



**public works
& infrastructure**

Department:
Public Works and Infrastructure
REPUBLIC OF SOUTH AFRICA

VOLUME 3 OF 3

**EASTERN CAPE: MDANTSANE LABOUR CENTRE: DEPARTMENT
OF EMPLOYMENT AND LABOUR: SUPPLY AND INSTALLATION OF
WATER TANKS.**

**TENDER NO. : GQEQ-2025/2026-111
REFERENCE NO. : 14/1/3/2/1/6464/5050
WCS NO. : 056632**

CONSISTING OF THREE VOLUMES

**VOLUME 1 – TENDERING PROCEDURES
VOLUME 2 – RETURNABLE DOCUMENTS**

VOLUME 3 – THE CONTRACT (THIS DOCUMENT)



public works & infrastructure

Department:
Public Works and Infrastructure
REPUBLIC OF SOUTH AFRICA

**EASTERN CAPE: MDANTSANE LABOUR CENTRE: DEPARTMENT
OF EMPLOYMENT AND LABOUR: SUPPLY AND INSTALLATION OF
WATER TANKS.**

TENDER NO. : GQEQ-2025/2026-063
REFERENCE NO. : 14/1/3/2/1/6464/5050
WCS NO. : 056632

CONSISTING OF THREE VOLUMES

VOLUME 3: THE CONTRACT

PART C1: AGREEMENT AND CONTRACT DATA

**C.1.2: CONTRACT DATA PART 1 – DATA PROVIDED BY THE
EMPLOYER
(DPW-04 EC)**

DPW-04 (EC): CONTRACT DATA - PART 1

DATA PROVIDED BY THE EMPLOYER

JBCC PRINCIPAL BUILDING AGREEMENT (Edition 6.2 of May 2018)

Project title:	EASTERN CAPE: MDANTSANE LABOUR CENTRE: DEPARTMENT OF EMPLOYMENT AND LABOUR: SUPPLY AND INSTALLATION OF WATER TANKS.
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Tender / Quotation no:	GQEQ-2025/2026-111	WCS no:	056632	Reference no:	14/1/3/2/1/6464/5050
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	The Conditions of Contract are clauses 1 to 30 of the JBCC® Principal Building Agreement (Edition 6.2 of May 2018) prepared by the Joint Building Contracts Committee. Contractors are cautioned to read the JBCC PBA and Contract Data (DPW-04 (EC)) together as some clauses in the JBCC PBA have been amended in the Contract Data (DPW-04 (EC)). Copies of these conditions of contract may be obtained through most regional offices of the Association of South African Quantity Surveyors, Master Builders Association, South African Association of Consulting Engineers, South African Institute of Architects, Association of Construction Project Managers, Building Industries Federation South Africa, South African Property Owners Association or Specialist Engineering Contractors Committee. Bidders to note that materials procured for the works should be from South African manufactures and suppliers. Imported materials shall only be considered under exceptional circumstances, based on compelling technical justifications, and subject to the approval by the NDPWI.
	CONTRACT VARIABLES THE SCHEDULE The schedule is the listed variables in this agreement and contains all variables referred to in this document including specific changes made to JBCC® documentation. It is divided into part 1: contract data completed by the employer and part 2: contract data completed by the tenderer. Part 1 must be completed in full and included in the tender documents. Both the part 1 and part 2 form part of this agreement. Spaces requiring information must be filled in, shown as ‘not applicable’ or deleted but not left blank. Where choices are offered, the non-applicable items are to be deleted. Where insufficient space is provided the information should be annexed hereto and cross referenced to the applicable clause of the schedule. Reference to clause numbers in the JBCC Principal Building Agreement are shown in [square brackets] in this contract data e.g. [3.1].

A PROJECT INFORMATION

A 1.0 Works [1.1]

Works description	Refer to document PG01.2 (EC) – Scope of Works for detailed description
	The project scope of work entails provision a steel back up water tank complete with booster pump connection. The Water tank will be place of concrete upstand beams. Provision of pipe connections, valve chambers and electrical connection of the booster pumps.

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A 2.0 Site [1.1]

Erf / stand number	972
Site address	981 Mdantsane Access-Weg.
Township / Suburb	Mdantsane Unit 1
City / Town	East London
Province	Eastern Cape
Local authority	Buffallo City Local Municipality
GPS Coordinates	32°56'53.71"S, 27°46'40.70"E

A 3.0 EMPLOYER AND ITS REPRESENTATIVE

A 3.1 Employer:

Official Name of Organ of State / Public Sector Body	Government of the Republic of South Africa in its Department of Public Works & Infrastructure		
Business registration number	Not applicable	VAT number	Not applicable
E-mail	Nolizwi.Hlengwa@dpw.gov.za	Telephone	047 502 7010
Postal address	Private Bag X3913 Port Elizabeth 6056		
Physical address	Eben Donges Building Hancock Street and Robert North End Port Elizabeth 6056		

A 3.2 Employer's representative:

Name	Ayabulela Mgijima	Telephone number	041 408 2346
E-mail	Ayabulela.Mgijima@dpw.gov.za	Mobile number	079 521 3055
Postal address	Private Bag X3913 Port Elizabeth 6056		
Physical address	Eben Donges Building Hancock Street and Robert North End Port Elizabeth 6056		

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A 4.0	Principal Agent [1.1; 6.2]	Discipline	Construction Project Manager
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Name	Mr A. Mgijima		
Legal entity of above	DPWI	Contact person	Mr. A. Mgijim
Practice number		Telephone number	041 408 2346
Country	South Africa	Mobile number	079 521 3055
E-mail	Ayabulela.Mgijima@dpw.gov.za		
Postal address	Private Bag X3913 Port Elizabeth 6056		
Physical address	Eben Donges Building Hancock Street and Robert North End Port Elizabeth		

A 5.0	Agent [1.1; 6.2]	Discipline	Structural Engineer
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Name	Mr. D. Sibanda		
Legal entity of above	DPWI	Contact person	Mr. D. Sibanda
Practice number		Telephone number	041 408 2126
Country	South Africa	Mobile number	066 056 0141
E-mail	Dennis.Sibanda@dpw.gov.za		
Postal address	Private Bag X3913 Port Elizabeth 6056		
Physical address	Eben Donges Building Hancock Street and Robert North End Port Elizabeth		

A 6.0	Agent [1.1; 6.2]	Discipline	Electrical Engineer
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Name	Ms. Y. Didibani		
Legal entity of above	DPWI	Contact person	Ms. Y. Didibani
Practice number		Telephone number	041 408 2303
Country	South Africa	Mobile number	060 653 4380
E-mail			
Postal address	Private Bag X3913 Port Elizabeth 6056		
Physical address	Eben Donges Building Hancock Street and Robert North End Port Elizabeth		

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A 7.0	Agent [1.1; 6.2]	Discipline	Quantity Surveyor
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Name	Mr. M. Meiring		
Legal entity of above	DPWI	Contact person	Mr. M. Meiring
Practice number		Telephone number	041 408 2123
Country	South Africa	Mobile number	076 991 0011
E-mail	Martin.Meiring@dpw.gov.za		
Postal address	Private Bag X3913 Port Elizabeth 6056		
Physical address	Eben Donges Building Hancock Street and Robert North End Port Elizabeth		

A 8.0	Agent [1.1; 6.2]	Discipline	Construction Project Manager
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Name	Mr. A.Mgijima		
Legal entity of above	DPWI	Contact person	Mr. A.Mgijima
Practice number		Telephone number	041 408 2346
Country	South Africa	Mobile number	079 521 3055
E-mail	Ayabulela.Mgijima@dpw.gov.za		
Postal address	Private Bag X3913 Port Elizabeth 6056		
Physical address	Eben Donges Building Hancock Street and Robert North End Port Elizabeth		

A 9.0	Agent [1.1; 6.2]	Discipline	
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Name			
Legal entity of above		Contact person	
Practice number		Telephone number	
Country		Mobile number	
E-mail			
Postal address	insert postal address insert suburb insert town insert postal code		
Physical address	insert physical address insert suburb insert town insert postal code		

Any reference to words "Bid" or Bidder" herein and/or in any other documentation shall be construed to have the same meaning as the words "Tender" or "Tenderer".

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A 10.0	Agent [1.1; 6.2]	Discipline	
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Name			
Legal entity of above		Contact person	
Practice number		Telephone number	
Country		Mobile number	
E-mail			
Postal address	insert postal address insert suburb insert town insert postal code		
Physical address	insert physical address insert suburb insert town insert postal code		

A 11.0	Agent [1.1; 6.2]	Discipline	
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Name			
Legal entity of above		Contact person	
Practice number		Telephone number	
Country		Mobile number	
E-mail			
Postal address	insert postal address insert suburb insert town insert postal code		
Physical address	insert physical address insert suburb insert town insert postal code		

A 12.0	Agent [1.1; 6.2]	Discipline	
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Name			
Legal entity of above		Contact person	
Practice number		Telephone number	
Country		Mobile number	
E-mail			
Postal address	insert postal address insert suburb insert town insert postal code		
Physical address	insert physical address insert suburb insert town insert postal code		

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B CONTRACT INFORMATION

B 1.0 Definitions [1.1]

Bills of quantities: System/Method of measurement	Standard system of measurement of building works 7 th edition
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B 2.0 Law, regulations and notices [2.0]

Law applicable to the works, state country [2.1]	Law of the Republic of South Africa
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B 3.0 Offer and acceptance [3.0]

Currency applicable to this agreement [3.2]	South African Rand
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B 4.0 Documents [5.0]

The original signed agreement is to be held by the principal agent [5.2], if not, indicate by whom	Employer
Number of copies of construction information issued to the contractor at no cost [5.6] (3 Copies of all relevant construction documentation – this to includes 1 priced Bills of Quantities and 2 unpriced Bills of Quantities)	3
Documents comprising the agreement	Page numbers
The JBCC® Principal Building Agreement, Edition 6.2 May 2018	1 to 30
DPW-04 (EC): CONTRACT DATA: JBCC PRINCIPAL BUILDING AGREEMENT (Edition 6.2 of May 2018)	1 to 31
The JBCC® General Preliminaries for use with the JBCC® Principal Building Agreement, Edition 6.2 May 2018	
Drawings as per drawing register issued with the tender	
Specifications issued with the tender	
Schedules issued with the tender	
Bills of Quantities issued with the tender	
Addenda as issued during tender stage, if applicable	As issued
Site Conditions	
Approved Shop Drawings	

B 5.0 Employer's agents [6.0]

Authority is delegated to the following agents to issue contract instructions and perform duties for specific aspects of the works [6.2] [6.7 [CD]]	Principal Agent
Principal agent's and agents' interest or involvement in the works other than a professional interest [6.3]	

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B 6.0 Insurances [10.0]

Insurances by contractor			
NB: Insurances submitted must be issued by either an insurance company duly registered in terms of the Insurance Act [Long-Term Insurance Act, 1998 (Act 52 of 1998) or Short-Term Insurance Act, 1998 (Act 53 of 1998)] or by a bank duly registered in terms of the Banks Act, 1990 (Act 94 of 1990). Insured amounts to include VAT.			
	New works [10.1.1] With a deductible not exceeding 5% of each and every claim	Contract sum plus 10%	Applicable
Or	Works with practical completion in sections [10.2] With a deductible not exceeding 5% of each and every claim	Contract sum plus 10%	Not Applicable
Or	Works with alterations and additions [10.3] (reinstatement value of existing structures with or including new works) With a deductible not exceeding 5% of each and every claim	Contract sum plus 10%	Not Applicable
	Direct contractors [10.1.1; 10.2] where applicable, to be included in the contract works insurance	R	Applicable
	Free issue [10.1.1; 10.2] where applicable, to be included in the contract works insurance	R	Applicable
	Escalation, professional fees and reinstatement costs must be included in the above respective insurances		Applicable
	Supplementary insurance [10.1.2; 10.2]	Contract sum plus 10%	Not Applicable
	Public liability insurance [10.1.3; 10.2]	R 5 000 000	Applicable
	Removal of lateral support insurance [10.1.4; 10.2]	R	Not Applicable
	Other insurances [10.1.5]		
	Hi Risk Insurance Refer B18.0 [10.1.5.1]	R	Applicable
	Other insurances: If applicable, description 1:	R	Applicable
	Other insurances; If applicable, description 2:	R	Not Applicable

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B 7.0 Obligations of the employer [12.1]

Existing premises will be in use and occupied [12.1.2]	Applicable
If applicable, description: The facility will be in operation during construction thus there must be supply of water.	
Restriction of working hours [12.1.2]	Applicable
If applicable, description: Operational Hours are 07:30am to 4pm Mondays to Friday. Facility is closed on Saturday and Sunday.	
Natural features and known services to be preserved by the contractor [12.1.3]	Applicable
If applicable, description: Site to be rehabilitated to its original state/condition upon completion of the works.	
Restrictions to the site or areas that the contractor may not occupy [12.1.4]	Applicable
If applicable, description: Contractor must request permission to access/work inside the buildign or on any services that may interrupt operations, this includes electrical cables, fire and portable water supplies, storm water, sewer line etc.	
Supply of free issue of material and goods [12.1.10]	Not Applicable
If applicable, description:	

B 8.0 Appointment of Nominated Subcontractors [14.0]

Not Applicable	If applicable, description of specialisation
Specialisation 1	
Specialisation 2	
Specialisation 3	
Specialisation 4	
Specialisation 5	

B 9.0 Appointment of Selected Subcontractors [15.0]

Applicable	If applicable, description of specialisation
Specialisation 1	
Specialisation 2	
Specialisation 3	
Specialisation 4	
Specialisation 5	

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B 10.0 Appointment of Direct Contractors [16.0]

Applicable	If applicable, description of extent of work [12.1.11]
Extent of work	
Extent of work	
Extent of work	
Extent of work	
Extent of work	

B 11.0 Works to be completed in sections [20.1]

Not Applicable	If applicable, description of sections
Section 1	
Section 2	
Section 3	
Section 4	
Section 5	
Section 6	
Remainder of the works.	

B 12.0 Contract period [B18: 1.2], Construction period [B18: 1.1], Possession of site [12.1.5], Practical Completion [19.0; 20.0], Works Completion Refer B18.0 [19.8], Final Completion [21] and Penalties [24.0]

B12.1 Contract Period

Contract period [B18: 1.2]: Period in months as indicated, include the time from the date of award (commencement date) for submitting contractual obligatory documents, submission of Health & Safety Plan and approval, period for obtaining the Construction Permit (if applicable), the Construction Period and the Defect Liability Period up to and including Final Completion	
The contract period is determined as follows (Period/s indicated in months):	
Period to submit contractual obligatory documents including submission and approval of health and safety plan by the appointed Health & Safety Agent	One (1) Month

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Period to obtain Construction Permit from Department of Labour upon approval of the Health & Safety Plan by the appointed Health & Safety Agent	N/A
Total construction period for the Works as a whole up to and including Practical Completion, as indicated below [24.1]	Eighth (8) Months
Period to achieve Works Completion Refer B18.0 [19.8]	One (1) Month
Defect liability period up to and including Final Completion	12
Total Contract Period [B18: 1.2]	Twenty two (22) Months
Penalty amount per calendar day for late submission of contractual obligatory documents: Ten percent (10%) of the penalty amount per calendar day for late Practical Completion, excluding VAT. [24.1]	R 27.50

B12.2 Construction Period for completion of the Works as a whole

Construction period [B18: 1.2] and Practical Completion for the Works as a whole [19.0] The time for achieving Practical Completion of the whole of the Works is measured from the date of possession of the site by the contractor inclusive of all public holidays, special non-working days and builders' holiday shut down periods.	Applicable
The date for practical completion for the works as a whole shall be the period in months as indicated, starting from the date of possession of the site by the contractor inclusive of all special non-working days and builders' holiday shut down periods [12.2.7; 24.1]	Eight (8) Calendar Months
Period for inspection in working days by the principal agent [19.3]	5 working days
Penalty amount per calendar day for late Practical Completion , excluding VAT. [24.1]	R 275.00
Penalty amount per calendar day for late Works Completion Refer B18.0 [19.8]: Thirty percent (30%) of penalty amount per calendar day for late Practical Completion, excluding VAT.	R 82.50
Penalty amount per calendar day for late Final Completion [21]: Fifteen percent (15%) of penalty amount per calendar day for late Practical Completion, excluding VAT.	R 41.25

B12.3 Construction Period for completion of the Works in portions

Construction period [B18: 1.1] and Practical completion for portions of the Works [20.0]	Not Applicable					
Portions of the Works in sections:	1	2	3	4	5	6
Period for inspection by the principal agent in working days [19.3]						
The date for practical completion shall be the period in months as indicated from the date of possession of the site by the contractor [12.2.7; 24.1]						

The date for practical completion shall be the period in months as indicated from the date of possession of the site by the contractor [12.2.7; 24.1]						
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The date for practical completion for the whole of the Works, if applicable shall be the period in months as indicated from the date of possession of the site by the contractor inclusive of all public holidays, special non-working days and builders' holiday shut down periods [12.2.7; 24.1]	Applicable
Penalty for late Practical Completion, if completion in sections is required , excluding VAT	
The penalty amount per day for failing to complete section 1 of the Works is:	R
The penalty amount per day for failing to complete section 2 of the Works is:	R
The penalty amount per day for failing to complete section 3 of the Works is:	R
The penalty amount per day for failing to complete section 4 of the Works is:	R
The penalty amount per day for failing to complete section 5 of the Works is:	R
The penalty amount per day for failing to complete section 6 of the Works is:	R
The penalty amount per day for failing to complete the whole of the Works, if applicable, is:	R
Penalty amount per calendar day for late Works Completion Refer B18.0 [19.8]: To be calculated at Thirty percent (30%) of penalty / calendar day to complete the whole of the Works , excluding VAT	
Penalty amount per calendar day for late Final Completion [21]: To be calculated at Fifteen percent (15%) of penalty / calendar day to complete the whole of the Works , excluding VAT	

B 13.0 Criteria to achieve Practical Completion [19.0; 20.0]

Criteria to achieve Practical Completion not covered in the definition of practical completion	
13.1	Maintenance / operating manuals
13.2	All relevant CoCs
13.3	All guarantees
13.4	Training on mechanical installations if contractually required
13.5	
13.6	
13.7	
13.8	

13.9	
13.10	

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B 14.0 Defects liability period [21.0]

Extended defects liability period: Refer B18.0 [21.13]

Applicable	If applicable, description of applicable elements
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14.1	Structural and Civil Works
14.2	All Electrical Installation and Reticulation
14.3	All Plumbing installation and Reticulation
14.4	
14.5	
14.6	
14.7	

B 15.0 Payment [25.0]

Date of month for issue of regular payment certificates Refer B18.0 [25.2]	20
Contract price adjustment / Cost fluctuations Refer [25.3.4; 26.9.5]	Not Applicable
If applicable, method to calculate	CPAP
Employer shall pay the contractor within: Refer B18.0 [25.10]	Thirty (30) calendar days

B 16.0 Dispute resolution [30.0]

Mediation	Applicable
Name of nominating body	Association of Arbitrators (Southern Africa)
Appointment of Mediator	State Attorney
Litigation	Court with Jurisdiction

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B 17.0 JBCC® General Preliminaries - selections

Provisional bills of quantities [P2.2]		Applicable
Availability of construction information [P2.3]		Not Applicable
Previous work - dimensional accuracy - details of previous contract(s) [P3.1]		Not Applicable
Previous work - defects - details of previous contract(s) [P3.2]		Not Applicable
Inspection of adjoining properties - details [P3.3]		Applicable
Handover of site in stages - specific requirements [P4.1]		Not Applicable
Enclosure of the works - specific requirements [P4.2]		Not Applicable
Geotechnical and other investigations - specific requirements [P4.3]		Applicable
Existing premises occupied - details [P4.5]		Applicable
Services - known - specific requirements [P4.6]		Applicable
Water [P8.1]	By contractor	Applicable
	By employer	Not Applicable
	By employer – metered	Not Applicable
Electricity [P8.2]	By contractor	Applicable
	By employer	Not Applicable
	By employer – metered	Not Applicable
Ablution and welfare facilities [P8.3]	By contractor	Applicable
	By employer	Not Applicable
Communication facilities - specific requirements [P8.4] Telephone, Cellphone, Emails and Internet Connectivity		Applicable
Protection of the works - specific requirements [P11.1] Works to be protected against all damages and vandalism		Applicable
Protection / isolation of existing works and works occupied in sections - specific requirements [P11.2]		Applicable
Disturbance - specific requirements [P11.5] Contractor to ensure that there is minimum disturbance of operations during construction. Contractor to co-ordinate the works with Project Manager, Principal Agent and Department of Employment and Labour.		Applicable
Environmental disturbance - specific requirements [P11.6] Environmental legislation to be adhered to during construction and site to be rehabilitated and cleared of any waste upon completion of the project.		Applicable

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B 18.0 SPECIFIC CHANGES MADE TO JBCC® DOCUMENTATION

[Details of changes made to the provisions of **JBCC** standard documentation]

