensure that the contractors tendering have made sufficient provision for health and safety costs.
- Ensure that the contractor appointed have the necessary competencies to perform construction work.
- Ensure prior appointing any contractor to ensure that the contractor is registered and in good standing.
- Appoint each contractor in writing.
- Ensure that the mandatory agreement is signed between the principal contractor and the contractor.
- Evaluate the OHS file and OHS plan.
- Discuss the contents of the OHS plan with the contractor and finally approve or not approve the OHS plan for implementation.
- Ensure that periodic audits and document verification is conducted at least every 30 days
- Stop any contractor from executing construction work which is not in line with the clients OHS specifications and the Principals Contractors OHS plan.



-
- Where changes brought about to the design and construction, make available sufficient health and safety information and appropriate resources for contractors to work safely.

19 Fall protection / Working at heights

Any work undertaken at height above ground level higher than two meters or any floor level will be classified as "Working in Elevated Positions" and fall protection plan and risk assessment shall be carried out.

Risk assessment shall take into account the possibility of workers falling scaffolding and roof and other openings in the roof.

- A competent fall protection plan developer to be appointed in writing.
- A fall protection plans to be developed implemented and revised as the project progresses.
- ~~Issue based risk assessment shall be devolved for all height work.~~
- The issue-based risk assessment and the fall protection plan shall be communicated with all employees.
- All employees shall be declared medically fit before working on heights.
- The principal contractor shall clearly specify how testing, inspecting and maintenance of fall protection equipment will take place.
- Fall arrest equipment shall be certified and placed on register. Daily inspections to be done before use.
- Drop zones to be clearly identified where overhead work is taking place. Yellow danger tape should be used as barricading. Signs to be posted to ensure no employees walk or work under overhead work.
- Objects are not to be thrown from elevated positions.
- Ladders to be inspected daily before use and monthly by a appointed person.
- No working at heights shall take place during inclement weather.

20 Structures

The Principal Contractor must ensure that:



-
- All steps are taken to prevent the uncontrolled collapse of any new or existing structure Or any part thereof, which may become unstable or is in a temporary state of weakness Or instability due to the carrying out of construction work.
 - No structure or part of a structure is loaded in a manner which would render it unsafe;
 - all drawings pertaining to the design of the relevant structure are kept on site and are available on request to an inspector, other contractors, the client and the client's agent or employee.

21 Temporary works

The Principal Contractor shall comply with the requirements as set out in Construction Regulations 12.

A proper method statement and issue based (task specific) risk assessment shall be developed for all temporary works and communicated with employees.

Principal Contractor must ensure that all temporary works operations are carried out under the supervision of a competent person who has been appointed in writing for that purpose.

22 Excavation and Trenches

The Principal Contractor must:

- ensure that all excavation work is carried out under the supervision of a competent person who has been appointed in writing for that purpose
- evaluate the stability of the ground before excavation work begins.
- ascertain the location and nature of electricity, water, Telkom lines or other similar services which may in any way be affected by the work to be performed, and must before the commencement of excavation work that may affect any such service, take the steps that are necessary to render the circumstances safe for all persons involved.
- Ensure excavations are adequately braced or shored. Bracing and shoring may not be necessary only where the excavation is sloped at least the minimum angle or permission have been given by the appointed scaffold supervisor after the evaluation of the excavations.
- Ensure shoring and bracing shall be designed to and constructed in such a manner that it provides enough support.



-
- Ensure no loads, material, plant or equipment must be placed on the edges of excavations where it can cause a collapse. All mobile plant that past excavations should not come closer than 5 meters from the excavation. . Provide safe access to all excavations
 - Ensure all inspections to be inspected daily before use and after every blasting operation, unexpected fall of ground, after damages to support and after rain. . Ensure excavations that will be accessible to the public shall adequately be protected by a barrier or a fence of at least 1 meter high. Provide clear illuminates or any other clear visible boundary indicators.
 - Ensure warning signs must be displayed next to warning signs . Ensure regular dust suppression to be done and dust to be monitored.
 - Employees to wear dust masks.