1.2	Definitions The following definitions replace corresponding definitions or are added to the definitions in the JBCC PRINCIPAL BUILDING AGREEMENT (Edition 6.2 of May 2018), whatever the case may be. ADVERSE WEATHER CONDITIONS: Adverse weather and inclement weather has the same meaning and used interchangeably and means any weather conditions i.e.: Rain, wind, snow, frost, temperature (cold or heat) that are not in the norm for the area where the construction takes place and during which no work is possible on site. AGREEMENT: The completed Form of Offer and Acceptance, the completed JBCC® Principal Building Agreement and contract data for organs of state and other public sector bodies, the contract drawings, the priced document and any other documents reduced to writing and signed by the authorised representative or representatives of the parties. CONSTRUCTION PERIOD: The period commencing on the date of possession of the site by the contractor and ending on the date of practical completion. CONTRACT PERIOD: The period commencing on the date of the letter of acceptance and ending on the date of final completion. COST FLUCTUATION shall mean contract price adjustment provision (CPAP) for the adjustment of fluctuation in the cost of labour, plant, material and goods as stated in the schedule. DEFAULT INTEREST: No clause. GUARANTEE FOR CONSTRUCTION: A security in terms of the DPWI's Guarantee for Construction form/s, obtained by the contractor from an institution approved by the employer [CD]. INTEREST: The interest rates applicable on this contract, whether specifically indicated in the relevant clauses or not, will be the rate as determined by the Minister of Finance from time to time, in terms of section 80(1)(b) of the Public Finance Management Act, 1999 (Act No 1 of 1999) as amended, calculated as simple interest, in respect of debts owing to the State, and will be the rate as published by the Minister of Justice and Correctional Services from time to time, in terms of section 1(2) of the Prescribed Rate of Interest Act, 1975 (Act No 55 of 1975) as amended, calculated as simple interest, in respect of debts owing by the State. LETTER OF ACCEPTANCE: The letter of formal acceptance of the Contractor's or Service Provider's Tender / Bid, issued and signed by the Employer. PAYMENT CERTIFICATE: A certificate issued at regular agreed intervals [CD] by the principal agent to the parties certifying the amount due and payable in terms of clause 25.3. PRINCIPAL AGENT: The person or entity appointed by the employer and named in the contract data for organs of state and other public sector bodies. In the event of a principal agent not being appointed, then all the duties and obligations of a principal agent as detailed in the agreement shall be fulfilled by the employer's representative as named in the contract data for organs of state and other public sector bodies.
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CONTRACT SPECIFIC DATA

The following contract specific data, referring to the General Conditions of Contract for Construction Works, JBCC PRINCIPAL BUILDING AGREEMENT (Edition 6.2 of May 2018), are applicable to this Contract:

3.3	Replace clause with the following: This agreement shall come into force on the date of letter of acceptance and continue to be of force and effect until the end of the latent defects liability period [22.0] notwithstanding termination [29.0] or the certification of final completion [21.0] and final payment [25.0].
4.2	Refer to clause 6.7 [CD].
4.3	Replace clause with the following: Where a contractor cedes any right or any monies due to or to become due under this agreement as security in favour of a financial institution, the prior written consent of the employer, which consent shall not be unreasonably withheld, must be obtained.
5.2	Replace last sentence with the following: The original signed agreement shall be held by the Employer.
5.4	Replace clause with the following: The Bills of Quantities shall not be used as a specification of material and goods or methods unless so instructed by the Principal Agent. The contractor may not use the Bills of Quantities for purpose of ordering material. All dimensions and quantities must be determined on site before ordering. In the event of discrepancy between the drawings and Bills of Quantity, the drawings shall take preference.
5.5	Replace clause with the following: The parties may publish or disclose on any platform only the contract scope and contract amount.
6.5	Replace clause with the following: Where the principal agent and/or an agent fails to act or is unable to act or ceases to be the principal agent or an agent in terms of this agreement, the employer may appoint another principal agent and/or an agent, be it temporary or permanently.
6.7	Add the following as clause 6.7: In terms of the clauses listed hereunder, the employer has retained its authority and has not given a mandate to the principal agent, notwithstanding other provisions in the contract. The employer shall sign all documents in relation to clauses 4.2, 14.1.4, 14.4.1, 14.6, 15.1.4, 15.4.1, 23.1, 23.2, 23.3, 23.7, 23.8, 26.1, 26.7, 26.12.
7.2	Replace first sentence with the following: Any design responsibility undertaken by a subcontractor shall not devolve on the contractor except for items that require specific component design and or compatibility design and or shop drawings and or the assembly thereof.
8.4	Replace clause with the following: The contractor shall bear the full risk of damage to and/or destruction of the works by whatever cause during construction of the works and hereby indemnifies and holds harmless the employer against any such damage. The contractor shall take such precautions and security measures and other steps for the protection and security of the works as the contractor may deem necessary.
9.2.7	Add the following to the end of the first sentence: ".... due to no fault of the contractor".

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9.2.9	No clause.
9.2.10	No clause.
9.3	Add the following as clause 9.3: The employer's rights to claim damages for the contractor's omissions and actions will not be affected.
10.1	Replace clause with the following: The party responsible shall effect and keep the respective insurances [CD] in force, in favour of the employer as beneficiary, from the date of possession of the site until the issue of the certificate of practical completion and with an extension to cover the contractor's obligations after the date of practical completion [8.2.2].
10.1.5.1	Add the following as clause 10.1.5.1: Hi Risk Insurance In the event of the project being executed in a geological area classified as a "High Risk Area", that is an area which is subject to highly unstable sub-surface conditions that might result in catastrophic ground movement evident by sinkhole or doline formation the following will apply:
10.1.5.1.1	Add the following as clause 10.1.5.1.1: Damage to the works The contractor shall, from the date of possession of the site until the date of the certificate of practical completion, bear the full risk of and hereby indemnifies and holds harmless the employer against any damage to and/or destruction of the works consequent upon a catastrophic ground movement as mentioned above. The contractor shall take such precautions and security measures and other steps for the protection of the works as he may deem necessary. When so instructed to do so by the principal agent, the contractor shall proceed immediately to remove and/or dispose of any debris arising from damage to or destruction of the works and to rebuild, restore, replace and/or repair the works, at the contractor's own costs.
10.1.5.1.2	Add the following as clause 10.1.5.1.2: Injury to persons or loss of or damage to property The contractor shall be liable for and hereby indemnifies and holds harmless the employer against any liability, loss, claim or proceeding arising at any time during the period of the contract whether arising in common law or by statute, consequent upon personal injuries to or the death of any person whomsoever resulting from, arising out of or caused by a catastrophic ground movement as mentioned above. The contractor shall be liable for and hereby indemnifies the employer against any and all liability, loss, claim or proceeding consequent upon loss of or damage to any moveable, or immovable property, or personal property, or property contiguous to the site, whether belonging to or under the control of the employer or any other body or person whomsoever arising out of or caused by a catastrophic ground movement, as mentioned above, which occurred during the period of the contract.
10.1.5.1.3	Add the following as clause 10.1.5.1.3: It is the responsibility of the contractor to ensure that he has adequate insurance to cover his risk and liability as mentioned in 10.1.5.1.1 and 10.1.5.1.2. Without limiting the contractor's obligations in terms of the contract, the contractor shall, within twenty-one (21) calendar days of the date of letter of acceptance, but before commencement of the works, submit to the employer proof of such insurance policy.

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10.1.5.1.4	Add the following as clause 10.1.5.1.4: The employer shall be entitled to recover any and all losses and/or damages of whatever nature suffered or incurred consequent upon the contractor's default of his obligations as set out in 10.1.5.1.1; 10.1.5.1.2 and 10.1.5.1.3. Such losses or damages may be recovered from the contractor or by deducting the same from any amounts still due under this contract or under any other contract presently or hereafter existing between the employer and the contractor and for this purpose all these contracts shall be considered one indivisible whole.
10.2	Replace clause with the following: Where practical completion in sections is required [20.0], or where the works is for alterations and additions, the contractor shall effect and keep in force contract works insurance [10.1.1], supplementary insurance [10.1.2], public liability insurance [10.1.3] and where applicable, removal of lateral support insurance [10.1.4] and other insurances [10.1.5] in favour of the employer as beneficiary.
10.6	No clause.
10.11	Add the following as clause 10.11 In the event that an insurer dispute the amount of the claim to be paid to the employer, the contractor shall be liable to the employer for the difference between the claim (as determined by the employers QS appointed on the project) made by the employer and the amount that the insurer is willing to pay.
11.1	Add the following to clause 11.1. In respect of contracts with a contract sum up to R1 million, the security to be provided by the contractor to the employer will be a payment reduction of five per cent (5%) of the value certified in the payment certificate (excluding VAT). In respect of contracts with a contract sum above R1 million, the contractor shall have the right to select the security to be provided in terms of C 1.0 Securities, as stated in the schedule. Such security shall be provided to the employer within fifteen (15) working days from contract commencement date. Should the contractor fail to select the security to be provided or should the contractor fail to provide the employer with the selected security within fifteen (15) working days from the contract commencement date, the security in terms of C 1.0 Option C shall be deemed to have been selected. The payment reduction of the value certified in a payment certificate shall be <i>mutatis mutandis</i> in terms of 25.12.1 - 25.12.5.
11.1.1	No clause.
11.1.2	No clause.
11.2.2	No clause.
11.3	No clause.
11.4.1	Replace clause 11.4.1 with the following: Hand over the site to the contractor and withhold an amount equal to ten per cent (10%) of each interim payment certificate until practical completion is achieved. The value certified shall be subject to the adjustments in terms of 25.12.6 to 25.12.10.
11.5	No clause.
11.6	No clause.

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11.7	No clause.
11.8	No clause.
11.9	No clause.
11.10	No clause.
11.11	Add the following as clause 11.11 Where the security as a cash deposit of ten per cent (10%) of the contract sum (excluding VAT) has been selected:
11.11.1	Add the following as clause 11.11.1 The contractor shall furnish the employer with a cash deposit equal in value to ten percent (10%) of the contract sum (excluding VAT) within fifteen (15) working days from the contract commencement date. Failure to furnish the employer with a cash deposit within fifteen (15) working days clause 11.4 will apply <i>mutatis mutandis</i> .
11.11.2	Add the following as clause 11.11.2 The employer shall be entitled to recover expense and loss from the cash deposit in terms of 27.0 provided that the employer notifies the Contractor in which event the employer's entitlement shall take precedence over his obligations to refund the cash deposit security or portions thereof to the contractor.
11.11.3.	Add the following as clause 11.11.3 Within fifteen (15) working days of the date of practical completion of the works the employer shall reduce the cash deposit to an amount equal to three per cent (3%) of the contract value (excluding VAT).
11.11.4	Add the following as clause 11.11.4 Within fifteen (15) working days of the date of final completion of the works the employer shall reduce the cash deposit to an amount equal to one per cent (1%) of the contract value (excluding VAT).
11.11.5	Add the following as clause 11.11.5 On the date of payment of the amount in the final payment certificate, the employer shall refund the remainder of the cash deposit to the contractor.
11.11.6	Add the following as clause 11.11.6 The parties expressly agree that neither the employer nor the contractor shall be entitled to cede the rights to the deposit to any third party.
11.12	Add the following as clause 11.12 Where security as a variable construction guarantee of ten percent (10%) of the contract sum (excluding VAT) has been selected:
11.12.1	Add the following as clause 11.12.1 The contractor shall furnish the employer with an acceptable variable construction guarantee equal in value to ten per cent (10%) of the contract sum (excluding VAT) within fifteen (15) working days after issuance of the letter of acceptance. Failure to submit an acceptable variable construction guarantee within fifteen (15) working days clause 11.4 will apply <i>mutatis mutandis</i> .
11.12.2	Add the following as clause 11.12.2 The variable construction guarantee shall reduce and expire in terms of the Variable Construction Guarantee form included in the invitation to tender.

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11.12.3	Add the following as clause 11.12.3 The employer shall return the variable construction guarantee to the contractor within fourteen (14) calendar days of it expiring.
11.12.4	Add the following as clause 11.12.4 Where the employer has a right of recovery against the contractor in terms of 27.0, the employer shall issue a written demand in terms of the variable construction guarantee.
11.13	Add the following as clause 11.13 Where security is a fixed construction guarantee of five per cent (5%) of the contract sum (excluding VAT) and a five per cent (5%) payment reduction of the value certified in the payment certificate (excluding VAT) has been selected:
11.13.1	Add the following as clause 11.13.1 The contractor shall furnish a fixed construction guarantee to the employer equal in value to five per cent (5%) of the contract sum (excluding VAT).
11.13.2	Add the following as clause 11.13.2 The fixed construction guarantee shall come into force on the date of issue and shall expire on the date of the last certificate of practical completion.
11.13.3	Add the following as clause 11.13.3 The employer shall return the fixed construction guarantee to the contractor within fourteen (14) calendar days of it expiring.
11.13.4	Add the following as clause 11.13.4 The payment reduction of the value certified in a payment certificate shall be <i>mutatis mutandis</i> in terms of 25.12.1 - 25.12.5.
11.13.5	Add the following as clause 11.13.5 Where the employer has a right of recovery against the contractor in terms of 27.0, the employer shall be entitled to issue a written demand in terms of the fixed construction guarantee or may recover from the payment reduction or from both.
11.14.1	Add the following as clause 11.14.1 Where security as a cash deposit of five per cent (5%) of the contract sum (excluding VAT) and a payment reduction of five per cent (5%) of the value certified in the payment certificate (excluding VAT) has been selected:
11.14.2	Add the following as clause 11.14.2 The contractor shall furnish the employer with a cash deposit equal in value to five per cent (5%) of the contract sum (excluding VAT) within fifteen (15) working days from the contract commencement date. Failure to submit a cash deposit within fifteen (15) working days clause 11.4 will apply <i>mutatis mutandis</i> .
11.14.3	Add the following as clause 11.14.3 Within fifteen (15) working days of the date of practical completion of the works the employer shall refund the cash deposit in total to the contractor.
11.14.4	Add the following as clause 11.14.4 The payment reduction of the value certified in a payment certificate shall be <i>mutatis mutandis</i> in terms of 25.12.1 - 25.12.5.
11.14.5	Add the following as clause 11.14.5 Where the employer has a right of recovery against the contractor in terms of 27, the employer may recover from the payment reduction or cash deposit or from both.

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11.15	Add the following as clause 11.15 Where security as a payment reduction of ten per cent (10%) of the value certified in the payment certificate (excluding VAT) has been selected:
11.15.1	Add the following as clause 11.15.1 The payment reduction of the value certified in a payment certificate shall be <i>mutatis mutandis</i> in terms of 25.12.6 to 25.12.10.
11.15.2	Add the following as clause 11.15.2 The employer shall be entitled to recover expense and loss from the cash deposit in terms of 27.0 provided that the employer notifies the Contractor in which event the employer's entitlement shall take precedence over his obligations to refund the cash deposit security or portions thereof to the contractor.
11.16	Add the following as clause 11.16 Payments made by the guarantor to the employer in terms of the fixed or variable construction guarantee shall not prejudice the rights of the employer or contractor in terms of this agreement.
11.17	Add the following as clause 11.17 Should the contractor fail to furnish the security in terms of 11.2 the employer, in his sole discretion, and without notification to the contractor, is entitled to change the contractor's selected form of security to that of a ten per cent (10%) payment reduction of the value certified in the payment certificate (excluding VAT).
12.1.1	No Clause.
12.1.5	Replace clause with the following: Give possession of the site to the contractor within ten (10) working days after approval of the Health and Safety Plan or the issue of a construction permit by the Department of Labour, if applicable, after the contractor complied with the terms of 12.2.22.
12.1.6	No clause.
12.1.8	No clause.
12.2.2	Replace clause with the following: The priced Bills must be submitted to the Employer within fourteen (14) calendar days from date of request. Where the priced document contains errors or discrepancies and/or prices considered by the employer or principal agent to be imbalanced or unreasonable the employer or principal agent and the contractor shall adjust such prices without any change to the contract sum .
12.2.5	Replace clause with the following: Effect and keep in force insurances in favour of the employer as beneficiary where the contractor is responsible for providing insurances [10.0) [CD].
12.2.13	Replace clause with the following: Designate a competent person full time on site to continuously administer and control the works on site and to receive and implement notices and contract instructions on behalf of the contractor.
12.2.22	Insert the following clause as 12.2.22: Within fourteen (14) working days of the date of the letter of acceptance submit to the principal agent an acceptable health and safety plan, required in terms of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993).

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12.2.23	Insert the following clause as 12.2.23: The contractor shall within reasonable time inform the agents regarding inspection of the works before covering / closing [B 12.0].
14.1.4	Refer to clause 6.7 [CD].
14.1.5	No clause.
14.4.1	Replace "principal agent" with "employer" [6.7 [CD]].
14.6	Refer to clause 6.7 [CD].
15.0	See clause 6.7 above for clauses, 15.5.
15.1.2	Replace clause with the following: The principal agent shall call for tenders from a list of tenderers agreed between the contractor and the employer.
15.1.4	Refer to clause 6.7 [CD].
15.1.5	No clause.
15.4.1	Replace "principal agent" with "employer" [6.7 [CD]].
17.4	Replace clause with the following: The contractor shall comply with and duly execute all contract instructions except any contract instruction for additional work issued after the date of practical completion other than making good physical loss and repairing damage to the works in terms of 8.0 and 21.
17.6	Add the following as clause 17.6: Minutes of meetings shall not constitute a site instruction unless reduced to a written contract instruction issued by the principal agent in terms of this contract / agreement.
19.5	Replace clause with the following: On issue of the only or last certificate of practical completion the employer shall be entitled to possession of the works and the site. On issue of the certificate of practical completion for a section, the employer shall be entitled to possession of such section.
19.8	Add the following as: 19.8 WORKS COMPLETION (1) Within seven (7) calendar days of the date of practical completion the principal agent shall issue to the contractor a works completion list defining the outstanding work and defects apparent at the date of practical completion to be completed or rectified to achieve works completion. (2) Where, in the opinion of the contractor, the works completion list has been completed the contractor shall notify the principal agent who shall inspect within seven (7) calendar days of receipt of such a notice. Where, in the opinion of the principal agent, the Works Completion list: (2)(a) Has been satisfactorily completed, the principal agent shall forthwith issue a certificate of Works Completion to the contractor with a copy to the employer

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19.8 Continued	(2)(b) Has not been satisfactorily completed, the principal agent shall forthwith identify the works completion list items that are not yet complete and inform the contractor thereof. The contractor shall repeat the procedure in terms of 19.8(2) (3) Should the principal agent not issue a works completion list, in terms of 19.8 (1) or 19.8 (2) (b), within seven (7) calendar days from the end of the inspection period, the contractor shall notify the employer and principal agent. Should the principal agent not issue such Works Completion list within seven (7) calendar days of receipt of such notice, the employer may within seven (7) calendar days issue to the contractor a Works Completion list. Should the employer: (3)(a) Not issue such works completion list within seven (7) calendar days, then the certificate of Works Completion shall be deemed to have been issued on the date of expiry of the initial notice period and works completion shall be deemed to have been achieved on such date (3b) Issue a works completion list and the work on Works Completion list not have been completed or where further defects have become apparent, the employer shall forthwith identify such items on the updated works completion list and notify the contractor. The contractor shall repeat the procedure in terms of 19.8(2) (b) until such items have been completed to the satisfaction of the employer (4) Should the works completion list not be completed to the satisfaction of the employer within a period of twenty (20) working days of the issue final works completion list the contractor shall be liable to a daily penalty as described in B13. (5) The defects liability period in terms of 21.1 shall commence with the issue or deemed issue of the certificate of Works Completion in terms of 19.8(2)(a) or 19.8(3).
20.2.1.A	Add the following as: 20.2.1.A A certificate of Works Completion [19.8]
21.1	Replace clause 21.1 with the following: The defects liability period for the works shall commence on the calendar day following the date of works completion and end at midnight (00:00) ninety (90) calendar days from the date of works completion [CD] or when work on the list for completion has been satisfactorily attended to [21.6], whichever is the later (if we use works completion).
21.6	Replace clause 21.6 with the following: On the expiry of the ninety (90) calendar days defects liability period [21.1] for items not indicated as items with an extended liability as indicated in B14 and on receipt of the contractor's notice to the principal agent. And/or On the expiry of the defects liability period as indicated in B14, for items indicated in B14 and on receipt of the contractor's notice to the principal agent, the principal agent shall: (1) inspect the works And within ten (10) working days either issue a list for final completion detailing all outstanding work or defects that must be attended to, or rectified to achieve final completion or (2) issue the certificate of final completion to the contractor with a copy to the employer for that part of the works where defects liability period has expired.
21.6.1.	Omit clause.

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21.6.2	Omit clause.
21.13	Add the following as clause 21.13 The ninety (90) calendar day defects liability period for the works [21.1] is replaced with an extended defects liability period of three hundred and sixty-five (365) calendar days in respect of the listed applicable elements in B14.
21.14	Add the following as clause 21.14 Penalties will be applied if the items on the completion list have not been attended to within a period of ninety (90) calendar days [21.1]. If additional defect items have being added to the list during this period, then the Principal Agent and Contractor will agree on a revised completion date. Failing in achieving the revised date will result in penalties being applied [B12.0].
22.3.2	No clause.
23.1	Refer to clause 6.7 [CD].
23.2	Refer to clause 6.7 [CD].
23.2.13	No clause.
23.3	Replace 23.3 with the following: Further circumstances that delays practical completion due to any other cause beyond the contractor's reasonable control that could not have reasonably been anticipated and provided for which the contractor may be entitled to a revision of the date for practical completion, with or without an adjustment of the contract value as determined by the Employer [6.7 CD].
23.7	Refer to clause 6.7 [CD].
23.8	Refer to clause 6.7 [CD].
24.1	Replace clause 24.1 with the following: Where the contractor fails to bring the works , or a section thereof, to practical-, works-, or final- completion by the applicable completion date [B10 CD], or the revised applicable completion date, the contractor shall be liable to the employer for the penalty [B10 CD].
24.2	Replace clause 24.2 with the following: Where the employer elects to levy such penalty the employer , or the principal agent on instruction from the employer , shall give notice thereof to the contractor . The principal agent shall determine the penalty due from the later of the date for practical- works-, or final- completion [B10 CD], or the revised date for practical- works-, or final- completion , up to and including the earlier of:
24.2.1	Replace clause 24.2.1 with the following: The actual or deemed date of practical-, works- or final- completion of the works , or a section thereof [23.7.1].
25.2	Replace clause 25.2 with the following: The principal agent shall issue at regular agreed intervals [CD] payment certificates, to the contractor with a copy to the employer, up to and including practical completion. Interim Payment certificates may be issued to the contractor between practical completion and the final payment certificate. A payment certificate may be for a nil or negative amount.

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25.3	Add the following to clause 25.3: 25.3.12 Monthly Local content report. 25.3.13 EPWP / NYS payment register, labour reports and certified ID document of EPWP/ NYS beneficiaries, Contract between Contractor and EPWP/ NYS beneficiaries, attendance register (if applicable). 25.3.14 Tax Invoice. 25.3.15 Labour intensive report. 25.3.16 Contract participation goal and cidb BUILD programme reports.
25.5	No Clause.
25.6	Replace clause 25.6 with the following: Materials and goods will only be certified and paid for upon providing proof of full payment to the supplier and proof of transfer of ownership from the supplier to the contractor by the contractor. Once paid, material and goods shall become the property of the employer and shall not be removed from site without the written authority of the Employer.
25.7.5	No Clause.
25.10	Replace clause 25.10 with the following: The employer shall pay the contractor the amount stipulated in an issued payment certificate, correct in all material respects, within thirty (30) calendar days from the date of receiving the payment certificate and invoice including all other substantiating documentation for items certified in the payment certificate.
25.12	Replace clauses 25.12 to 25.12.3 with the following: The value certified shall be subject to the following percentage adjustments : (Clauses 25.12.1 to 25.12.5 shall be applicable to a contract sum up to R1 million. In the event of a contract sum more than R1 million for Options D & E (C 1.0 Securities [11.0]) Clauses 25.12.1 to 25.12.5 shall be applicable) 25.12.1 Where a security is selected in terms of C 1.0 Securities [11.0] the value of the works in terms of 25.1 and of the materials and goods in terms of 25.4 shall be certified in full. The value certified shall be subject to the following percentage adjustments: 25.12.2 Ninety-five per cent (95%) of such value in interim payment certificates issued up to the date of practical completion. 25.12.3 Ninety-seven per cent (97%) of such value in interim payment certificates issued on the date of works completion and up to but excluding the date of final completion. 25.12.4 Ninety-nine per cent (99%) of such value in interim payment certificates issued on the date of final completion and up to but excluding the final payment certificate in terms of 26. 25.12.5 One hundred per cent (100%) of such value in the final payment certificate in terms of 26 except where the amount certified is in favour of the employer. In such an event the payment reduction shall remain at the adjustment level applicable to the final payment certificate.

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25.12 Continued	(Clauses 25.12.6 to 25.12.10 shall be applicable to a contract sum more than R1 million for Option C (C 1.0 Securities [11.0]) 25.12.6 Where security is a payment reduction in term of Option C, the value of the works in terms of 25.1 and materials and goods in terms of 25.4 shall be certified in full. The value certified shall be subject to the following percentage adjustments: 25.12.7 Ninety per cent (90%) of such value in interim payment certificates issued up to the date of practical completion. 25.12.8 Ninety-seven per cent (97%) of such value in interim payment certificates issued on the date of practical completion and up to but excluding the date of final completion. 25.12.9 Ninety-nine per cent (99%) of such value in interim payment certificates issued on the date of final completion and up to but excluding the final payment certificate in terms of 26. 25.12.10 One hundred per cent (100%) of such value in the final payment certificate in terms of 26 except where the amount certified is in favour of the employer. In such an event the payment reduction shall remain at the adjustment level applicable to the final payment certificate.
26.1	Refer to clause 6.7 [CD].
26.4.3	Omit clause.
26.7	Refer to clause 6.7 [CD].
26.10	Replace 26.10 with the following: The principal agent shall prepare the final account in consultation with the employer and issue the final account, to the contractor within sixty (60) working days of the date of practical completion.
26.12	Refer to clause 6.7 [CD].
27.1.2	Replace 27.1.2 with the following: Interest due to late payment only.
27.1.4	Replace 27.1.4 with the following: Interest due to late payment only.
27.1.5	No clause.
27.5	Add the following as clause 27.5: Where the employer decides to recover an amount due in terms of 27.2 from a construction guarantee, cash deposit or retention money held as security, the employer shall issue a written demand to the contractor before recovering the amount. Should such amount not be paid to the employer within fourteen (14) calendar days of the date-of notice by the employer, the employer may recover such an amount from the security.

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27.6	Add the following as clause 27.6: Where a provisional sequestration or provisional liquidation order has been granted or where an order has been granted which commences sequestration, liquidation, bankruptcy, receivership, winding-up or any similar effect, against the contractor or this agreement is cancelled in terms of 29, the employer may issue a demand to the guarantor in terms of the construction guarantee or advance payment guarantee held as security.
28.0	No clause.
28.1	No clause.
28.1.1	No clause.
28.1.2	No clause.
28.1.3	No clause.
28.1.4	No clause.
28.1.5	No clause.
28.2	No clause.
28.3	No clause.
28.4	No clause.
29.1.4	Add the following as clause 29.1.4: The contractor's estate has been sequestrated, liquidated or surrendered in terms of the insolvency laws in force within the Republic of South Africa.
29.1.5	Add the following as clause 29.1.5: The contractor has engaged in corrupt or fraudulent practices in competing for or in executing the contract.
29.1.6	Add the following as clause 29.1.6: Honour his obligations in terms of clauses 10.1.5.1.3, 11.4.1 and 12.2. sub-clauses 5, 6, 8, 9, 10, 11, 12, 13, 15, 16, 19, 20, 22.
29.7	Replace clause 29.7 with the following: The employer, on notice to the contractor, may recover damages from the contractor from the date of termination including, but not limited to, additional costs incurred in the completion, consultant cost, rental of alternative accommodation, invitation of completion tenders, salaries of officials and safeguarding the site, of the remaining work [25.3.7; 27.1.3].
29.9	Replace clause 29.9 with the following: The employer has the right of recovery against the contractor , where applicable, [CD] from: The guarantee for construction (variable) until the final payment has been made; or The guarantee for construction (fixed) until the date of practical completion; or The payment reduction until the final payment is made; or The cash deposit made as security until the final payment is made.
29.14.1	No clause.
29.14.3	No clause.

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29.14.4	No clause.
29.14.5	No clause.
29.14.6	No clause.
29.14.7	No clause.
29.15	No clause.
29.16	No clause.
29.17.3	No clause.
29.17.6	No clause.
29.21.5	No clause.
29.22	No clause.
29.23	No clause.
29.25.3	No clause.
29.25.4	No clause.
29.27	No clause.
30.2	Replace clause 30.2 with the following: Where such disagreement is not resolved within ten (10) working days of receipt of such notice it shall be deemed to be a dispute and shall be submitted to Mediation as a first method of dispute resolution failing which the parties will resort to Litigation.
30.3 to 30.7.7	No clauses.
30.8	Replace clause 30.8 with the following: The parties may, by agreement and at any time before Litigation, refer a dispute to mediation, in which event:
30.8.1	No clause.
30.8.2	Replace clause 30.8.2 with the following: The appointment of a mediator, the procedure, and the status of the outcome shall be agreed between the parties.
30.8.3	Replace clause 30.8.3 with the following: Regardless of the outcome of a mediation the parties shall bear their own costs concerning the Mediation and equally share the costs of the mediator and related expenses.
30.9	Replace clause 30.9 with the following: Institution of Litigation shall be commenced and process served within three (3) year from the date of existence of the dispute, failing which the dispute shall lapse.
30.10	No clause.
30.12	No clause.

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B 19.0 CONTRACT PARTICIPATION GOAL TARGETS AND CIDB B.U.I.L.D. PROGRAMME

The contractor shall achieve in the performance of the contract the following Contract Participation Goals (CPGs) as described in PG-01.2 (EC): Scope of Work and PG-02.2 (EC): Pricing Assumptions and in accordance with the feasibility study, which forms part of the specifications in the CPG Section of the Specification of this contract.

(a)	Minimum Targeted Local Manufacturers of Material Contract Participation Goal, in accordance with the cidb Standard for Contract Participation Goals for Targeting Enterprises and Labour through Construction Works Contracts as published in the Government Gazette Notice No. 41237 of 10 November 2017, as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract.	Not applicable
(b)	Minimum Targeted Local Building Material Suppliers Contract Participation Goal in accordance with the cidb Standard for Contract Participation Goals for Targeting Enterprises and Labour through Construction Works Contracts as published in the Government Gazette Notice No. 41237 of 10 November 2017, as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract.	Not applicable
(c)	Minimum Targeted Local Labour Skills Development Contract Participation Goal in accordance with the cidb Standard for Contract Participation Goals for Targeting Enterprises and Labour through Construction Works Contracts as published in the Government Gazette Notice No. 41237 of 10 November 2017, as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract.	Not applicable
(d)	cidb BUILD Programme: Minimum Targeted Enterprise Development Contract Participation Goal in accordance with the cidb Standard for Indirect Targeting for Enterprise Development through Construction Works Contracts, No 36190 Government Gazette, 25 February 2013, as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract.	Not applicable
(e)	cidb BUILD Programme: Minimum Targeted Contract Skills Development Goal in accordance with the cidb Standard for Developing Skills through Infrastructure Contracts as published in the Government Gazette Notice No. 48491 of 28 April 2023. and the cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract.	Not applicable
(f)	DPWI National Youth Service training and development programme (NYS) – Condition of Contract.	Not applicable
(g)	Labour Intensive Works – Condition of Contract.	Not applicable
(h)		Select
(i)		Select

**C1.3: FORM OF GAURANTEE
FIXED CONSTRUCTION GUARANTEE
DPW 10.1 (EC)**

DPW-10.1 (EC): FIXED CONSTRUCTION GUARANTEE - JBCC 2000 PRINCIPAL BUILDING AGREEMENT (EDITION 6.2 OF MAY 2018)

Director-General
Department of Public Works and Infrastructure
Government of the Republic of South Africa

FOR ATTENTION

The Director General
Private Bag X3913
Gqeberha
6056

Sir/Madam

FIXED CONSTRUCTION GUARANTEE FOR THE EXECUTION OF A CONTRACT IN TERMS OF JBCC 2000 (EDITION 6.2 OF MAY 2018)

1. With reference to the contract between _____
_____ (hereinafter referred to as the “**contractor**”) and the Government of the Republic of South Africa in its Department of Public Works and Infrastructure (hereinafter referred to as the “**employer**”), Contract/Tender No: **GQEQ-2025/2026-111**, for the **EASTERN CAPE: MDANTSANE LABOUR CENTRE: DEPARTMENT OF EMPLOYMENT AND LABOUR: SUPPLY AND INSTALLATION OF WATER TANKS**.
(Hereinafter referred to as the “contract”) in the amount of R **insert amount, (insert amount in words)**, (hereinafter referred to as the **contract sum**),
I / We, _____
in my/our capacity as _____ and hereby
representing _____ (hereinafter referred to as the “**guarantor**”) advise that the **guarantor** holds at the **employer’s** disposal the sum of R **insert amount, (insert amount in words)** being 5% of the **contract sum** (excluding VAT), for the due fulfillment of the contract.
2. The **guarantor** hereby renounces the benefits of the exceptions *non numeratae pecunia; non causa debiti; excussionis et divisionis; and de duobus vel pluribus reis debendi* which could be pleaded against the enforcement of this guarantee, with the meaning and effect whereof I/we declare myself/ourselves to be conversant, and undertake to pay the **employer** the amount guaranteed, on receipt of a written demand from the **employer** to do so, stating that the **employer** has a right of recovery against the **contractor** in terms of 33.0 of the contract.
3. Subject to the above, but without in any way detracting from the **employer’s** rights to adopt any of the procedures provided for in the contract, the said demand can be made by the **employer**, at any stage prior to the expiry of this guarantee.
4. The amount paid by the **guarantor** in terms of this guarantee may be retained by the **employer** on condition that upon the issue of the last final **payment certificate**, the **employer** shall account to the **guarantor** showing how this amount has been expended and refund any balance due to the **guarantor**.

Tender no: **GQEQ-2025/2026-111**

5. The **employer** shall have the absolute right to arrange his affairs with the **contractor** in any manner which the **employer** deems fit and the **guarantor** shall not have the right to claim his release on account of any conduct alleged to be prejudicial to the **guarantor**. Without derogating from the foregoing, any compromise, extension of the **construction period**, indulgence, release or variation of the **contractor's** obligation shall not affect the validity of this guarantee.
6. The **guarantor** reserves the right to withdraw from this guarantee at any time by depositing the guaranteed amount with the **employer**, whereupon the guarantor's liability ceases.
7. This guarantee is neither negotiable nor transferable, and
 - (a) must be surrendered to the **guarantor** at the time when the **employer** accounts to the **guarantor** in terms of clause 4 above, or
 - (b) shall lapse on the date of the last **certificate of practical completion**.
8. This guarantee shall not be interpreted as extending the **guarantor's** liability to anything more than payment of the amount guaranteed.

SIGNED AT _____ ON THIS _____ DAY OF
_____ 20__

AS WITNESS

1. _____
2. _____

By and on behalf of

(insert the name and physical address of the guarantor)

NAME: _____

CAPACITY: _____
(duly authorised thereto by resolution attached marked
Annexure A)

DATE: _____

- A. No alterations and/or additions of the wording of this form will be accepted.
- B. The physical address of the guarantor must be clearly indicated and will be regarded as the **guarantor's *domicilium citandi et executandi***, for all purposes arising from this guarantee.
- C. This GUARANTEE must be returned to: _____

**C1.4: FORM OF GAURANTEE
VARIABLE CONSTRUCTION GAURANTEE
DPW 10.3 (EC)**

DPW-10.3 (EC): VARIABLE CONSTRUCTION GUARANTEE - JBCC 2000 PRINCIPAL BUILDING AGREEMENT (EDITION 6.2 OF MAY 2018)

Director-General
Department of Public Works and Infrastructure
Government of the Republic of South Africa

FOR ATTENTION

The Director General
Private Bag X3913
Gqeberha
6056

Sir,

VARIABLE CONSTRUCTION GUARANTEE FOR THE EXECUTION OF A CONTRACT IN TERMS OF JBCC 2000 (EDITION 6.2 OF MAY 2018)

1. With reference to the contract between _____
_____ (hereinafter referred to as the “**contractor**”) and the Government of the Republic of South Africa, in its Department of Public Works and Infrastructure, (hereinafter referred to as the “**employer**”), Contract/Tender No: **GQEQ-2025/2026-111**, for the **EASTERN CAPE: MDANTSANE LABOUR CENTRE: DEPARTMENT OF EMPLOYMENT AND LABOUR: SUPPLY AND INSTALLATION OF WATER TANK**. (hereinafter referred to as the “**contract**” in the amount of R *insert amount, (insert amount in words)* (hereinafter referred as the **contract sum**),

I / We, _____
in my/our capacity as _____ and hereby
representing _____ (hereinafter referred to as the “**guarantor**”) advise that the **guarantor** holds at the **employer’s** disposal the sum of R *insert amount, (insert amount in words)* being 10% of the **contract sum** (excluding VAT), for the due fulfillment of the contract.
2. I / We advise that the **guarantor’s** liability in terms of this guarantee shall be as follows:
 - (a) From and including the date on which this guarantee is issued and up to and including the date of payment of the amount in the last final **payment certificate**, the **guarantor** will be liable in terms of this guarantee to the maximum amount of 10% of the **contract sum** (excluding VAT);
 - (b) The **guarantor’s** liability shall reduce to 3 % of the **contract value** (excluding VAT) as determined at the date of the last **certificate of practical completion**, subject to such amount not exceeding 10% of the **contract sum** (excluding VAT).
 - (c) The **guarantor’s** liability shall reduce to 1 % of the **contract value** (excluding VAT) as determined at the date of the last **certificate of final completion**, subject to such amount not exceeding 10 % of the **contract sum** (excluding VAT).
 - (d) This guarantee shall expire on the date of the last **final payment certificate**.
 - (e) The **practical completion certificate** and the **final completion certificate** referred to in this guarantee shall mean the certificates issued in terms of the contract.

Tender no: **GQEQ-2025/2026-111**

3. The **guarantor** hereby renounces the benefits of the exceptions *non numeratae pecunia; non causa debiti; excussionis et divisionis*; and *de duobus vel pluribus reis debendi* which could be pleaded against the enforcement of this guarantee, with the meaning and effect whereof I/we declare myself/ourselves to be conversant, and undertake to pay the **employer** the amount guaranteed on receipt of a written demand from the **employer** to do so, stating that the **employer** has a right of recovery against the **contractor** in terms of 33.0 of the contract.
4. Subject to the above, but without in any way detracting from the **employer's** rights to adopt any of the procedures provided for in the contract, the said demand can be made by the **employer** at any stage prior to the expiry of this guarantee.
5. The amount paid by the **guarantor** in terms of this guarantee may be retained by the **employer** on condition that upon the issue of the last **final payment certificate**, the **employer** shall account to the **guarantor** showing how this amount has been expended and refund any balance due to the **guarantor**.
6. The **employer** shall have the absolute right to arrange his affairs with the **contractor** in any manner which the **employer** deems fit and the **guarantor** shall not have the right to claim his release on account of any conduct alleged to be prejudicial to the **guarantor**. Without derogating from the foregoing, any compromise, extension of the construction period, indulgence, release or variation of the **contractor's** obligation shall not affect the validity of this guarantee.
7. The **guarantor** reserves the right to withdraw from this guarantee at any time by depositing the amount guaranteed with the **employer**, whereupon the **guarantor's** liability ceases.
8. This guarantee is neither negotiable nor transferable, and
 - (a) must be surrendered to the **guarantor** at the time when the **employer** accounts to the **guarantor** in terms of clause 5 above, or
 - (b) shall lapse in accordance with clause 2(d) above.
9. This guarantee shall not be interpreted as extending the **guarantor's** liability to anything more than the payment of the amount guaranteed.

SIGNED AT _____ ON THIS _____ DAY OF _____ 20__

AS WITNESS

1. _____

2. _____

Tender no: **GQEQ-2025/2026-111**

By and on behalf of

(insert the name and physical address of the guarantor)

NAME: _____

CAPACITY: _____
(duly authorised thereto by resolution attached marked
Annexure A)

DATE: _____

- A. No alterations and/or additions of the wording of this form will be accepted.
- B. The physical address of the guarantor must be clearly indicated and will be regarded as the guarantor's *domicilium citandi et executandi*, for all purposes arising from this guarantee.
- C. This guarantee must be returned to: _____

PART C2: PRICING DATA

C2.1: PRICING ASSUMPTIONS
PG-01.2 (EC)

PG-02.2 (EC) PRICING ASSUMPTIONS - JBCC 2000 PRINCIPAL BUILDING AGREEMENT (Edition 6.2 of May 2018)

Project title:	EASTERN CAPE: MDANTSANE LABOUR CENTRE: DEPARTMENT OF EMPLOYMENT AND LABOUR: SUPPLY AND INSTALLATION OF WATER TANK.				
Tender / Quotation no:	GQEQ-2025/2026-111	WCS no:	056632	Reference no:	14/1/3/2/1/6464/5050

C2.1 Pricing Assumptions

C2.1.1 BILLS OF QUANTITIES / LUMP SUM DOCUMENT

The **bills of quantities / lump sum document** forms part of and must be read and priced in conjunction with all the other documents forming part of the **contract documents**, the Standard Conditions of Tender, Conditions of Contract, Specifications, Drawings and all other relevant documentation.