23 Scaffolding

The Principal Contractor must appoint a competent person in writing who must ensure that all scaffolding work operations are carried out under his or her supervision and that all scaffold erectors, team leaders and inspectors are competent to carry out their work.

A contractor using access scaffolding must ensure that such scaffolding, when in use, complies with the safety standards.

24 Cranes | Lifting machines | Lifting devices

The Principal Contractor shall not use or permit any user to use a lifting machine or a hand powered lifting device if:

- It has not been designed in accordance with necessary technical standards.
- It is not conspicuously and clearly marked with the safe work load: A table showing the safe workloads with regards to all variable conditions should be displayed in the operator's cabin.
- If the manufacturer identification plates, the design standard, the serial number, country of origin is not visible.
- At all times have at least three full turns of rope on the drum of each winch when been run to its lowest level.
- All lifting machines shall be load tested every 12 months by a registered lifting machinery inspector (LMI) or lifting machinery entity (LME).
- The load test must be available on site.
- All hooks, slings, chains, other attaching devices, sheaves, breaks and safety devices



should be thoroughly examined by a competent person not exceeding every 6 months.

- Operators operating lifting equipment / cranes shall be appointed in writing . Lifting tackles shall be inspected every 3 months by a competent person.
- No user shall be permitted to use any lifting equipment if it shows any signs of damage, defect, wear or distortion that will make it unsafe for use.

25 Construction Vehicle and Mobile Plant

The Principal Contractor must ensure that:

- Operators are appointed in writing.
- Operators shall be trained and authorised to operate mobile plant / vehicles.
- Operators shall be declared medically fit without restrictions to operate any mobile
- Mobile plant supervisor shall be appointed to supervise all mobile plant.
- Induction shall be done with all operators / drivers
- ~~All plant shall be inspected, authorised and approved before working on sites.~~
- All test certificates shall be valid. Maintenance records as well as pre — use inspection checklists shall be available on site for inspections.
- All plant / vehicles shall be fitted with an orange light and a reverse alarm.
- All plant shall be inspected daily before use.
- All operators / drivers shall adhere to the speed limit and road signs.
- Operators /drivers shall not talk on cell phones while operating plant.
- Flagmen / women to appointed in writing to regulate plant and construction vehicles.

26 Portable Electrical Tools

The Principal Contractor must ensure that:

- Employees to be appointed in writing to use portable electrical tools.
- Employees to be trained in the use of portable electrical tools.
- Portable electrical tools to be placed on a register and inspected before use.
- No employees shall work with portable electrical tools in wet conditions.
- All electrical tools shall be fitted with a "dead man" switch.
- Electrical tools not in use shall be unplugged.
- All cables and extensions shall be routed safely in such a way that it does not pose as a



-
- tripping hazard. Cables and extensions are not allowed to be coiled when in use.
 - Risk assessment and safe working procedures shall be developed for the use of all portable electrical equipment.

27 Hazardous Chemical Substances (HCS)

The Principal Contractor must ensure that:

- Competent person to be appointed in writing to coordinate and control all HCS.
- All HCS to be stored in a proper HCS store. Store must be well ventilated.
- Signage to be displayed and fire extinguishers to be available at the storage area.
- Material safety data sheet shall be available for chemicals.
- Employees using chemicals shall be trained in the material safety data sheets.
- Employees to wear PPE as required by the MSDS.

28 Housekeeping and General Safeguarding

The contractor must ensure that suitable housekeeping is continuously implemented on each construction site, including:

- the proper storage of materials and equipment;
- the removal of scrap, waste and debris at appropriate intervals;
- ensuring that materials which are no longer required for use, do not accumulate on and
are removed from the site at appropriate intervals;

29 Stacking of Materials

The contractor must ensure that:

- A competent person is appointed in writing with the duty of supervising all stacking and
storage on a construction site;
- Adequate storage areas are provided;
- There are demarcated storage areas; and
- Storage areas are kept neat and under control.