The prices and rates to be inserted by the Tenderer in the Bill of Quantities shall be the full inclusive prices to be paid by the Employer for the work described under the several items, and shall include full compensation for all cost and expenses that may be required in and for the completion and maintenance during the defects liability period of all the work described and as shown on the drawings as well as all overheads, profits, incidentals and the cost of all general risks, liabilities and obligations set forth or implied in the documents on which the Tender is based.

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

No alterations, erasures, omissions or additions is to be made in the text and/or conditions of these Bills of Quantities. Should any such alterations, amendments, note/s or addition be made, the same will not be recognized, but reading of these Bills of Quantities as originally prepared by the Quantity Surveyor will be adhered to.

The contractor is cautioned that the use of any quantities appearing in these Bills of Quantities for the purpose of ordering material, it is done at own risk and no liability whatsoever will be admitted by the Employer or Quantity Surveyor for the correctness of such Quantities. Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance is made for waste.

The prices and rates to be inserted by the Tenderer in the Bills of Quantities shall be the full inclusive prices to be paid by the Employer for the work described. Such prices and rates shall cover all costs and expenses that may be required in and for the execution of the work described, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the documents on which the tender is based, as well as overhead charges and profit. Market related prices shall be inserted as these will be used as a basis for assessment of payment for additional work that may have to be carried out. The Employer reserves the right to balance the Bill rates where deemed necessary within the Tendered Amount.

A price or rate is to be entered against each item in the Bills of Quantities, whether the quantities are stated or not. An item against which no rate is/are entered, or if anything other than a rate or a nil rate (for example, a zero, a dash or the word "included" or abbreviations thereof) is entered against an item, it will also be regarded as a nil rate having been entered against that item, i.e. that there is no charge for that item. The Tenderer may be requested to clarify nil rates, or items regarded as having nil rates; and the Employer may also perform a risk analysis with regard to the reasonableness of such rates.

**PG-02.2 (EC) PRICING ASSUMPTIONS - JBCC 2000
PRINCIPAL BUILDING AGREEMENT (Edition 6.2 of May 2018)**

Should the full intent and meaning of any description not be clear, the bidder shall, before submission of his tender, call for a written directive from the principal agent, failing which it shall be assumed that the contractor has allowed in his pricing for materials and workmanship in terms of National Best Practice.

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

The Tenderer is required to check the Bills of Quantities and the numbers of the pages and should any be found to be missing or in duplicate, or should any of the typing be indistinct, or any doubt of obscurity arise as to the meaning of any description or particulars of any item, or if this Tender Enquiry contains any obvious errors, then the Tenderer must immediately inform the Principal Agent and have them rectified or explained in writing as the case may be. No liability whatsoever will be admitted by reason of the Contractor having failed to comply with the foregoing instruction.

The contractor is cautioned that the use of any quantities appearing in these Bills of Quantities for the purpose of ordering material, it is done at own risk and no liability whatsoever will be admitted by the Employer or Quantity Surveyor for the correctness of such Quantities. Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance is made for waste.

No alterations, erasures, omissions, or additions are allowed to be made to the text and/or conditions contained in these Bills of Quantities. If any such alteration, amendment, note or addition is made, it will not be recognised and the Bills of Quantities will be deemed to be as originally drawn up by the Quantity Surveyor.

A price or rate is to be entered against each item in the Bills of Quantities, whether the quantities are stated or not. An item against which no rate is/are entered, or if anything other than a rate or a nil rate (for example, a zero, a dash or the word “included” or abbreviations thereof) is entered against an item, it will also be regarded as a nil rate having been entered against that item, i.e. that there is no charge for that item. The Tenderer may be requested to clarify nil rates, or items regarded as having nil rates; and the Employer may also perform a risk analysis with regard to the reasonableness of such rates.

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

The Tenderer shall fill in rates for all items where the words “rate only” appear in the “Total” column. “Rate Only” items have been included where:

- (a) variations of specified components in the make-up of a pay item may be expected; and
- (b) no work under the item is foreseen at tender stage but the possibility that such work may be required is not excluded.

For ‘Rate Only’ items no quantities are given in the “Quantity” column but the quoted rate shall apply in the event of work under this item being required. The Tenderer shall however note that in terms of the Tender Data the Tenderer may be asked to reconsider any such rates which the Employer may regard as unbalanced.

Descriptions in the Bills of Quantities are abbreviated and comply generally with those in the “PW 371” and the principles contained in the latest version of the Standard System for Measuring Builders’ Work in South Africa. It is the intention that the abbreviated descriptions be fully described when read with the applicable measuring system and the relevant preambles and/or specifications. However, should the full intent and meaning of any description not be clear, the bidder shall, before submission of his tender, call for a written directive from the principal agent, failing which it shall be assumed that the contractor has allowed in his pricing for materials and workmanship in terms of National Best Practice.

**PG-02.2 (EC) PRICING ASSUMPTIONS - JBCC 2000
PRINCIPAL BUILDING AGREEMENT (Edition 6.2 of May 2018)**

The price quoted against each item of this Bills of Quantities shall cover the full inclusive cost of the complete work to which it refers, as described in the Conditions of Contract and Specifications and as shown on the Drawings and shall allow for labour, material, transporting, loading, storage, supervision, commissioning, wastage, as well as the builders profit and attendance.

The Tenderer must ensure that he fully completes all columns of the Bill of Quantities including the Final Summary. The fully priced bill of quantities must be submitted with the tender or The Final Summary and the Section Summary pages **MUST** be returned with the tender document as indicated the PA-03 Notice and Invitation to Tender / PA-04 Notice and Invitation for quotation.

The tenderers are to ensure that they have read and understood the project specifications included in C3: Scope of Work. All the information provided in the Scope of Works form part of the work and must be included in the rates.

"The Contractor shall be deemed to have inspected and examined the Site and its surroundings and information available in connection therewith and to have satisfied himself before submitting his tender (as far as is practicable) as to:

- (a) the form and nature of the Site and its surroundings, including subsurface conditions,
- (b) the hydrological and climatic conditions,
- (c) the extent and nature of work and materials necessary for the execution and completion of the Works,
- (d) the means of access to the Site and the accommodation he may require

and, in general, shall be deemed to have obtained all information (as far as is practicable) as to risks, contingencies and all other circumstances which may influence or affect his Tender"

C2.1.2 VALUE ADDED TAX

The contract sum must include for Value Added Tax (VAT). All rates, provisional sums, etc. in the bills of quantities / lump sum document shall be in Rands and cents and shall include all levies and taxes (other than VAT). VAT will be added in the summary of the Bill of Quantities. The rates must however be net (exclusive of VAT) with VAT calculated and added to the total value thereof in the Final Summary. All rates and amounts quoted in the Bill of Quantities

C2.1.3 CORRECTION OF ENTRIES

Incorrect entries shall not be erased or obliterated with correction fluid but must be crossed out neatly. The correct figures must be entered above or adjacent to the deleted entry, and the alteration must be initialled by the Tenderer.

C2.1.4 ARITHMETICAL ERRORS

Arithmetical errors found in the Bill of Quantities as a result of faulty multiplication of addition, will be corrected by the Engineer at the tender evaluation stage, as set out in the Tender Data.

C2.1.5 TRADE NAMES

Tenderers attention is drawn to the fact that wherever trade names or references to any catalogue have been made in these Bills of Quantities, it is purely to establish a standard for the required material. If use is made of any other equally approved material in lieu of the prescribed trade name or catalogue, the necessary price adjustments will be made.

C2.1.6 CONTRACT DOCUMENTS

The Tenderers are advised to examine the bills of quantities, drawings and specifications including all other contract documents and make themselves thoroughly acquainted with the nature and requirements of the work, as no claim for extra payment in this regard will be entertained. Should any parts of the drawings not be clearly intelligible to the Tender, he must, before submitting his tender, obtain clarification from the Principal Agent.

C2.1.7 FIXED PRICE CONTRACT

The Bills of Quantities document is not a fixed price contract and the Tenderers are to take note that contract price adjustments (CPAP) are applicable to this contract.

C2.1.8 PAYMENTS

Interim valuations and payments will be prepared on a monthly basis, all in terms of the conditions of contract.

The contractor is to note that no payment will be made for materials stored off site and in the case of materials being stored on site, payment will only be made for such materials on condition that they have not been delivered to the site prematurely, a tax invoice and proof of payment (ownership) is submitted by the Contractor.

C2.1.9 ACCOMMODATION ON SITE

It is imperative to note that no living quarters for construction workers on site will not be permitted for the full duration of the contract unless otherwise stated in the contract data or permission be granted by the Employer.

C2.1.10 SUBMISSION OF LOCAL MATERIAL UTILISATION REPORT (LOCAL CONTENT)

Submission of Local Material Utilisation Reports is “not applicable” to this project.

Bidders to note that materials procured for the works should be from South African manufactures and suppliers. Imported materials shall only be considered under exceptional circumstances, based on compelling technical justifications, and subject to the approval by the NDPWI.

The contractor shall be responsible for record keeping, documenting and submission of monthly local material utilization report with supporting documentation to the Employer's representative within 7 working days of the beginning of the successive month, indicating the percentage targets achieved in terms of DTI&C designated industry/sector/sub-sector schedule as per the PA36 and Annexures C attached to the tender document. The final percentage achievement to be reconciled upon completion of the project and form part of the final account. Allowance must be made for submitting reports to the Employer's Representative on a monthly basis in terms of monthly and accumulative targets achieved with audited supporting documentation.

C2.1.11 CONTRACT PARTICIPATION GOALS

The contractor shall achieve in the performance of this contract the following Contract Participation Goals (CPGs) as indicated below:

Prescribed Profit and Attendance percentages have been stipulated, all inclusive of associated costs to the contractor for implementation and allowance for submitting reports to the Employer's

Representative on a monthly basis in terms of monthly and accumulative targets achieved with audited supporting documentation.

Monthly progressive reports to be submitted to the Employer's representative indicating the percentage targets achieved which must be reconciled upon completion of the project and to form part of the final account.

C2.1.11.1 MINIMUM TARGETED LOCAL BUILDING MATERIAL MANUFACTURERS CONTRACT PARTICIPATION GOAL

The Minimum Targeted Local Building Material Manufacturers CPG is “not applicable” to this project.

Provision is made within the Contract Participation Goal section in the Bill of Quantities for the Minimum Targeted Local Building Material Manufacturers CPG in the execution of this project as described in PG-01.2 (EC) SCOPE OF WORKS C3.6.1. Prescribed Profit and Attendance percentages have been stipulated, all inclusive of associated costs to the contractor for implementation and allowance for submitting reports to the Employer's Representative on a monthly basis in terms of monthly and accumulative targets achieved with audited supporting documentation.

C2.1.11.2 MINIMUM TARGETED LOCAL BUILDING MATERIAL SUPPLIERS CONTRACT PARTICIPATION GOAL

The Minimum Targeted Local Building Material Suppliers CPG is not applicable to this project.

Provision is made within the Contract Participation Goal section in the Bill of Quantities for the Minimum Targeted Local Building Material Suppliers CPG in the execution of this project as described in PG-01.2 (EC) SCOPE OF WORKS C3.6.2. Prescribed Profit and Attendance percentages have been stipulated, all inclusive of associated costs to the contractor for implementation and allowance for submitting reports to the Employer's Representative on a monthly basis in terms of monthly and accumulative targets achieved with audited supporting documentation.

C2.1.11.3 MINIMUM TARGETED LOCAL LABOUR CONTRACT PARTICIPATION GOAL

The Minimum Targeted Local Labour Skills Development CPG is not applicable to this project.

Provision is made within the Contract Participation Goal section in the Bill of Quantities for the Minimum Targeted Local Labour CPG in the execution of this project as described in PG-01.2 (EC) SCOPE OF WORKS C3.6.3. Prescribed Profit and Attendance percentages have been stipulated, all inclusive of associated costs to the contractor for implementation and allowance for submitting reports to the Employer's Representative on a monthly basis in terms of monthly and accumulative targets achieved with audited supporting documentation.

C2.1.11.4 MINIMUM TARGETED ENTERPRISE DEVELOPMENT CONTRACT PARTICIPATION GOAL

The Minimum Targeted Enterprise Development Contract Participation Goal is not applicable to this project.

A provisional amount has been allowed for within the Contract Participation Goal section in the Bill of Quantities for the Minimum Targeted Enterprise Development CPG in the execution of this project as described in PG-01.2 (EC) SCOPE OF WORKS C3.6.4. The provisional amount allowed is for the appointment of training coordinator, mentor, training service providers and training of the beneficiary enterprises. The provisional amount will be adjusted in accordance with the actual Contract Amount (Awarded tender amount excluding allowance, provisional amounts and VAT) of the awarded bid.

**PG-02.2 (EC) PRICING ASSUMPTIONS - JBCC 2000
PRINCIPAL BUILDING AGREEMENT (Edition 6.2 of May 2018)**

Prescribed Profit and Attendance percentages have been stipulated, all inclusive of associated costs to the contractor for implementation and allowance for submitting reports to the Employer's Representative on a monthly basis in terms of monthly and accumulative targets achieved with audited supporting documentation.

The contractor shall complete a separate bill of quantities upon the award of the project and identification of the respective beneficiaries and the appointment of the training coordinator, mentor, training service providers of which the cost will be offset against the provisional amount allowed in the Bills of Quantities.

C2.1.11.5 MINIMUM TARGETED TARGETED CONTRACT SKILLS DEVELOPMENT GOALS (CSDG)

The Minimum Targeted Contract Skills Development CPG is not *applicable* to this project.

A provisional amount has been allowed for within the Contract Participation Goal section in the Bill of Quantities for the Minimum Targeted Skills Development CPG in the execution of this project as described in PG-01.2 (EC) SCOPE OF WORKS C3.6.5. The provisional amount allowed is for:

- stipends payable to the beneficiaries
- appointment of training coordinator
- appointment of mentor (where applicable)
- appointment of training service providers
- other additional costs as per Table 3 of the Standard

The provisional amount will be adjusted in accordance with the actual Contract Amount (Awarded tender amount excluding allowance, provisional amounts and VAT) of the awarded bid.

Prescribed Profit and Attendance percentages have been stipulated, all inclusive of associated costs to the contractor for implementation and allowance for submitting reports to the Employer's Representative on a monthly basis in terms of monthly and accumulative targets achieved with audited supporting documentation.

The contractor shall complete a separate bill of quantities upon the award of the project and identification of the respective beneficiaries. The CPG value to be achieved will be based on the actual contract amount which will be offset against the provisional amount allowed for within the Contract Participation Goal section in the Bill of Quantities.

Payment

The contractor shall upon the appointment of beneficiaries, provide a breakdown of all the associated costs. The contractor shall provide a payment schedule as to how the CPG costs will be claimed against for inclusion in the monthly payment certificates.

(a) Payment to the contractor to accommodate Part/Full Occupational qualification and Trade qualifications:

Should the contractor select Part/Full Occupational qualification and Trade qualifications learners, then the employer shall make provision for payment to the contractor as indicated in Table 3 of the Standard.

The contract skills participation goal, expressed in Rand, shall not be less than the contract amount multiplied by a percentage (%) factor given in Table 2 in the Standard for the applicable class of construction works. Should the contractor select Part/Full Occupational qualification and Trade qualifications learners, then the employer shall make provision for payment to the contractor as indicated in Table 2 of the Standard.

Table 2: Contracting skills development goals for different classes of engineering and construction works contracts

Source: cidb Standard for Developing Skills through Infrastructure Contracts as published in the Government Gazette Notice No 48491 Government Gazette, 23 April 2023 (Table 2, Page 7)

Class of construction works as identified in terms of Regulation 25 (3) of the Construction Industry Regulations 2004		Construction skills development goal (CSDG) (%)
Designation	Description	
CE	Civil Engineering	0.25
CE and GB	Civil engineering and General Building	0.375
EE	Electrical Engineering works (buildings)	0.25
EP	Electrical Engineering works (infrastructure)	0.25
GB	General Building	0.5
ME	Mechanical Engineering works	0.25
SB	Specialist	0.25

No provision for an additional payment item for the payment of the supervisor and/or mentors for the provision of training as provided for in the Contract Participation Goal section in the Bill of Quantities for the training of part/full time occupational learners and/or trade qualification learners. The associated cost is deemed to be included in general supervision on site.

The contractor shall complete a separate bill of quantities upon award, indicating the type and number of beneficiaries as well as the associated Notional Cost of Training to be provided, on which payment will be based.

(b) Payment to the contractor to accommodate Work Integrated Learners and Candidates for professional registration:

Should the contractor select Work Integrated Learners and/or Candidates for professional registration, then the employer shall make provision for payment to the contractor as indicated in Table 3 of the Standard.

Provisional amounts have been included in the Contract Participation Goal section in the Bill of Quantities for the training of Work Integrated Learners and Candidates for professional registration. The contractor shall price his Profit and Attendance (all inclusive of associated costs to the contractor for implementation and reporting), based on the provisional amount in the Contract Participation Goal section in the Bill of Quantities.

The contractor shall complete a separate bill of quantities upon award, indicating the type and number of beneficiaries as well as the associated Notional Cost of Training to be provided, on which payment will be based.

The CPG value to be achieved will be based on the contract amount as defined by the Standard, which will be offset against the provisional amount allowed for within the Contract Participation Goal section in the Bill of Quantities.

The contractor shall apportion the cost of accommodating work integrated learners (P1 and P2 learners) and candidates for professional registration by using Table 3 in the Standard and this cost will be used to determine the Rand value and will be used in determining the contract participation goal in the Bills of Quantities.

Table 3: The notional cost of providing training opportunities per quarter

Source: cidb Standard for Developing Skills through Infrastructure Contracts as published in the Government Gazette Notice No 48491 Government Gazette, 23 April 2023 (table 3, Page 9)



**PG-02.2 (EC) PRICING ASSUMPTIONS - JBCC 2000
PRINCIPAL BUILDING AGREEMENT (Edition 6.2 of May 2018)**

Type of Training Opportunity	Provision for stipends (Unemployed learners only)	Provisions for mentorship	Provisions for additional costs*	Total costs	
				Unemployed learners	Employed learners
Method 1					
Occupational qualification	R7 000	R0	R9 000	R16 000	R9 000
Method 2					
TVET College graduates	R14 000	R0	R9 000	R23 000	N/A
Apprenticeship	R14 000	R0	R12 000	R26 000	R12 000
Method 3					
P1 and P2 learners	R24 000	R20 000	R4 500	R48 500	N/A
Method 4					
Candidates with a 3 year diploma	R37 000	R20 000	R4 500	R61 500	R20 000
Candidates with 4 year qualification	R47 000	R20 000	R4 500	R71 500	R20 000

Note: The notional cost of providing training opportunities will increase by CPI on an annual basis based on April CPI. Should the rates increase after bid award or during construction the rates will be adjusted as a provisional item.

Example: Training Target Calculation for a R65,7m GB contract

Contract amount	R65 700 000
Contract duration	12 Months
CSDG	0,50%
Minimum CSDG target	0,50% x R65 700 000 = R328 500 (Minimum requirement)

Skills Types	Number of learners	Notional Cost / Learner / Quarter	Notional cost/learner/year	Total Notional Cost over 12 months Contract
Method 2: Workplace learning opportunities, with unemployed TVET graduates	1	R23 000	R92 000	R92 000
Method 3: Candidacy for an unemployed learner with a 3-year qualification	1	R61 500	R246 000	R246 000
Total	2			R338 000

C2.1.11.6 NATIONAL YOUTH SERVICE TRAINING AND DEVELOPMENT PROGRAMME

The National Youth Service Training and Development Programme is *applicable* to this project.

The programme shall be implemented in terms of the Implementation of the National Youth Service Programme under the Expanded Public Works (EPWP) and shall be priced in the CPG section of the Bills of Quantities.

Provision has been made within the Contract Participation Goal section in the Bill of Quantities for the National Youth Service Training and Development Programme CPG in the execution of this project as described in PG-01.2 (EC) SCOPE OF WORKS C3.6.6.

Prescribed Profit and Attendance percentages have been stipulated, all inclusive of associated costs to the contractor for implementation and allowance for submitting reports to the Employer's

Representative on a monthly basis in terms of monthly and accumulative targets achieved with audited supporting documentation.

C2.1.11.7 LABOUR-INTENSIVE WORKS

Labour Intensive Works is *not applicable* to this project.

Where labour intensive work is specified in the Bill of Qualities and indicated by "LI" the contractor must price for and include in rates. Contractors are expected to use their initiative to identify additional activities that can be done labour-intensively to comply with the set minimum labour intensity target. Provision has been made within the Contract Participation Goal section in the Bill of Quantities for the monthly reporting illustrating the value of the works executed under Labour Intensive Works CPG in the execution of this project as described in PG-01.2 (EC) SCOPE OF WORKS C3.6.7 and any other supplementary specifications.

Prescribed Profit and Attendance percentages have been stipulated, all inclusive of associated costs to the contractor for implementation and allowance for submitting reports to the Employer's Representative on a monthly basis in terms of monthly and accumulative targets achieved with audited supporting documentation.