30 Fire precautions on Construction Sites

The contractor must ensure that:

- All appropriate measures are taken to avoid the risk of fire;
- sufficient and suitable storage is provided for flammable liquids, solids and gases;
- smoking is prohibited and notices in this regard are prominently displayed in all places containing readily combustible or flammable materials;
- combustible materials do not accumulate on the construction site;
- welding, flame cutting and other hot work are done only after appropriate precautions have been taken to reduce the risk of fire;
- suitable and sufficient fire-extinguishing equipment is placed at strategic locations.

31. Construction Employee' Facilities

A Principal Contractor must provide:

- At least one sanitary facility for each sex and for every 30 workers;
- Changing facilities for each sex;
- Sheltered eating area.

32. Waste Management

The contractor must ensure that:

- Waste management plan to be established
- Employees are trained in the waste management plan.
- Waste minimization separation and recycling program is in place.
- Provide sufficient bins. Lids to be provided and used where necessary.
- Schedule for the removal of waste is established and followed.
- Drip trays are used for generators / mobile plant.

33. Personal Protective Equipment (PPE)



The Principal Contractor must conduct a PPE survey and based on the risks identified and MSDS requirements provide employees with the correct PPE. The following PPE should be used but not limited to:

- Overall with reflectors
- Safety shoes
- Hard hat
- Ear protection
- Safety goggles
- Dust Masks
- Gloves

A PPE issue register should be completed for all employees. Employees must sign PPE issue registers as proof that PPE was received.

Employees to receive training on the correct use of PPE. Attendance registers to be completed as proof that training was received.

~~PPE shall be checked monthly and recorded in the appropriate register.~~

Procedure to be compiled and implemented to manage redundant PPE.

34. Fire Extinguishers and Fire Fighting Equipment

The Contractor shall provide adequate, regularly serviced fire extinguishers located at strategic points on site. The Contractor shall keep spare serviced portable fire extinguishers. Safety signage shall be posted up in all areas where fire extinguishers are located.

35. Ladders and Ladders work

The Contractor shall ensure that all ladders are inspected regularly keeping record of inspections. It should be noted that Aluminium ladders are preferred to wooden ladders.

36. General Machinery



The Contractor shall comply with the Driven Machinery Regulations, which include inspecting machinery regularly, appointing a competent person to inspect and ensure maintenance, issuing PPE or clothing and training those that use machinery and enforce compliance.

37. Pressure Equipment

The Contractor shall comply with the Pressure Equipment Regulations, which include inspecting equipment regularly, appointing a competent person to inspect and ensure maintenance, issuing PPE or clothing and training those that use equipment and enforce compliance.

38. Electrical Installation

A Principal Contractor must ensure that:

- ~~A competent temporary electrical installation controller is appointed in writing.~~
- The appointed temporary electrical installation controller is registered electrician with a wiremen's license.
- All temporary and permanent installations shall be inspected monthly by the temporary electrical installation controller. An up to date register shall be kept on file.
- All DB's shall be locked. A key register shall be established and keys should be available for use and emergencies.
- All switches, plugs, jointing, fuse boxes and distribution boards must be in sound condition and safe.

39. Public Health and Safety

The Principal Contractor shall ensure that non-employees affected by the construction work area made aware of the dangers likely to arise from the construction work and of the precautionary measures to be observed in order to avoid or minimise those dangers. This applies to:

- Non-employees entering the site
- Departmental employees and members of the community

40. Lighting



Where poor or lack of illumination is identified as a hazard the lighting regulations must be complied with and the following must be included in the H&S Plan:

- How lighting will be ensured/provided where daylight is not sufficient and/or after Hours and worked.
- Planned maintenance programme for replacing luminaries.
- Proof of illumination levels of artificial illumination equipment.

41. Environmental Conditions

The Principal Contractor must be mindful of adverse weather conditions upon the health and safety of the workforce. This includes inclement weather, strong wind, heat stress, extreme cold, etc. The Contractor's risk assessment process must take into account the risks associated with such weather conditions.

The same is true when working in an environment where there is a risk to employees' health and safety from presence of poisonous flora, or wildlife (including bees, snakes, etc.)

~~The Contractor's risk assessment process must take these risks into account.~~

42. Occupational Health

Exposure of workers to occupational health hazards and risk are very common in any work environment, especially in construction. Occupational health hazards and risks exposure is a major problem and all Contractors are to ensure that proper health and hygiene measures are put in place to prevent exposure to these hazards and risks.

The occupational hazards and risks may enter the body in three ways:

- Inhalation through breathing e.g. cement dust;
- Ingestion through swallowing maybe through food intake;
- Absorption through the skin (pores) e.g. painting or use of thinners.

The Principal Contractor is required to ensure that all his personnel are medically fit prior to being allowed onto the work site.



43. Barricading

The Principal Contractor must ensure that:

- Orange safety netting shall be used to barricade stacking and storage areas.
- Orange netting shall also be used to barricade excavations.
- danger tape shall be used to barricade areas where lifting practices takes place and where overhead work is done.

44. Construction Health and Safety Budget

The Principal Contractor shall ensure adequate provision for the cost of health and safety measures during the construction process as required by Construction Regulation 5(1)(g).

Further to the adequate provision for the cost of health and safety as outlined above, the Principal Contractor shall ensure that on appointing any other contractor for any portion of the construction project, that each potential sub-contractor submitting tenders for such work, have made sufficient provision for adequate and required health and safety measures during the construction process as required by Construction Regulation 7(1)(c)(ii).

This provision shall include adequate supply of free PPE, suitable and sufficient edge protection and fall prevention equipment, welfare facilities, OHS related training, suitably trained and competent supervisory and health and safety personnel, fire prevention measures, etc.

The principal contractor shall provide a sufficient OHS budget that shall include a complete breakdown of all OHS costs.

45. Non Compliance to Health and Safety on site

Department of Health Free State OHS Manager reserve the right to stop the operations of the Principal Contractor should it be found that the operations are being undertaken in non compliance with the laid down health and safety plan based on this specification.

It should be noted to the contractors that any expenses incurred due to non-compliance shall be for Contractor's account in question.

Safety officers and other personnel have the authority to stop work if there is a life threatening situation or danger of material loss/damage and direct immediate remedial action under the supervision of contractor's manager is required.

Any "stop work order" shall be followed up and the site manager shall present a written report including remedial actions to avoid the re-occurrence and disciplinary action for



contravening safety regulation and if considered necessary to instruct the site manager to remove certain of his personnel from site.

Contact Details of Free State Department of Health OHS Manager:

Mr. H. Maloisane

Deputy Director: Infrastructure Compliance

Infrastructure and Engineering Services Management

E-Mail: MaloisanTH@fshealth.gov.za

3rd floor B-C – East, Bophelo House, Cnr of Charles and Harvey Road, Bloemfontein

Approval of Health and Safety Specifications for Project:

Name of Project Manager: _____

Expected commencement date: _____

Official Stamp of OHS OFFICIAL from Free State Department of Health Infrastructure:





ANNEXURE A

NOTIFICATION OF CONSTRUCTION WORK
Regulation 3 of the Construction Regulations, 2014

1. (a) Name and postal address of principal contractor:

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(b) Name and telephone number of principal contractor's contact person:

.....

2. Principal contractor's compensation registration number:

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3. (a) Name and postal address of client:

.....

(b) Name and telephone number of client's contact person or agent:

.....

4. (a) Name and postal address of designer(s) for the project:

.....

(b) Name and telephone number of designer's contact person:

.....

5. Name and telephone number of principal contractor's construction supervisor on site appointed in terms of regulation 6(1):

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6. Name/s of principal contractor's sub-ordinate supervisors on site appointed in terms of regulation 6(2):

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7. Exact physical address of the construction site or site office:

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8. Nature of the construction work:

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9. Expected commencement date:

10. Expected completion date:



11. Estimated maximum number of persons on the construction site:

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12. Planned number of contractors on the construction site accountable to principal contractor:

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13. Name(s) of contractors already chosen:

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.....

.....
Principal Contractor

.....
Date

.....
Client

.....
Date

- THIS DOCUMENT IS TO BE FORWARDED TO THE OFFICE OF THE DEPARTMENT OF LABOUR PRIOR TO COMMENCEMENT OF WORK ON SITE.