C2.2 Submission of Accrual Reports

The Contractor shall submit accrual reports to the client representative at the end of March and September each year for the duration of the Service Contract period from the date of appointment up to and including project closeout. This is to ensure that PMTE complies with the accounting framework GRAP, which requires that PMTE disclose all its accruals as at the end of each reporting date. Allowance must be made for submitting reports to the Employer's Representative on a monthly basis in terms of monthly and accumulative targets achieved with audited supporting documentation.

C2.2: BILLS OF QUANTITIES

Item No		Quantity	Amount
	<u>BILL No. 1</u> <u>PRELIMINARIES</u> MEANING OF TERMS "TENDER / TENDERER" Any reference to the words "Tender" or "Tenderer" herein and/or in any other documentation shall be construed to have the same meaning as the words "Bid" or "Bidder" <u>BUILDING AGREEMENT AND PRELIMINARIES</u> The JBCC Principal Building Agreement (Edition 6.2 - May 2018) prepared by the Joint Building Contracts Committee shall be the applicable building agreement, amended as hereinafter described The JBCC Principal Building Agreement contract data for organs of state and other public sector bodies forms an integral part of this agreement The JBCC General Preliminaries (May 2018) published by the Joint Building Contracts Committee for use with the JBCC Principal Building Agreement (Edition 6.2 - May 2018) shall be deemed to be incorporated in these bills of quantities / lump sum document, amended as hereinafter described The contractor is deemed to have referred to the abovementioned documents for the full intent and meaning of each clause The clauses in the abovementioned documents are hereinafter referred to by clause number and heading only Where any item is not relevant to this agreement such item is marked N/A signifying "not applicable" Where standard clauses or alternatives are not entirely applicable to this agreement such amendments, modifications, corrections or supplements as will apply are given under each relevant clause heading and such amendments, modifications, corrections or supplements shall take precedence notwithstanding anything to the contrary contained in the abovementioned documents		
	Bill No. 1 Preliminaries Professional Services DPWI - Gqeberha Regional Office	Carried Forward	R

Brought Forward

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TENDERER'S SELECTIONS

Before submission of his tender the **contractor** is to complete the tenderer's selections in the **contract data for organs of state and other public sector bodies**

STRUCTURE OF THIS PRELIMINARIES BILL

Section A : A recital of the headings of the individual clauses in the aforementioned **JBCC** Principal Building Agreement

Section B : A recital of the headings of the individual clauses in the aforementioned **JBCC** General Preliminaries

Section C : Any special clauses to meet the particular circumstances of the project

PRICING OF PRELIMINARIES

Should the **contractor** select Option A in the **contract data for organs of state and other public sector bodies** for the adjustment of **preliminaries**, the amounts entered against the relevant items in these **preliminaries** are to be divided into one or more of the three categories provided namely fixed (F), value related (V) and time related (T)

PRICING OF BILLS OF QUANTITIES

The **contractor** is to allow opposite each item for all costs in connection therewith. All prices to include, unless otherwise stated, for all materials, fabrication, conveyance and delivery, unloading, storing, unpacking, hoisting, labour, setting, fitting and fixing in position, cutting and waste (except where to be measured in accordance with the standard system of measurement), patterns, models and templates, plant, temporary works, returning of packaging, duties, taxes (other than Value Added Tax), imposts, establishment charges, overheads, profit and all other obligations arising out of this **agreement**.

Items left unpriced will be deemed to be covered in prices against other items throughout these **bills of quantities** and no claim for any extras arising out of the **contractor's** omission to price any item will be entertained

Prices for all **construction equipment**, temporary works, services and other items shall include for the supply, maintenance, operating cost and subsequent removal and making good as necessary

Carried Forward

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Brought Forward <u>VALUE ADDED TAX</u> Provision is made in the summary page of these bills of quantities / lump sum document for the inclusion of Value Added Tax (VAT) <u>SECTION A: PRINCIPAL BUILDING AGREEMENT</u> <u>INTERPRETATION</u> <u>A1.0 DEFINITIONS AND INTERPRETATION</u> Clause 1.0 The following definitions replace corresponding definitions or are added to the definitions in the JBCC PRINCIPAL BUILDING AGREEMENT (Edition 6.2 of May 2018), whatever the case may be ADVERSE WEATHER CONDITIONS: Adverse weather and inclement weather has the same meaning and used interchangeably and means any weather conditions i.e.: Rain, wind, snow, frost, temperature (cold or heat) that are not in the norm for the area where the construction takes place and during which no work is possible on site AGREEMENT: The completed Form of Offer and Acceptance, the completed JBCC® Principal Building Agreement and contract data for organs of state and other public sector bodies, the contract drawings, the priced document and any other documents reduced to writing and signed by the authorised representative or representatives of the parties CONSTRUCTION PERIOD: The period commencing on the date of possession of the site by the contractor and ending on the date of practical completion CONTRACT PERIOD: The period commencing on the date of the letter of acceptance and ending on the date of final completion	R	
Carried Forward Bill No. 1 Preliminaries Professional Services DPWI - Gqeberha Regional Office	R	

Brought Forward COST FLUCTUATION shall mean contract price adjustment provision (CPAP) for the adjustment of fluctuation in the cost of labour, plant, material and goods as stated in the schedule DEFAULT INTEREST: No Clause GUARANTEE FOR CONSTRUCTION: A security in terms of the DPWI's Guarantee for Construction form/s, obtained by the contractor from an institution approved by the employer [CD] INTEREST: The interest rates applicable on this contract, whether specifically indicated in the relevant clauses or not, will be the rate as determined by the Minister of Finance from time to time, in terms of section 80(1)(b) of the Public Finance Management Act, 1999 (Act No 1 of 1999) as amended, calculated as simple interest, in respect of debts owing to the State, and will be the rate as published by the Minister of Justice and Correctional Services from time to time, in terms of section 1(2) of the Prescribed Rate of Interest Act, 1975 (Act No 55 of 1975) as amended, calculated as simple interest, in respect of debts owing by the State LETTER OF ACCEPTANCE: The letter of formal acceptance of the Contractor's or Service Provider's Tender / Bid, issued and signed by the Employer PAYMENT CERTIFICATE: A certificate issued at regular agreed intervals [CD] by the principal agent to the parties certifying the amount due and payable in terms of Clause 25.3 PRINCIPAL AGENT: The person or entity appointed by the employer and named in the contract data for organs of state and other public sector bodies. In the event of a principal agent not being appointed, then all the duties and obligations of a principal agent as detailed in the agreement shall be fulfilled by the employer's representative as named in the contract data for organs of state and other public sector bodies	R	
Carried Forward Bill No. 1 Preliminaries Professional Services DPWI - Gqeberha Regional Office	R	

Brought Forward		R
1	TARGETED SUBCONTRACTORS: Subcontractors that must be appointed to a total of 30% or more of the contract sum, by the contractor, projects with a contract sum of the amount determined by the Minister in terms of the latest Preferential Procurement regulations, as may be amended from time to time. F:..... V:..... T:.....	Item
2	A2.0 LAW, REGULATIONS AND NOTICES Clause 2.0 F:..... V:..... T:.....	Item
3	A3.0 OFFER AND ACCEPTANCE Replace Clause 3.3 with the following: This agreement shall come into force on the date of letter of acceptance and continue to be of force and effect until the end of the latent defects liability period [22.0] notwithstanding termination [29.0] or the certification of final completion [21.0] and final payment [25.0] F:..... V:..... T:.....	Item
4	A4.0 CESSION AND ASSIGNMENT Clause 4.0 Ref Clause 6.7 [CD] - Clause 4.2 Replace Clause 4.3 with the following: Where a contractor cedes any right or any monies due to or to become due under this agreement as security in favour of a financial institution, the prior written consent of the employer, which consent shall not be unreasonably withheld, must be obtained F:..... V:..... T:.....	Item
Carried Forward		R
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		Brought Forward	R	
5	A5.0 DOCUMENTS Clause 5.0 Replace last sentence of Clause 5.2 with the following: The original signed agreement shall be held by the Employer Replace Clause 5.4 with the following: The Bills of Quantities shall not be used as a specification of material and goods or methods unless so instructed by the Principal Agent. The contractor may not use the Bills of Quantities for purpose of ordering material. All dimensions and quantities must be determined on site before ordering. In the event of discrepancy between the drawings and Bills of Quantity, the drawings shall take preference Replace Clause 5.5 with the following: The parties may publish or disclose on any platform only the contract scope and contract amount F:..... V:..... T:.....			Item
6	A6.0 EMPLOYER'S AGENTS Clause 6.0 Replace Clause 6.5 with the following: Where the principal agent and/or an agent fails to act or is unable to act or ceases to be the principal agent or an agent in terms of this agreement, the employer shall appoint another principal agent and/or an agent Add the following as Clause 6.7: In terms of the clauses listed hereunder, the employer has retained its authority and has not given a mandate to the principal agent, notwithstanding other provisions in the contract. The employer shall sign all documents in relation to clauses 4.2, 14.1.4, 14.4.1, 14.6, 15.1.4, , 15.4.1, 23.1, 23.2, 23.3, 23.7, 23.8, 26.1, 26.7, 26.12 F:..... V:..... T:.....			Item
		Carried Forward	R	
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		Brought Forward	R	
7	A7.0 DESIGN RESPONSIBILITY Clause 7.0 Replace first sentence of Clause 7.2 with the following: Any design responsibility undertaken by a subcontractor shall not devolve on the contractor except for items that require specific component design and or compatibility design and or shop drawings and or the assembly thereof F:..... V:..... T:..... <u>INSURANCES AND SECURITIES</u>		Item	
8	A8.0 WORKS RISK Clause 8.0 Replace Clause 8.4 with the following: The contractor shall bear the full risk of damage to and/or destruction of the works by whatever cause during construction of the works and hereby indemnifies and holds harmless the employer against any such damage. The contractor shall take such precautions and security measures and other steps for the protection and security of the works as the contractor may deem necessary F:..... V:..... T:.....		Item	
9	A9.0 INDEMNITIES Clause 9.0 Add the following to the end of the first sentence of Clause 9.2.7: “.... due to no fault of the contractor 9.2.9 No Clause 9.2.10 No Clause Add the following as clause 9.3: The employer's rights to claim damages for the contractor's omissions and actions will not be affected. F:..... V:..... T:.....		Item	
10	A10.0 INSURANCES			
		Carried Forward	R	
	Bill No. 1 Preliminaries Professional Services DPWI - Gqeberha Regional Office			

Brought Forward Clause 10.0 Replace Clause 10.1 with the following: The party responsible shall effect and keep the respective insurances [CD] in force, in favour of the employer as beneficiary , from the date of possession of the site until the issue of the certificate of practical completion and with an extension to cover the contractors obligations after the date of practical completion [8.2.2] Add the following as Clause 10.1.5.1: Hi Risk Insurance In the event of the project being executed in a geological area classified as a "High Risk Area", that is an area which is subject to highly unstable sub-surface conditions that might result in catastrophic ground movement evident by sinkhole or doline formation the following will apply Add the following as Clause 10.1.5.1.1 Damage to the works The contractor shall, from the date of possession of the site until the date of the certificate of practical completion, bear the full risk of and hereby indemnifies and holds harmless the employer against any damage to and/or destruction of the works consequent upon a catastrophic ground movement as mentioned above. The contractor shall take such precautions and security measures and other steps for the protection of the works as he may deem necessary When so instructed to do so by the principal agent, the contractor shall proceed immediately to remove and/or dispose of any debris arising from damage to or destruction of the works and to rebuild, restore, replace and/or repair the works, at the contractor's own costs 10.1.5.1.2 Injury to persons or loss of or damage to property The contractor shall be liable for and hereby indemnifies and holds harmless the employer against any liability, loss, claim or proceeding arising at any time during the period of the contract whether arising in common law or by statute, consequent upon personal injuries to or the death of any person whomsoever resulting from, arising out of or caused by a catastrophic ground movement as mentioned above The contractor shall be liable for and hereby indemnifies the employer against any and all liability, loss, claim or proceeding consequent upon loss of or damage to any moveable, or immovable property, or personal property, or property contiguous to the site, whether belonging to or under the control of the employer or any other body or person whomsoever arising out of or caused by a catastrophic ground movement, as mentioned above, which occurred during the period of the contract 10.1.5.1.3 Replace Clause with the following:	R	
Carried Forward Bill No. 1 Preliminaries Professional Services DPWI - Gqeberha Regional Office	R	

		Brought Forward	R
	It is the responsibility of the contractor to ensure that he has adequate insurance to cover his risk and liability as mentioned in 10.1.5.1.1 and 10.1.5.1.2. Without limiting the contractor's obligations in terms of the contract, the contractor shall, within twenty-one (21) calendar days of the date of letter of acceptance, but before commencement of the works, submit to the employer proof of such insurance policy. 10.1.5.1.4 Replace Clause with the following: The employer shall be entitled to recover any and all losses and/or damages of whatever nature suffered or incurred consequent upon the contractor's default of his obligations as set out in 10.1.5.1.1; 10.1.5.1.2 and 10.1.5.1.3. Such losses or damages may be recovered from the contractor or by deducting the same from any amounts still due under this contract or under any other contract presently or hereafter existing between the employer and the contractor and for this purpose all these contracts shall be considered one indivisible whole 10.2 Replace Clause with the following: Where practical completion in sections is required [20.0), or where the works is for alterations and additions, the contractor shall effect and keep in force contract works insurance [10.1.1], supplementary insurance [10.1.2], public liability insurance [10.1.3] and where applicable, removal of lateral support insurance [10.1.4] and other insurances [10.1.5) in favour of the employer as beneficiary 10.6 No Clause Add the following as Clause 10.11 In the event that an insurer dispute the amount of the claim to be paid to the employer, the contractor shall be liable to the employer for the difference between the claim (as determined by the employers QS appointed on the project) made by the employer and the amount that the insurer is willing to pay F:.....V:.....T:.....	Item	
11	A11.0 SECURITIES Add the following as to the relevant related Clauses as follows: Add the following to Clause 11.1: In respect of contracts with a contract sum up to R1 million, the security to be provided by the contractor to the employer will be a payment reduction of five per cent (5%) of the value certified in the payment certificate (excluding VAT). In respect of contracts with a contract sum above R1 million, the contractor shall have the right to select the security to be provided in terms of C 1.0 Securities, as stated in the schedule. Such security shall be provided to the employer within		
		Carried Forward	R
	Bill No. 1 Preliminaries Professional Services DPWI - Gqeberha Regional Office		

Brought Forward fifteen (15) working days from commencement date. Should the contractor fail to select the security to be provided or should the contractor fail to provide the employer with the selected security within fifteen (15) working days from commencement date, the security in terms of C 1.0 Option C shall be deemed to have been selected. The payment reduction of the value certified in a payment certificate shall be mutatis mutandis in terms of 25.12.1 - 25.12.5 11.1.1 No Clause 11.1.2 No Clause 11.2.2 No Clause 11.3 No Clause Replace Clause 11.4.1 with the following: Hand over the site to the contractor and withhold an amount equal to ten per cent (10%) of each interim payment certificate until practical completion is achieved. The value certified shall be subject to the adjustments in terms of 25.12.6 to 25.12.10. 11.5 No Clause 11.6 No Clause 11.7 No Clause 11.8 No Clause 11.9 No Clause 11.10 No Clause Add the following as Clause 11.11: Where the security as a cash deposit of ten per cent (10%) of the contract sum (excluding VAT) has been selected: Add the following as Clause 11.11.1: The contractor shall furnish the employer with a cash deposit equal in value to ten percent (10%) of the contract sum (excluding VAT) within fifteen (15) working days from commencement date. Failure to furnish the employer with a cash deposit within fifteen (15) working days Clause 11.4 will apply mutatis mutandis. Add the following as Clause 11.11.2:	R	
Carried Forward Bill No. 1 Preliminaries Professional Services DPWI - Gqeberha Regional Office	R	

Brought Forward The employer shall be entitled to recover expense and loss from the cash deposit in terms of Clause 27.0 provided that the employer notifies the Contractor in which event the employer's entitlement shall take precedence over his obligations to refund the cash deposit security or portions thereof to the contractor. Add the following as Clause 11.11.3: Within fifteen (15) working days of the date of practical completion of the works the employer shall reduce the cash deposit to an amount equal to three per cent (3%) of the contract value (excluding VAT) and refund the balance to the contractor Add the following as Clause 11.11.4: Within fifteen (15) working days of the date of final completion of the works the employer shall reduce the cash deposit to an amount equal to one per cent (1%) of the contract value (excluding VAT) and refund the balance to the contractor. Add the following as Clause 11.11.5: On the date of payment of the amount in the final payment certificate, the employer shall refund the remainder of the cash deposit to the contractor. Add the following as Clause 11.11.6: The parties expressly agree that neither the employer nor the contractor shall be entitled to cede the rights to the deposit to any third party. Add the following as Clause 11.12: Where security as a variable construction guarantee of ten percent (10%) of the contract sum (excluding VAT) has been selected: Add the following as Clause 11.12.1: The contractor shall furnish the employer with an acceptable variable construction guarantee equal in value to ten per cent (10%) of the contract sum (excluding VAT) within fifteen (15) working days after issuance of the letter of acceptance. Failure to submit an acceptable variable construction guarantee within fifteen (15) working days Clause 11.4 will apply mutatis mutandis. Add the following as Clause 11.12.2: The variable construction guarantee shall reduce and expire in terms of the Variable Construction Guarantee form included in the invitation to tender. Add the following as Clause 11.12.3: The employer shall return the variable construction guarantee to the contractor within fourteen (14) calendar days of it expiring. Add the following as Clause 11.12.4: Where the employer has a right of recovery against the contractor in terms of	R	
Carried Forward Bill No. 1 Preliminaries Professional Services DPWI - Gqeberha Regional Office	R	

Brought Forward 27.0, the employer shall issue a written demand in terms of the variable construction guarantee. Add the following as Clause 11.13: Where security as a fixed construction guarantee of five per cent (5%) of the contract sum (excluding VAT) and a five per cent (5%) payment reduction of the value certified in the payment certificate (excluding VAT) has been selected: Add the following as Clause 11.13.1: The contractor shall furnish a fixed construction guarantee to the employer equal in value to five per cent (5%) of the contract sum (excluding VAT). Add the following as Clause 11.13.2: The fixed construction guarantee shall come into force on the date of issue and shall expire on the date of the last certificate of practical completion. Add the following as Clause 11.13.3: The employer shall return the fixed construction guarantee to the contractor within fourteen (14) calendar days of it expiring. Add the following as Clause 11.13.4: The payment reduction of the value certified in a payment certificate shall be mutatis mutandis in terms of 25.12.1 - 25.12.5. Add the following as Clause 11.13.5: Where the employer has a right of recovery against the contractor in terms of 27.0, the employer shall be entitled to issue a written demand in terms of the fixed construction guarantee or may recover from the payment reduction or from both. Add the following as Clause 11.14.1: Where security as a cash deposit of five per cent (5%) of the contract sum (excluding VAT) and a payment reduction of five per cent (5%) of the value certified in the payment certificate (excluding VAT) has been selected: Add the following as Clause 11.14.2: The contractor shall furnish the employer with a cash deposit equal in value to five per cent (5%) of the contract sum (excluding VAT) within fifteen (15) working days from commencement date. Failure to submit a cash deposit within fifteen (15) working days Clause 11.4 will apply mutatis mutandis. Add the following as Clause 11.14.3: Within fifteen (15) working days of the date of practical completion of the works the employer shall refund the cash deposit in total to the contractor. Add the following as Clause 11.14.4:	R	
Carried Forward Bill No. 1 Preliminaries Professional Services DPWI - Gqeberha Regional Office	R	

		Brought Forward	R
		The payment reduction of the value certified in a payment certificate shall be mutatis mutandis in terms of 25.12.1 - 25.12.5.	
		Add the following as Clause 11.14.5: Where the employer has a right of recovery against the contractor in terms of 27, the employer may recover from the payment reduction or cash deposit or from both.	
		Add the following as Clause 11.15: Where security as a payment reduction of ten per cent (10%) of the value certified in the payment certificate (excluding VAT) has been selected.	
		Add the following as Clause 11.15.1: The payment reduction of the value certified in a payment certificate shall be mutatis mutandis in terms of 25.12.6 to 25.12.10.	
		Add the following as Clause 11.15.2: The employer shall be entitled to recover expense and loss from the cash deposit in terms of 27.0 provided that the employer notifies the Contractor in which event the employer's entitlement shall take precedence over his obligations to refund the cash deposit security or portions thereof to the contractor.	
		Add the following as Clause 11.16: Payments made by the guarantor to the employer in terms of the fixed or variable construction guarantee shall not prejudice the rights of the employer or contractor in terms of this agreement.	
		Add the following as Clause 11.17: Should the contractor fail to furnish the security in terms of 11.2 the employer, in his sole discretion, and without notification to the contractor, is entitled to change the contractor's selected form of security to that of a ten per cent (10%) payment reduction of the value certified in the payment certificate (excluding VAT).	
		F:..... V:..... T:.....	Item
		<u>EXECUTION</u>	
12	A12.0 OBLIGATIONS OF THE PARTIES		
	Clause 12.0		
	12.1.1 No Clause		
	Replace Clause 12.1.5 with the following: Give possession of the site to the contractor within ten (10) working days after		
		Carried Forward	R
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Brought Forward approval of the Health and Safety Plan or the issue of a construction permit by the Department of Labour, if applicable, after the contractor complied with the terms of 12.2.22 12.1.6 No Clause 12.1.8 No Clause Replace Clause 12.2.2 with the following: The priced Bills must be submitted to the Employer within fourteen (14) calendar days from date of request. Where the priced document contains errors or discrepancies and/or prices considered by the employer or principal agent to be imbalanced or unreasonable the employer or principal agent and the contractor shall adjust such prices without any change to the contract sum Replace Clause 12.2.5 with the following: Effect and keep in force insurances in favour of the employer as beneficiary where the contractor is responsible for providing insurances [10.0) [CD] Replace Clause 12.2.13 with the following: Designate a competent person full time on site to continuously administer and control the works on site and to receive and implement notices and contract instructions on behalf of the contractor Add the following as Clause 12.2.22: Within fourteen (14) working days of the date of the letter of acceptance submit to the principal agent an acceptable health and safety plan, required in terms of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) Add the following as Clause 12.2.23: The contractor shall within reasonable time inform the agents regarding inspection of the works before covering / closing [B 12.0] Offices The contractor shall provide, maintain and remove on completion of the works an office for the exclusive use of the principal agent, minimum size 4 x 3 x 3m high internally, suitably insulated and ventilated, provided with electric lighting and fitted with boarded floor, desk, chair, drawing stool, drawing board and lock-up drawers for drawings. The office shall be kept clean and fit for use at all times [12.2.18] F:..... V:..... T:..... Main notice board	R	
Carried Forward Bill No. 1 Preliminaries Professional Services DPWI - Gqeberha Regional Office	R	

[illegible]

	Brought Forward	R	
15	A15.0 SELECTED SUBCONTRACTORS Clause 15.0 Ref Clause 6.7 [CD] - Clause 15.1.4 & Clause 15.5 15.1.5 No Clause Replace Clause 15.1.2 with the following: The principal agent shall call for tenders from a list of tenderers agreed between the contractor and the employer Replace "principal agent " with "employer" [6.7 [CD]] in Clause 15.4.1 F:..... V:..... T:.....		Item
16	A16.0 DIRECT CONTRACTORS Clause 16.0 F:..... V:..... T:.....		Item
17	A17.0 CONTRACT INSTRUCTIONS Clause 17.0 Replace Clause 17.4 with the following: The contractor shall comply with and duly execute all contract instructions except any contract instruction for additional work issued after the date of practical completion other than making good physical loss and repairing damage to the works in terms of 8.0 and 21 Add the following clause as Clause 17.6: Minutes of meetings shall not constitute a site instruction unless reduced to a written contract instruction issued by the principal agent in terms of this contract / agreement. F:..... V:..... T:.....		Item
	Carried Forward	R	
	Bill No. 1 Preliminaries Professional Services DPWI - Gqeberha Regional Office		

		Brought Forward	R	
	<u>COMPLETION</u>			
18	A18.0 INTERIM COMPLETION			
	Clause 18.0			
	F:..... V:..... T:.....		Item	
19	A19.0 PRACTICAL COMPLETION			
	Clause 19.0			
	Replace Clause 19.5 with the following:			
	On issue of the only or last certificate of practical completion the employer shall be entitled to possession of the works and the site. On issue of the certificate of practical completion for a section, the employer shall be entitled to possession of such section			
	Add the following as Clause 19.8:			
	WORKS COMPLETION			
	(1) Within seven (7) calendar days of the date of practical completion the principal agent shall issue to the contractor a works completion list defining the outstanding work and defects apparent at the date of practical completion to be completed or rectified to achieve works completion.			
	(2) Where, in the opinion of the contractor, the works completion list has been completed the contractor shall notify the principal agent who shall inspect within seven (7) calendar days of receipt of such a notice. Where, in the opinion of the principal agent, the Works Completion list:			
	(2)(a) Has been satisfactorily completed, the principal agent shall forthwith issue a certificate of Works Completion to the contractor with a copy to the employer			
	(2)(b) Has not been satisfactorily completed, the principal agent shall forthwith identify the works completion list items that are not yet complete and inform the contractor thereof. The contractor shall repeat the procedure in terms of 19.8(2)			
	(3) Should the principal agent not issue a works completion list, in terms of 19.8 (1) or 19.8 (2)(b), within seven (7) calendar days from the end of the inspection period, the contractor shall notify the employer and principal agent. Should the principal agent not issue such Works Completion list within seven (7) calendar days of receipt of such notice, the employer may within seven (7) calendar days issue to the contractor a Works Completion list. Should the employer:			
	(3)(a) Not issue such works completion list within seven (7) calendar days, then the certificate of Works Completion shall be deemed to have been issued on the			
		Carried Forward	R	
	Bill No. 1 Preliminaries Professional Services DPWI - Gqeberha Regional Office			

Brought Forward

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date of expiry of the initial notice period and works completion shall be deemed to have been achieved on such date

(3b) Issue a works completion list and the work on Works Completion list not have been completed or where further defects have become apparent, the employer shall forthwith identify such items on the updated works completion list and notify the contractor. The contractor shall repeat the procedure in terms of 19.8(2)(b) until such items have been completed to the satisfaction of the employer

(4) Should the works completion list not be completed to the satisfaction of the employer within a period of twenty one (21) working days of the issue first works completion list the contractor shall be liable to a daily penalty as described in B12.0

(5) The defects liability period in terms of 21.1 shall commence with the issue or deemed issue of the certificate of Works Completion in terms of 19.8(2)(a) or 19.8(3).

F: V: T:

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20 | **A20.0 COMPLETION IN SECTIONS**

Clause 20.0

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		Brought Forward	R
21	A21.0 DEFECTS LIABILITY PERIOD AND FINAL COMPLETION Clause 21.0 Replace Clause 21.1 with the following: The defects liability period for the works shall commence on the calendar day following the date of works completion and end at midnight (00:00) ninety (90) calendar days from the date of works completion [CD] or when work on the list for completion has been satisfactorily attended to [21.6], whichever is the later (if we use works completion) Replace Clause 21.6 with the following: On the expiry of the ninety (90) calendar days defects liability period [21.1] for items not indicated as items with an extended liability as indicated in B14 and on receipt of the contractor's notice to the principal agent And/or On the expiry of the defects liability period as indicated in B14, for items indicated in B14 and on receipt of the contractor's notice to the principal agent, the principal agent shall: (1) inspect the works And within ten (10) working days either issue a list for final completion detailing all outstanding work or defects that must be attended to, or rectified to achieve final completion or (2) issue the certificate of final completion to the contractor with a copy to the employer for that part of the works where defects liability period has expired 21.6.1 Omit Clause 21.6.2 Omit Clause Add the following as Clause 21.13: The ninety (90) calendar days defects liability period for the works [21.1] is replaced with an extended defects liability period of three hundred and sixty-five (365) calendar days in respect of the listed applicable elements in B14 Add the following as Clause 21.14: Penalties will be applied if the items on the completion list have not been attended to within a period of ninety (90) calendar days [21.1]. If additional defect items have being added to the list during this period, then the Principal Agent and Contractor will agree on a revised completion date. Failing in achieving the revised date will result in penalties being applied.[B12.0] F:..... V:.....T:.....		
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22	A22.0 LATENT DEFECTS LIABILITY PERIOD Clause 22.0 22.3.2 No Clause F:..... V:..... T:.....	Item
23	A23.0 REVISION OF THE DATE FOR PRACTICAL COMPLETION Clause 23.0 Ref Clause 6.7 [CD] - Clause 23.1 Ref Clause 6.7 [CD] - Clause 23.2 Replace Clause 23.3 with the following: Further circumstances that delays practical completion due to any other cause beyond the contractor's reasonable control that could not have reasonably been anticipated and provided for which the contractor may be entitled to a revision of the date for practical completion, with or without an adjustment of the contract value as determined by the Employer [6.7 CD] Ref Clause 6.7 [CD] - Clause 23.7 Ref Clause 6.7 [CD] - Clause 23.8 F:..... V:..... T:.....	Item
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24	A24.0 PENALTY FOR LATE OR NON-COMPLETION Clause 24.0 Replace Clause 24.1 with the following: Where the contractor fails to bring the works, or a section thereof, to practical-, works-, or final- completion by the applicable completion date [CD], or the revised applicable completion date, the contractor shall be liable to the employer for the penalty [CD] Replace Clause 24.2 with the following: Where the employer elects to levy such penalty the employer, or the principal agent on instruction from the employer, shall give notice thereof to the contractor. The principal agent shall determine the penalty due from the later of the date for practical- works-, or final- completion [CD], or the revised date for practical- works-, or final- completion, up to and including the earlier of: Replace Clause 24.2.1 with the following: The actual or deemed date of practical- works-, or final- completion, of the works, or a section thereof [23.7.1] F:..... V:..... T:..... <u>PAYMENT</u>		
25	A25.0 PAYMENT Clause 25.0 Replace Clause 25.2 with the following: The principal agent shall issue at regular agreed intervals [CD] payment certificates, to the contractor with a copy to the employer, up to and including practical completion. Interim Payment certificates may be issued to the contractor between practical completion and the final payment certificate. A payment certificate may be for a nil or negative amount Add the following to Clause 25.3: 25.3.12 Monthly Local content report, 25.3.13 EPWP / NYS payment register, labour reports and certified ID document of EPWP/ NYS beneficiaries, Contract between Contractor and EPWP/ NYS beneficiaries, attendance register. (if applicable)		
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Brought Forward 25.3.14 Tax Invoice 25.3.15 Labour intensive report 25.3.16 Contract participation goal reports 25.5 No Clause Replace Clause 25.6 with the following: Materials and goods will only be certified and paid for upon providing proof of full payment to the supplier and proof of transfer of ownership from the supplier to the contractor by the contractor. Once paid, material and goods shall become the property of the employer and shall not be removed from site without the written authority of the Employer. 25.7.5 No clause. Replace Clause 25.10 with the following: The employer shall pay the contractor the amount stipulated in an issued payment certificate, correct in all material respects, within thirty (30) calendar days from the date of receiving the payment certificate, invoice and all other substantiating documentation for items certified in the payment certificate Replace Clauses 25.12 to 25.12.3 with the following: The value certified shall be subject to the following percentage adjustments : (Clauses 25.12.1 to 25.12.5 shall be applicable to a contract sum up to R1 million. In the event of a contract sum more than R1 million for Options D & E (C 1.0 Securities [11.0]) Clauses 25.12.1 to 25.12.5 shall be applicable) 25.12.1 Where a security is selected in terms of C 1.0 Securities [11.0], the value of the works in terms of 25.1 and of the materials and goods in terms of 25.4 shall be certified in full. The value certified shall be subject to the following percentage adjustments: 25.12.2 Ninety-five per cent (95%) of such value in interim payment certificates issued up to the date of practical completion 25.12.3 Ninety-seven per cent (97%) of such value in interim payment certificates issued on the date of practical completion and up to but excluding the date of final completion 25.12.4 Ninety-nine per cent (99%) of such value in interim payment certificates issued on the date of final completion and up to but excluding the final payment certificate in terms of 26	R	
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25.12.5 One hundred per cent (100%) of such value in the final payment certificate in terms of 26 except where the amount certified is in favour of the employer. In such an event the payment reduction shall remain at the adjustment level applicable to the final payment certificate. (Clauses 25.12.6 to 25.12.10 shall be applicable to a contract sum more than R1 million for Option C (C 1.0 Securities [11.0]) 25.12.6 Where security is a payment reduction in term of C 1.0 Option C, value of the works in terms of 25.1 and materials and goods in terms of 25.4 shall be certified in full. The value certified shall be subject to the following percentage adjustments: 25.12.7 Ninety per cent (90%) of such value in interim payment certificates issued up to the date of practical completion 25.12.8 Ninety-seven per cent (97%) of such value in interim payment certificates issued on the date of practical completion and up to but excluding the date of final completion 25.12.9 Ninety-nine per cent (99%) of such value in interim payment certificates issued on the date of final completion and up to but excluding the final payment certificate in terms of 26 25.12.10 One hundred per cent (100%) of such value in the final payment certificate in terms of 26 except were the amount certified is in favour of the employer. In such an event the payment reduction shall remain at the adjustment level applicable to the final payment certificate F:..... V:..... T:.....		
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[illegible]

	Brought Forward	R	
27	A27.0 RECOVERY OF EXPENSE AND/OR LOSS Clause 27.0 Replace Clause 27.1.2 with the following: Interest due to late payment only Replace Clause 27.1.4 with the following: Interest due to late payment only 27.1.5 No Clause Replace Clause 27.5 with the following: Where the employer decides to recover an amount due in terms of 27.2 from a construction guarantee, cash deposit or retention money held as security, the employer shall issue a written demand to the contractor before recovering the amount. Should such amount not be paid to the employer within fourteen (14) calendar days of the date-of notice by the employer, the employer may recover such an amount from the security Add the following as Clause 27.6: Where a provisional sequestration or provisional liquidation order has been granted or where an order has been granted which commences sequestration, liquidation, bankruptcy, receivership, winding-up or any similar effect, against the contractor or this agreement is cancelled in terms of 29, the employer may issue a demand to the guarantor in terms of the construction guarantee or advance payment guarantee held as security F:..... V:..... T:.....	item	
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	SUSPENSION AND TERMINATION	
28	A28.0 SUSPENSION BY THE CONTRACTOR Clause 28.0 28 No Clause 28.1 No Clause 28.1.1 No Clause 28.1.2 No Clause 28.1.3 No Clause 28.1.4 No Clause 28.1.5 No Clause 28.2 No Clause 28.3 No Clause 28.4 No Clause F:..... V:..... T:.....	Item
29	A29.0 TERMINATION Clause 29.0 Add the following as Clause 29.1.4: The contractor's estate has been sequestrated, liquidated or surrendered in terms of the insolvency laws in force within the Republic of South Africa Add the following as Clause 29.1.5: The contractor has engaged in corrupt or fraudulent practices in competing for or in executing the contract Add the following as Clause 29.1.6: Honour his obligations in terms of Clauses 10.1.5.1.3, 11.4.1 and 12.2. sub Clauses 5, 6, 8, 9, 10, 11, 12, 13, 15, 16, 19, 20, 22. Replace Clause 29.7 with the following: The employer, on notice to the contractor, may recover damages from the contractor from the date of termination including, but not limited to, additional costs incurred in the completion, consultant cost, rental of alternative accommodation, invitation of completion tenders, salaries of officials and safeguarding the site, of the remaining work [25.3.7; 27.1.3] Replace Clause 29.9 with the following: The employer has the right of recovery against the contractor, where applicable, [CD] from:	
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The guarantee for construction (variable) until the final payment has been made;		
or		
The guarantee for construction (fixed) until the date of practical completion;		
or		
The payment reduction until the final payment is made;		
or		
The cash deposit made as security until the final payment is made		
29.14.1 No Clause		
29.14.3 No Clause		
29.14.4 No Clause		
29.14.5 No Clause		
29.14.6 No Clause		
29.14.7 No Clause		
29.15 No Clause		
29.16 No Clause		
29.17.3 No Clause		
29.17.6 No Clause		
29.21.5 No Clause		
29.22 No Clause		
29.23 No Clause		
29.25.3 No Clause		
29.25.4 No Clause		
29.27 No Clause		
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	<u>DISPUTE RESOLUTION</u>		
30	A30.0 DISPUTE RESOLUTION		
	Clause 30.0		
	Replace Clause 30.2 with the following: Where such disagreement is not resolved within ten (10) working days of receipt of such notice it shall be deemed to be a dispute and shall be submitted to Mediation as a first method of dispute resolution failing which the parties will resort to Litigation		
	30.3 to 30.7.7 No Clauses		
	Replace Clause 30.8 with the following: The parties may, by agreement and at any time before Litigation, refer a dispute to mediation, in which event:		
	30.8.1 No Clause		
	Replace Clause 30.8.2 with the following: The appointment of a mediator, the procedure, and the status of the outcome shall be agreed between the parties		
	Replace Clause 30.8.3 with the following: Regardless of the outcome of a mediation the parties shall bear their own costs concerning the Mediation and equally share the costs of the mediator and related expenses		
	Replace Clause 30.9 with the following: Institution of Litigation shall be commenced and process served within three (3) year from the date of existence of the dispute, failing which the dispute shall lapse		
	30.10 No Clause		
	30.12 No Clause		
	F:..... V:..... T:.....		Item
	<u>SECTION B: GENERAL PRELIMINARIES</u>		
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	<u>B1.0 DEFINITIONS AND INTERPRETATION</u>			
31	B1.1 Definitions			
	F:..... V:..... T:.....		Item	
32	B1.2 Interpretation			
	F:..... V:..... T:.....		Item	
	<u>B2.0 DOCUMENTS</u>			
33	B2.1 Checking of documents			
	F:..... V:..... T:.....		Item	
34	B2.2 Provisional bills of quantities YES			
	F:..... V:..... T:.....		Item	
35	B2.3 Availability of construction information			
	F:..... V:..... T:.....		Item	
36	B2.4 Ordering of materials and goods			
	F:..... V:..... T:.....		Item	
	<u>B3.0 PREVIOUS WORK AND ADJOINING PROPERTIES</u>			
37	B3.1 Previous work - dimensional accuracy			
	F:..... V:..... T:.....		Item	
38	B3.2 Previous work - defects			
	F:..... V:..... T:.....		Item	
39	B3.3 Inspection of adjoining properties			
	F:..... V:..... T:.....		Item	
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	Brought Forward	R
	<u>B4.0 THE SITE</u>	
40	B4.1 Handover of site in stages F:..... V:..... T:.....	Item
41	B4.2 Enclosure of the works F:..... V:..... T:.....	Item
42	B4.3 Geotechnical and other investigations F:..... V:..... T:.....	Item
43	B4.4 Encroachments F:..... V:..... T:.....	Item
44	B4.5 Existing premises occupied F:..... V:..... T:.....	Item
45	B4.6 Services - known F:..... V:..... T:.....	Item
	<u>B5.0 MANAGEMENT OF CONTRACT</u>	
46	B5.1 Management of the works F:..... V:..... T:.....	Item
47	B5.2 Progress meetings F:..... V:..... T:.....	Item
48	B5.3 Technical meetings F:..... V:..... T:.....	Item
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	<u>B6.0 SAMPLES, SHOP DRAWINGS AND MANUFACTURER'S INSTRUCTIONS</u>		
49	B6.1 Samples of materials F:..... V:..... T:.....	Item	
50	B6.2 Workmanship samples F:..... V:..... T:.....	Item	
51	B6.3 Shop drawings F:..... V:..... T:.....	Item	
52	B6.4 Compliance with manufacturer's instructions F:..... V:..... T:.....	Item	
	<u>B7.0 DEPOSITS AND FEES</u>		
53	B7.1 Deposits and fees F:..... V:..... T:.....	Item	
	<u>B8.0 TEMPORARY SERVICES</u>		
54	B8.1 Water F:..... V:..... T:.....	Item	
55	B8.2 Electricity F:..... V:..... T:.....	Item	
56	B8.3 Ablution and welfare facilities F:..... V:..... T:.....	Item	
57	B8.4 Communication facilities F:..... V:..... T:.....	Item	
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		Brought Forward	R
	<u>B9.0 PRIME COST AMOUNTS</u>		
58	B9.1 Responsibility for prime cost amounts		
	F:..... V:..... T:.....	Item	
	<u>B10.0 ATTENDANCE ON SUBCONTRACTORS</u>		
59	B10.1 General attendance		
	The contractor shall at his own expense provide the following general attendance on the subcontractors :		
	Access to the site and places where the subcontract work is to be carried out, including the reasonable use of any temporary personnel hoists erected by the contractor		
	The provision of water and lighting and single phase electric power to a position within 50 metres of the place where the subcontract work is to be carried out but excluding water, fuel and power for commissioning of any installation		
	The provision of an area for the subcontractor to establish temporary office accommodation and workshops and for the storage of plant and materials		
	The use of erected scaffolding belonging to the contractor , in common with others having the like right, while it remains erected on the site		
	The use, at reasonable times by arrangement of the contractor's erected hoisting equipment		
	F:..... V:..... T:.....	Item	
60	B10.2 Special attendance		
	F:..... V:..... T:.....	Item	
	<u>B11.0 GENERAL</u>		
61	B11.1 Protection of the works		
	F:..... V:..... T:.....	Item	
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62	B11.2 Protection/isolation of existing works and works occupied in sections F:..... V:..... T:.....	Item	
63	B11.3 Security of the works F:..... V:..... T:.....	Item	
64	B11.4 Notice before covering work F:..... V:..... T:.....	Item	
65	B11.5 Disturbance The contractor shall keep the site, structures, etc well watered during operations to prevent dust and shall provide and erect and remove on completion of the works all necessary temporary dust screens all to the satisfaction of the principal agent F:..... V:..... T:.....	Item	
66	B11.6 Environmental disturbance F:..... V:..... T:.....	Item	
67	B11.7 Works cleaning and clearing F:..... V:..... T:.....	Item	
68	B11.8 Vermin F:..... V:..... T:.....	Item	
69	B11.9 Overhand work F:..... V:..... T:.....	Item	
70	B11.10 Tenant installations F:..... V:..... T:.....	Item	
71	B11.10 Advertising F:..... V:..... T:.....	Item	
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SECTION C: SPECIFIC PRELIMINARIES

Section C contains specific preliminary items which apply to this contract except where **N/A (Not Applicable)** appears against an item

C1.0 CONTRACT DRAWINGS

72 * Select relevant paragraph and delete whichever is not applicable depending on whether the contract is based on a **bills of quantities** or lump sum document

* The drawings issued with the tender documents do not comprise the complete set but serve as a guide only for tendering purposes and for indicating the scope of the work to enable the tenderer to acquaint himself with the nature and extent of the **works** and the manner in which they are to be executed

* A full set of drawings is issued with the tender documents indicating the full scope of the work to enable the tenderer to acquaint himself with the nature and extent of the **works** and the manner in which they are to be executed

Should any part of the drawings not be clearly understood by the tenderer he shall, before submitting his tender, obtain clarification in writing from the **principal agent**

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C2.0 PREAMBLES

73 The document "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" is obtainable on the Department's website (<http://www.publicworks.gov.za/> under "Consultants Guidelines"), and shall be read in conjunction with the **bills of quantities** / lump sum document and be referred to for the full descriptions of work to be done and materials to be used

The document "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" is issued together with the drawings and shall be read in conjunction with the drawings and the **bills of quantities** / lump sum document

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		<u>C3.0 TRADE NAMES</u>	
74	Wherever a trade name for any product has been described in the bills of quantities / lump sum document, the tenderer's attention is drawn to the fact that any other product of equal quality may be used subject to the written approval of the principal agent being obtained prior to the closing date for submission of tenders		
	If prior written approval for an alternative product is not obtained, the product described shall be deemed to have been tendered for		
	F:..... V:..... T:.....	Item	
		<u>C4.0 IMPORTED MATERIALS AND EQUIPMENT</u>	
75	Where imported items are listed in the tender documents, the tenderer shall provide all the information called for, failing which the price of any such item, materials or equipment shall be excluded from currency fluctuations. (refer to Schedule of Imported Materials and Equipment DPW-23(EC) to be completed by tenderer)		
	Notwithstanding any provisions elsewhere regarding the adjustment of contract prices, the price of any item, material or equipment listed in terms of this clause shall be excluded from the Contract Price Adjustment Provisions (if applicable)		
	F:..... V:..... T:.....	Item	
		<u>C5.0 VIEWING THE SITE IN SECURITY AREAS</u>	
76	The site is situated in a security area and the tenderer must arrange with the unit commander or other responsible officer to obtain permission to enter the site for tendering purposes		
	F:..... V:..... T:.....	Item	
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C6.0 COMMENCEMENT OF WORKS IN SECURITY AREAS

77 As the **works** falls within a security area the **contractor** must give the unit commander or other responsible officer notice before commencement of the **works**. Should the **contractor** fail to make such arrangements, admission to the **site** may be refused and any additional costs will be for the **contractor's account**

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C7.0 ENTRANCE PERMITS TO SECURITY AREAS

78 As the **works** falls within a security area the **contractor** shall obtain entrance permits for his personnel and workmen entering the area and shall comply with all regulations and instructions which may be issued from time to time regarding the protection of persons and property under the control of the Defence Force, Police or chief security officer

F: V: T:

Item

C8.0 SECURITY CHECK OF PERSONNEL

79 The **principal agent** may require the **contractor** to have his personnel and workmen, or a certain number of them, security classified

In the event of the **principal agent** requesting the removal of a person or persons from the **works** for security reasons, the **contractor** shall do so forthwith and shall thereafter ensure that such person or persons are denied access to the **works** and the **site** and/or to any document or information relating to the **works**

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C9.0 PROHIBITION ON TAKING OF PHOTOGRAPHS

80 In terms of article 119 of the Defence Act, 44 of 1957, it is prohibited to sketch or to take photographs of any military site or installation or any building or civil works thereon or to be in possession of a camera or other apparatus used for taking of photographs except when authorized thereto by or on behalf of the Minister

The same prohibition is also applicable to all correctional institutions in terms of article 44.1(e) of the Correctional Services Act 8 of 1959

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C10.0 HIV/AIDS AWARENESS

It is required of the **contractor** to thoroughly study the HIV/AIDS Specification (PW 1544) of the Department that must be read together with and is deemed to be incorporated under this Section of the **bills of quantities** / lump sum document. Provision for pricing of HIV/AIDS awareness is made under items C10.1 to C10.5 hereafter and it is explicitly pointed out that all requirements of the aforementioned specification are deemed to be priced hereunder, as the said items represent the only method of measurement and no additional items or extras to the contract in this regard shall be entertained

The **contractor** must take note that compliance with the HIV/AIDS Specification is compulsory. In the event of partial or total non-compliance, the **principal agent**, notwithstanding the provisions of Clause A 25.0 of Section A or any other clause to the contrary, reserves the right to delay issuing any progress **payment certificate** until the **contractor** provides satisfactory proof of compliance. The **contractor** shall not be entitled to any compensation of whatsoever nature, including **interest**, due to such delay of payment

C10.1 AWARENESS CHAMPION

81 Selection, appointment, briefing and making available of an Awareness Champion including provision of all relevant services, all in accordance with the HIV/AIDS Specification

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<u>C10.2 AWARENESS WORKSHOPS</u>		
82	Selection and appointment of a competent Service Provider approved by the principal agent , provision of a Service Provider Workshop Plan and a suitable venue, conducting of awareness workshops by means of traditional and/or modern multi-media techniques, including follow-up courses, making available all tuition material and performing assessment procedures, all in accordance with the HIV/AIDS Specification F:..... V:..... T:.....	Item
<u>C10.3 POSTERS, BOOKLETS, VIDEOS, ETC.</u>		
83	Provision, displaying, maintaining and replacing when necessary of four plastic laminated posters, booklets and educational videos, etc. for the duration of the construction period , all in accordance with the HIV/AIDS Specification F:..... V:..... T:.....	Item
<u>C10.4 ACCESS TO CONDOMS</u>		
84	Provision and maintenance of condom dispensers fixed in position, including male and female condoms, replenishing male and female condoms on a daily basis as required for the duration of the construction period , all in accordance with the HIV/AIDS Specification F:..... V:..... T:.....	Item
<u>C10.5 MONITORING</u>		
85	Monitoring HIV/AIDS awareness of workers, providing the principal agent with access to information including making available all reports, thoroughly completed and reflecting the correct information, for the duration of the construction period and close out, all in accordance with the HIV/AIDS Specification F:..... V:..... T:..... Item	Item
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C11.0 OCCUPATIONAL HEALTH & SAFETY ACT

86

The **contractor** shall comply with all the requirements as set out in the Construction Regulations, 2014 issued under the Occupational Health and Safety Act, 1993 (Act No 85 of 1993)

It is required of the **contractor** to thoroughly study the Health and Safety Specification that must be read together with and is deemed to be incorporated under this Section of the bills of quantities / lump sum document

The **contractor** must take note that compliance with the Occupational Health and Safety Act, Construction Regulations and Health and Safety Specification is compulsory. In the event of partial or total non-compliance, **the principal agent**, notwithstanding the provisions of Clause A25.0 of Section A or any other clause to the contrary, reserves the right to delay issuing any progress **payment certificate** until the **contractor** provides satisfactory proof of compliance. The **contractor** shall not be entitled to any compensation of whatsoever nature, including **interest**, due to such delay of payment

Provision for pricing of the Occupational Health and Safety Act, Construction Regulations and Health and Safety Specification is made under this clause and it is explicitly pointed out that all requirements of the aforementioned are deemed to be priced hereunder and no additional claims in this regard shall be entertained

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**C12.0 EMPLOYMENT AND TRAINING OF YOUTH WORKERS ON THE
EXPANDED PUBLIC WORKS PROGRAMME (EPWP) INFRASTRUCTURE
PROJECTS: NATIONAL YOUTH SERVICE (NYS)**

87 The **contractor** shall comply with all the requirements as set out in the "Additional Specification SL: Employment and Training of Youth Workers on the Expanded Public Works Programme (EPWP) Infrastructure Projects: National Youth Service (NYS)" as attached to these **bills of quantities** / lump sum document

The **contractor** shall identify a minimum number of youth workers from a priority list, and shall employ them at the statutory labour rates for a minimum period and train them, all as per the aforementioned specification and as elsewhere measured in these **bills of quantities** / lump sum document

The contractor shall liaise and co-ordinate with the **employer** and the EPWP Training Service Provider with regard to the priority list, the selection of youth workers, and the employment and training of the identified youth workers

The **contractor** shall avail the services of an adequately qualified foreman specifically for the EPWP-NYS youth workers, to act as their construction supervisor. The foreman will be responsible for continually monitoring the progress of the youth workers and for addressing questions and issues that may arise from the youth workers

Separate items which will be subject to remeasurement have been included elsewhere in these **bills of quantities** / lump sum document to cover the direct costs associated with the employment and training of the youth workers. Any additional requirements in respect of the aforementioned specification are deemed to be priced hereunder and no additional claims in this regard shall be entertained

F:..... V:..... T:.....

Item

Bill No. 1
Preliminaries
Professional Services
DPWI - Gqeberha Regional Office

Brought Forward

R

Carried Forward

R

Brought Forward

R

C13.0 IMPLEMENTATION OF LABOUR-INTENSIVE INFRASTRUCTURE PROJECTS UNDER THE EXPANDED PUBLIC WORKS PROGRAMME (EPWP)

88 The **contractor** shall comply with all the requirements of the "Code of Good Practice for Employment and Conditions of Work for Special Public Works Programmes" issued in terms of the "Basic Conditions of Employment Act, 1997 (Act No 75 of 1997)" and the related "Ministerial Determination", for the employment of locally employed temporary workers on a labour-intensive infrastructure project under the Expanded Public Works Programme (EPWP)

The **contractor** shall maintain daily records with regard to the workers employed and shall, on a monthly basis, submit a report to the **principal agent** in the prescribed format. Compulsory indicators such as the project budget, actual project expenditure, number of job opportunities created, demographic characteristics of workers employed, minimum daily wage rate, number of person-days of employment created and number of training person-days, shall be included in said report, all as defined in the "Guidelines for the Implementation of Labour-Intensive Infrastructure Projects under the Expanded Public Works Programme (EPWP)"

Provision for pricing of compliance with the aforementioned is made under this clause and it is explicitly pointed out that all requirements in respect of the aforementioned are deemed to be priced hereunder and no additional claims in this regard shall be entertained

F:..... V:..... T:.....

Item

SUMMARY OF CATEGORIES

Category : Fixed R.....

Category : Value R.....

Category : Time R.....

Carried to Summary

R

Bill No. 1
Preliminaries
Professional Services
DPWI - Gqeberha Regional Office

Item No	Quantity	Rate	Amount
<u>BILL No. 2</u>			
<u>ALTERATIONS</u>			
<u>NOTE:</u> Tenderers are advised to study the Model Preambles for Trades before pricing this bill Tenderers are advised to study the Department of Public Works- Construction works: General Specification (PW371-A) and Construction works: Particular Specification (PW371-B) before pricing this bill			
<u>REMOVAL OF EXISTING WORK</u>			
<u>Breaking up and removing mass concrete:</u>			
1	Surface beds and slabs	m3	1
2	Strip footings and foundations	m3	1
<u>Breaking down and removing brickwork, etc.:</u>			
3	Half brick walls.	m2	2
4	One brick walls.	m2	4
5	Remove existing concrete interlocking paving	m2	5
6	Prepare area to be re-paved with existing paving by excavating and shaping of surface to falls, compacting, 30mm sand bed, soil insecticide, weed killer and re-laying of existing paving	m2	5
Carried to Summary			R
Bill No. 2 Alterations Professional Services DPWI - Gqeberha Regional Office			

Item No	Quantity	Rate	Amount
<u>BILL No. 3</u>			
<u>EARTHWORKS</u>			
NOTE: Tenderers are advised to study the Model Preambles for Trades before pricing this bill			
Tenderers are advised to study the Department of Public Works- Construction works: General Specification (PW371-A) and Construction works: Particular Specification (PW371-B) before pricing this bill			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Proprietary items or materials</u>			
Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Head: Works			
<u>Nature of material to be excavated</u>			
The material to be excavated is assumed to be predominantly of a composition that will allow "soft excavation" as specified, but including a percentage of "intermediate excavation" and "hard rock excavation"			
<u>Carting away of excavated material</u>			
Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations, or alternatively, from stock piles situated on the building site			
<u>SITE CLEARANCE</u>			
<u>Site clearance</u>			
1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush, etc and trees not exceeding 200mm girth	m2	325
Carried Forward			R
Bill No. 3 Earthworks Professional Services DPWI - Gqeberha Regional Office			

Brought Forward			R
<u>REMOVAL OF TREES ETC</u>			
<u>Taking out and removing, grubbing up roots, filling in holes and compacting to 90% Mod AASHTO density</u>			
2	Tree stump not exceeding 1m high, exceeding 200mm and not exceeding 500mm girth	No	1
<u>Cutting down and removing, grubbing up roots, filling in holes and compacting to 90% Mod AASHTO density</u>			
3	Tree exceeding 200mm and not exceeding 500mm girth	No	1
4	Tree exceeding 500mm and not exceeding 1000mm girth	No	1
5	Tree exceeding 1000mm and not exceeding 1500mm girth	No	1
<u>BULK EXCAVATION, FILLING, ETC</u>			
<u>EXCAVATIONS ETC</u>			
<u>Digging up topsoil</u>			
6	Digging up topsoil to an average depth of 150mm and preserving for use of filling	m2	325
<u>Open face excavation in earth over sloping site</u>			
7	Open face excavation	m3	89
<u>Extra over bulk excavations in earth for excavation in</u>			
8	Soft rock	m3	9
9	Hard rock	m3	4
Carried Forward			R
Bill No. 3 Earthworks Professional Services DPWI - Gqeberha Regional Office			

Brought Forward			R
<u>Extra over all excavations for carting away</u>			
10	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	89
<u>Risk of collapse of excavations</u>			
11	Sides of bulk excavations not exceeding 1,5m deep	m2	44
<u>Keeping excavations free of water</u>			
12	Keeping excavations free of water other than subterranean water	Item	
<u>FILLING ETC</u>			
<u>Earth filling, dumprock supplied by the contractor, wrapped in geotextile</u>			
13	600mm Thick over site to form platforms	m3	22
<u>Compaction of surfaces</u>			
14	Compaction of natural or excavated ground surface under floors etc, including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to ?% Mod AASHTO density	m2	56
<u>TESTS</u>			
<u>Prescribed tests to determine degree of compaction or other properties of ground or filling</u>			
15	"Modified AASHTO Density" test	No	4
<u>EXCAVATION, FILLING, ETC OTHER THAN BULK</u>			
<u>EXCAVATIONS ETC</u>			
Carried Forward			R
Bill No. 3 Earthworks Professional Services DPWI - Gqeberha Regional Office			

Brought Forward				R
<u>Soft excavation not exceeding 2m deep</u>				
16	Trenches by hand to locate existing services	m3	10	
17	Trenches	m3	7	
18	Holes	m3	0.5	
<u>Extra over all excavations for carting away</u>				
19	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	5	
<u>Risk of collapse of excavations</u>				
20	Sides of trench and hole excavations not exceeding 1,5m deep	m2	22	
<u>Keeping excavations free from water</u>				
21	Keeping excavations free from mud and all water other than from subterranean sources		Item	
<u>FILLING, ETC</u>				
<u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 98% Mod AASHTO density</u>				
22	Backfilling to trenches, holes, etc	m3	3	
<u>Earth filling G5 supplied by the contractor compacted to 95% Mod AASHTO density</u>				
23	Under floors, etc	m3	11	
<u>Earth filling G3 supplied by the contractor compacted to 98% Mod AASHTO density</u>				
24	Under floors, etc	m3	5	
Carried Forward				R
Bill No. 3 Earthworks Professional Services DPWI - Gqeberha Regional Office				

Brought Forward			R
<u>Course river sand filling supplied by the contractor compacted in 150mm layers to 95% Mod AASHTO density</u>			
25	50mm thick dry, clean, washed riversand layer evenly spread over filling (elsewhere), leveled, watered and rammed to receive waterproof membrane (elsewhere) under solid floors.	m2	17
<u>Compaction of surfaces</u>			
26	Compaction of ground surface under floors, etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density	m2	17
<u>PROTECTION AGAINST TERMITES</u>			
<u>Soil insecticide</u>			
27	Under floors, etc including forming and poisoning shallow furrows against foundation walls, etc and filling in furrows and ramming	m2	17
Carried to Summary			R
Bill No. 3 Earthworks Professional Services DPWI - Gqeberha Regional Office			

Item No		Quantity	Rate	Amount
	<u>BILL No. 4</u>			
	<u>CONCRETE, FORMWORK AND REINFORCEMENT</u>			
	NOTE: Tenderers are advised to study the Model Preambles for Trades before pricing this bill			
	Tenderers are advised to study the Department of Public Works- Construction works: General Specification (PW371-A) and Construction works: Particular Specification (PW371-B) before pricing this bill			
	<u>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u>			
	<u>20 MPa/19mm concrete</u>			
1	Filling of retaining blocks	m3	1	
	<u>25 MPa/19mm concrete</u>			
2	75mm Blinding	m3	1	
3	Strip footings	m3	3	
	<u>REINFORCED CONCRETE</u>			
	<u>25 MPa/ 19mm Concrete poured around reinforcement:</u>			
4	Plinth wall footings	m3	1	
5	Bases	m3	0.4	
6	Inverted beams	m3	1	
7	Surface beds cast in panels on waterproofing	m3	1	
8	Pavings cast in panels	m3	1	
	Carried Forward		R	
	Bill No. 4 Concrete, formwork and reinforcement Professional Services DPWI - Gqeberha Regional Office			

Brought Forward			R
<u>SMOOTH FORMWORK (DEGREE OF ACCURACY II)</u>			
<u>Smooth formwork to sides</u>			
9	Inverted beams above concrete	m2	15
10	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	24
<u>CONCRETE TESTING</u>			
11	Allow for all necessary concrete test cubes size 150 x 150 x 150mm cast from batches of concrete required for the entire contract as specified, made, stored, cured and tested in accordance with SABS Methods 861 and 863, including use of approved cube moulds, transporting to an approved testing laboratory for testing, paying all charges and submitting reports to the Head : Works	Item	
<u>CONCRETE SUNDRIES</u>			
<u>Finishing top surfaces of concrete smooth with a wooden float to a broom finish</u>			
12	Surface beds, slabs, etc.	m2	20
<u>35Mpa non-shrink grout in epoxy mortar</u>			
13	Bedding approximately 20mm thick under base plate including chamfered edges	m2	2
<u>MOVEMENT JOINTS, ETC.</u>			
<u>Expansion joints with 12mm thick Bitumen impregnated softboard between vertical concrete and brick surfaces</u>			
14	Expansion joint not exceeding 300mm high	m	32
Carried Forward			R
Bill No. 4 Concrete, formwork and reinforcement Professional Services DPWI - Gqeberha Regional Office			

Brought Forward

R

Saw cut joints:

- | | | | |
|----|---|---|----|
| 15 | Form 3 x 40mm saw cut to top of concrete within 12 hours of pouring. Allow to cure for 7 days, then ream out to form 13mm deep and 6mm wide recess. | m | 10 |
|----|---|---|----|

REINFORCEMENT

Fabric reinforcement

- | | | | |
|----|---|----|----|
| 16 | Type 245 fabric reinforcement in concrete surface beds, slabs, etc. | m2 | 37 |
|----|---|----|----|

High tensile steel reinforcement to structural concrete work

- | | | | |
|----|---------------------------|---|------|
| 17 | Bars of varying diameters | t | 0.28 |
|----|---------------------------|---|------|

Carried to Summary

R

Bill No. 4
Concrete, formwork and reinforcement
Professional Services
DPWI - Gqeberha Regional Office

Item No		Unit	Quantity	Rate	Amount
	<u>BILL No. 5</u> <u>PRECAST CONCRETE</u> <u>User note</u> NOTE: Tenderers are advised to study the Model Preambles for Trades before pricing this bill Tenderers are advised to study the Department of Public Works- Construction works: General Specification (PW371-A) and Construction works: Particular Specification (PW371-B) before pricing this bill <i>Insert preambles/specifications as may be required or in order to supplement any applicable preambles, specifications or bills of quantities descriptions</i> <i>Take note that these Model Bills of Quantities utilise abbreviated descriptions</i> <i>The Model Preambles for Trades 2008 published by the Association of South African Quantity Surveyors is designed to support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards. <u>Where such model preambles are not applicable</u> (eg where BS or Euro construction standards are applicable or the design consultants provide other preambles/specifications for insertion), users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications</i> <i>Consider inserting the preambles hereunder when using the abovementioned Model Preambles for Trades 2008</i>				
	Carried Forward Bill No. 5 Precast concrete Professional Services DPWI - Gqeberha Regional Office			R	

Brought Forward				R
<u>Sizes</u> Blocks, sills, etc measured linear shall be made in suitable lengths. Large size setting out drawings shall be prepared where necessary and submitted to the principal agent for approval before moulds are made <u>General</u> Where kerbstones, blocks, etc are laid in ground descriptions shall be deemed to include necessary excavation, filling in and ramming <u>User note</u> <i>Where precast concrete copings, sills, beams, facings, claddings, etc are specially designed then the relevant supplementary preambles are to be included here. Items are to be given with brief descriptions referring to detailed drawings annexed to these bills of quantities where necessary</i>				
<u>PRECAST CONCRETE PAVING</u>				
<u>"L13 Terraforce" precast concrete retaining blocks finished smooth on exposed surfaces</u>				
1	Retaining structures with stepped face and curves as required to suit slopes, of 400 x 350 x 225mm high type "L13" retaining blocks laid with horizontal bed joints to 25 degree slope, including average 300mm thick compacted earth filling behind the blocks and filling blocks with garden soil lightly tamped as the work proceeds	m2	15	
Carried to Summary				R
Bill No. 5 Precast concrete Professional Services DPWI - Gqeberha Regional Office				

Item No	Quantity	Rate	Amount
<u>BILL No. 6</u>			
<u>MASONRY</u>			
<u>NOTE:</u> Tenderers are advised to study the Model Preambles for Trades before pricing this bill Tenderers are advised to study the Department of Public Works- Construction works: General Specification (PW371-A) and Construction works: Particular Specification (PW371-B) before pricing this bill			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Proprietary items or materials</u>			
Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Head: Works			
<u>BRICKWORK</u>			
<u>Sizes in descriptions</u>			
Where sizes in descriptions are given in brick units, "one brick" shall be the length and "half brick" the width of a brick			
<u>Cement mortar</u>			
Unless otherwise described, all brickwork shall be built in 1:5 cement mortar			
<u>External walls, etc</u>			
Descriptions of hollow walls shall be deemed to include leaving every fifth perpend of the bottom course of the external skin open as a weep hole			
Carried Forward			R
Bill No. 6 Masonry Professional Services DPWI - Gqeberha Regional Office			

Brought Forward			R																
Walls in two skins described as "bagged and sealed" shall be deemed to include having the outer face of the inner skin bagged with 1:6 cement and sand mixture and sealed with two coats "Brixal" bitumen emulsion waterproofing coating <u>Face bricks</u> Bricks shall be ordered timeously to obtain uniformity in size and colour <u>Pointing</u> Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc <u>Samples, etc</u> Rates for brickwork, faced brickwork, etc shall include for all required samples <u>BRICKWORK</u> <u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in foundations (Provisional)</u> <tr> <td>1</td><td>One brick walls</td><td>m2</td><td>2</td></tr> <u>Brickwork of NFP bricks in superstructure</u> <tr> <td>2</td><td>One brick walls</td><td>m2</td><td>2</td></tr> <u>BRICKWORK SUNDRIES</u> <u>Joint forming material in movement joints</u> <tr> <td>3</td><td>12mm Bitumen impregnated fibre board built in vertically through brick walls in foundations (Provisional)</td><td>m2</td><td>1</td></tr> <u>Brickwork reinforcement</u> <tr> <td>4</td><td>150mm Wide reinforcement built in horizontally</td><td>m</td><td>120</td></tr>			1	One brick walls	m2	2	2	One brick walls	m2	2	3	12mm Bitumen impregnated fibre board built in vertically through brick walls in foundations (Provisional)	m2	1	4	150mm Wide reinforcement built in horizontally	m	120	
1	One brick walls	m2	2																
2	One brick walls	m2	2																
3	12mm Bitumen impregnated fibre board built in vertically through brick walls in foundations (Provisional)	m2	1																
4	150mm Wide reinforcement built in horizontally	m	120																
Carried Forward			R																
Bill No. 6 Masonry Professional Services DPWI - Gqeberha Regional Office																			

[illegible]

Item No	Quantity	Rate	Amount
<u>BILL No. 7</u>			
<u>WATERPROOFING</u>			
<u>NOTE:</u> Tenderers are advised to study the Model Preambles for Trades before pricing this bill Tenderers are advised to study the Department of Public Works- Construction works: General Specification (PW371-A) and Construction works: Particular Specification (PW371-B) before pricing this bill			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Proprietary items or materials</u>			
Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Head: Works			
<u>Waterproofing</u>			
Waterproofing of roofs, basements, etc shall be laid under a twelve year maintenance free guarantee. Waterproofing to roofs shall be laid to even falls to outlets etc with necessary ridges, hips and valleys. Descriptions of sheet or membrane waterproofing shall be deemed to include additional labour to turn-ups and turn-downs			
<u>DAMPPROOFING OF WALLS AND FLOORS</u>			
<u>One layer of 250 micron USB green waterproof sheeting sealed at laps with pressure sensitive tape</u>			
1	Under surface beds	m2	20
<u>JOINT SEALANTS, ETC</u>			
Carried Forward			R
Bill No. 7 Waterproofing Professional Services DPWI - Gqeberha Regional Office			

Brought Forward			R
<u>Two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc</u>			
2	6 x 10mm In expansion joints in floors including raking out expansion joint filler as necessary (Provisional)	m	10
3	12 x 10mm In expansion joints in floors/walls including raking out expansion joint filler as necessary (Provisional)	m	32
Carried to Summary			R
Bill No. 7 Waterproofing Professional Services DPWI - Gqeberha Regional Office			

Item No	Quantity	Rate	Amount
<u>BILL No. 8</u>			
<u>PLUMBING AND DRAINAGE</u>			
<u>(PROVISIONAL)</u>			
NOTE: Tenderers are advised to study the Model Preambles for Trades before pricing this bill			
Tenderers are advised to study the Department of Public Works- Construction works: General Specification (PW371-A) and Construction works: Particular Specification (PW371-B) before pricing this bill			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Fixing of pipes</u>			
Unless specifically otherwise stated, descriptions of pipes shall be deemed to include fixing to walls etc, casting in, building in or suspending not exceeding 1m below suspension level			
<u>Reducing fittings</u>			
Where fittings have reducing ends or branches they are described as "reducing". In the case of pipes with diameters not exceeding 60mm only the largest end or branch size is given. Should the contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained. In the case of pipes with diameters exceeding 60mm all sizes are given and no claim for extra bushes, reducers, etc will be entertained			
<u>Exposed concrete surfaces</u>			
Exposed surfaces of concrete stormwater channels, cover slabs, inspection eye marker slabs, gulley tops, cleaning eye tops, catchpits, inspection chambers, etc shall be finished smooth with plaster			
Carried Forward		R	
Bill No. 8 Plumbing and Drainage Professional Services DPWI - Gqeberha Regional Office			

Brought Forward

R

STEEL WATER TANK

NOTE:

Steel mass will be calculated according to the tables issued by the SA Institute of Steel Construction.

Descriptions

Descriptions of bolts shall be deemed to include nuts and washers

Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete

Descriptions of L-shaped and U-shaped anchor bolts shall be deemed to include bending, threading, nuts and washers and embedding in concrete. Where anchor bolts are described as embedded in sides or soffits of concrete it shall be deemed to include holes through formwork.

EXTENT OF THE WORK:

Supply, fabrication, shop painting, delivering and off-loading, hoisting and erection complete of the structural steelwork including for making good after erection. Include also for supplying holding down bolts, etc. as specified

SHOP DRAWINGS:

The Contractor will be required to prepare shop details for the work which must be submitted to the Engineers for approval before fabrication is started. Notwithstanding any approval of these details, the Contractor shall remain responsible for ensuring that the dimensions, details and workmanship result in the correct assembly of the work.

Carried Forward

R

Bill No. 8
Plumbing and Drainage
Professional Services
DPWI - Gqeberha Regional Office

Brought Forward

R

**FABRICATION, WORKMANSHIP
ANDSUBSTITUTION OF MEMBERS:**

The steelwork is to be fabricated from mild steel to B.S. 15 and in accordance with the requirements of S.B.R. Chapter 8. The whole of the fabrication and workmanship generally is to be in strict accordance with B.S. No. 449 as amended. Consideration will be given to any detail variations which the Contractor may wish to make with a view to the simplification of either fabrication, delivery or erection.

Substitutions must be made at the Contractor's own expense and must be accompanied by detailed calculations.

Tenderers shall state at the time of tendering whether they anticipate any difficulty in obtaining in time, any material shown on the drawings.

If at the time of fabrication, a particular section is no longer obtainable in Port Elizabeth in the time available, another section may be substituted after receipt of written permission from the Engineers. Such permission shall be given only on satisfactory evidence that the section is unobtainable. Costs of such substitution shall be at the Contractor's expense.

ERECTION:

The steelwork generally is to be fabricated in the Contractor's works having due regard to transport and erection facilities. He must supply all erection tackle, erect and plumb all steelwork, supply all steel wedges and packs as required and holding down bolts. If bolted connections are used for lattice girders then either high tensile "friction grip" bolts or close tolerance bolts must be used.

Carried Forward

R

Bill No. 8
Plumbing and Drainage
Professional Services
DPWI - Gqeberha Regional Office

Brought Forward

R

FRICTION GRIP BOLTS:

When site connections of steelwork are made with high tensile "friction grip" bolts, the Contractor shall rigidly adhere to the following:-

- (i) Two case hardened washers, one flat or bevelled under the head and the other flat or bevelled under the nut shall be used with each bolt.
- (ii) Contract surfaces shall be painted and shall be thoroughly cleaned and freed of dirt, oil, loose scale, burrs and other defects which are liable to reduce frictional resistance between surfaces.
- (iii) At all times the correct torques shall be applied to the difference sizes of bolts.

WELDING:

Welding shall be in accordance with British Standard No. 1856 General Requirements for the Metal-Arc Welding of Mild Steel. Mild steel electrodes shall comply with S.A.B.S. 455 Covered Electrodes for Metal-Arch Welding of Mild Steel.

HOLDING DOWN BOLTS

Holding down bolts must be supplied as and when required to the Main Contractor. Pipe sleeves or pockets must be provided with all holding down bolts and 14 S.w.g. mild steel plate templates provided on a scale of one template or more for every four groups of bolts, suitably marked to ensure easy identification.

Carried Forward

R

Bill No. 8
Plumbing and Drainage
Professional Services
DPWI - Gqeberha Regional Office

Brought Forward			R
<u>PRICES:</u>			
All masses of steelwork are based on measurements of nett length and size of all steel used and allowance must be made for all waste and rolling margin.			
Prices must allow for all cutting and fitting to lengths, shapes and sizes, for the drilling of all holes and slotted holes, for all welding, bolting and riveting and for erection and fixing in position complete.			
Prices must allow for all bolts and rivets .			
Prices must allow for preparing and painting all components as specified before delivery to the site.			
<u>SUBSOIL DRAINAGE</u>			
1	Excavation not exceeding 2m deep for drain trenches	m3	12
2	River sand backfilling to drain trenches	m3	7
3	19mm Crushed stone encasing to pipes	m3	2
4	"Bidem U14" geo- fabric filter blanket wrapped around stone encasing with 150mm side and 300mm end laps including stitching	m2	40
5	110mm Slotted uPVC agricultural pipes laid in stone encasing	m	20
<u>TAPS, VALVES, ETC.</u>			
<u>Stainless steel</u>			
6	25mm Ball valve with teflon seat	No	3
7	63mm Non-return valve	No	1
<u>INTERNAL WATER SUPPLY</u>			
Carried Forward			R
Bill No. 8 Plumbing and Drainage Professional Services DPWI - Gqeberha Regional Office			

Brought Forward				R
<u>Class 2 copper pipes</u>				
8	15mm Pipes	m	12	
9	22mm Pipes	m	24	
<u>Extra over class 2 copper pipes for "Conex" compression fittings</u>				
10	15mm Bush, elbow, bend, tee, reducing tee, saddles, etc.	No	8	
11	22mm Bush, elbow, bend, tee, reducing tee, saddles, etc.	No	12	
<u>Sundries</u>				
12	Testing internal water reticulation		Item	
<u>EXTERNAL WATER RETICULATION</u>				
<u>Class 9 uPVC pressure water pipes</u>				
13	75mm Pipe laid in and including trenches	m	221	
<u>Extra over uPVC pressure pipes for class 16 pressure fittings</u>				
14	75mm VJ Adaptor	No	2	
15	75mm CI FLA Adaptor including gaskets and bolts and nuts for flanged valves (rate calculation)	No	1	
16	75mm Elbow	No	12	
17	75mm Tee	No	2	
Carried Forward				R
Bill No. 8 Plumbing and Drainage Professional Services DPWI - Gqeberha Regional Office				

Brought Forward			R
<u>Inspection chambers and manholes</u>			
18	Excavate for and build manhole formed of standard precast concrete wall and cover slab (Cover e/m), including cutting and fitting precast concrete wall units around drain pipes and making good in cement mortar. Size internally 1000mm diameter, exceeding 1m deep but not exceeding 2m deep (LI)	No	1
<u>Covers</u>			
19	645mm Diameter concrete cover, including steel strap	No	1
<u>TANKS, ETC.</u>			
<u>"ABECO" Hot dipped galvanised steel sectional water tanks consisting of 1220 x 1220mm panels with high density ultraviolet resistance PVC foam gaskets and butyl rubber mastic compound for the jointing of the panel flanges</u>			
20	3.66 x 2.44 x 2.44m High sectional tank consisting of 1220 x 1220mm panels each panel hydraulically pressed with a combined double flange at an angle of 45 and 90 degrees to the face of the panel on all four sides, and pressed steel sectional panel cover with and including hinged manhole and air vent, internal and external ladders, with safety cage for external ladder, level indicator, etc. tank approximately 1m above ground level on concrete beams and base (concrete beams and base elsewhere)	No	1
21	Outlet union for 80mm diameter pipe, both sides flanged, including hole through tank.	No	4
22	80mm Flanged stainless steel ball float valve installed complete as per manufacturers instructions in steel water tank.	No	1
<u>Sundries</u>			
23	80 x 8mm Thick hot dipped galvanised section secured to top of plinth wall at 1m centres with and including M12 bolts.	m	12
Carried Forward			R
Bill No. 8 Plumbing and Drainage Professional Services DPWI - Gqeberha Regional Office			

Brought Forward				R
<u>WATER SUPPLIES</u>				
<u>Galvanised steel pipe (Medium duty)(Double Flanged)</u>				
24	25mm Pipe in connections	m	2	
25	50mm Pipe in connections	m	2	
26	80mm Pipe in connections	m	4	
27	80mm Pipe vertically	m	6	
<u>Galvanised steel fittings</u>				
28	50 x 25mm Reducer	No	1	
29	80 x 25mm Eccentric Reducer	No	1	
30	80 x 50mm Reducer	No	1	
31	80mm Bend (Double Flanged)	No	8	
32	80mm Equal tee (flanged with take-off plain ended)	No	1	
33	80mm RS Flanged gate valve with rising spindle	No	3	
34	80mm Vortex Inhabitor	No	1	
35	80mm Flanged adaptor	No	8	
36	80mm Blank flange	No	1	
<u>Sundries</u>				
37	Thermoplastic valve box for 80mm valve	No	2	
38	Thrust block (15MPa Concrete) including all necessary excavations, backfilling, carting away and rough formwork	m3	1	
Carried Forward				R
Bill No. 8 Plumbing and Drainage Professional Services DPWI - Gqeberha Regional Office				

Brought Forward			R
<u>Testing</u>			
39	Testing water supply system	Item	
40	Inspect, clean and disinfect inside of tank and pipe system prior to filling and commissioning	Item	
<u>STORMWATER CHANNELS</u>			
<u>Unreinforced concrete 20 Mpa in-situ stormwater channels rendered smooth all round, including excavations, formwork, etc. cast in 2m panels</u>			
41	700 x 150mm Thick V-dish channel 75mm deep	m	13
42	Extra for angles, intersections, ends, dressing into sides of catchpits, etc.	No	4
43	1000 x 150mm Thick V-dish channel 75mm deep	m	26
44	Extra for angles, intersections, ends, dressing into sides of catchpits, etc.	No	5
<u>Sundries</u>			
45	Excavate to open face to form cutt-off drain to falls, form banks and remainder deposit on site where directed	m3	4
46	Triangular shaped stormwater channel outlet 900mm wide at head, 1.5m wide at base and 1.5m long at sides formed of 100mm thick concrete V-shaped base including all excavations, formwork and six 150 x 150mm broken bricks or stones protruding 150mm high at base of the spill basin	No	1
<u>Lawn - Supply, deliver and plant</u>			
47	Cynodon Dactylon roll on lawn including rolling	m2	100
<u>"Kaytech" or similar and equal approved reno mattress, complete with stones, geotextile wrap, PVC-coated wiremesh basket and lid, etc.</u>			
48	2000 x 1000 x 300mm Thick baskets	m2	16
Carried to Summary			R
Bill No. 8 Plumbing and Drainage Professional Services DPWI - Gqeberha Regional Office			

Item No		Quantity	Rate	Amount
	<u>BILL No. 9</u>			
	<u>ELECTRICAL WORK</u>			
	<u>NOTE:</u> Tenderers are advised to study the Model Preambles for Trades before pricing this bill Tenderers are advised to study the Department of Public Works- Construction works: General Specification (PW371-A) and Construction works: Particular Specification (PW371-B) before pricing this bill <u>PREAMBLES</u> All equipment, electrical materials or methods of installation shall comply fully with SABS 0142-1 as published December 2001 <u>SUPPLEMENTARY PREAMBLES</u> The descriptions of items in this section is abbreviated descriptions of the work to be done and of the materials to be used, the tenderer are therefore referred to the full specifications for the full descriptions and complete specifications <u>Proprietary items or materials</u> Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Head: Works <u>ELECTRICAL INSTALLATION</u> <u>Qualified Electrician</u> Tenderer's are advised that a registered and qualified 3-phase electrician will be required to provide a electrical compliance certificate upon completion of the project			
	Carried Forward		R	
	Bill No. 9 Electrical Work Professional Services DPWI - Gqeberha Regional Office			

Brought Forward <u>Schedule of information</u> Tenderers are advised that information schedules are included with the project specifications. These schedules must be completed and submitted with the Tenders. <u>Labelling & Colour Coding</u> The cost of labelling and colour coding must be included within the prices of the respective equipment. <u>Fixing of conduits</u> The fixing of conduits shall be as follows a) Build in conduits in wall chases with cement mortar and clamps b) Fix conduits on wall surfaces and in roof spaces with approved saddles c) Cast conduit in concrete surface beds or slabs d) Do surface fixing level, plumb, neatly and in straight line by means of standard spacer saddles <u>Chasing</u> All chasing shall be carried out neatly. Do not chase walls constructed of hollow blocks, locate services in the block cavities. Chase solid walls not deeper than one third of the wall thickness vertically and not more than one sixth horizontally. Avoid horizontal chasing where possible. Ensure that chases, holes and recesses are so made as not to impair the strength or stability of the wall, or reduce the fire resistance properties of the wall. Fill chases with mortar once the conduits are in position Chasing and making good have not been measured separately and shall be deemed to be included in the descriptions of conduiting		R	
Carried Forward Bill No. 9 Electrical Work Professional Services DPWI - Gqeberha Regional Office		R	

Brought Forward				R
<u>Laying of electric cables</u>				
Excavate 600mm below finished ground level				
Encase the installed cable in river sand or sifted sand				
Mark the cable route with approved concrete cable markers				
<u>POWER SUPPLY</u>				
<u>EXCAVATIONS, ETC.</u>				
<u>"Soft excavations" for trenching including bedding, backfilling, compaction and disposal of surplus material.</u>				
1	Cable or sleeve trenches not exceeding 1m deep	m3	26	
2	Extra over excavations in 'earth' for cable or sleeve trenches in 'soft rock'	m3	2	
3	Extra over excavations in 'earth' for cable or sleeve trenches in 'hard rock'	m3	2	
<u>SUNDRIES</u>				
4	Cable marking tape	m	60	
5	Truncated pyramidal cable route markers	No	2	
<u>SLEEVES</u>				
<u>Unplasticised polyvinyl chloride (UPVC) sleeve piping including short lengths and jointing, laid in trench (trench and backfilling measured elsewhere)</u>				
6	32mm Diameter sleeve with draw wire	m	60	
<u>WORK INSIDE EXISTING DISTRIBUTION BOARD</u>				
Carried Forward				R
Bill No. 9 Electrical Work Professional Services DPWI - Gqeberha Regional Office				

		Brought Forward			R
		<u>Installation of new circuit breaker:</u>			
7	20A Double pole 5kA mccb's	No	1		
		<u>ELECTRICAL SUPPLY</u>			
		<u>PVC/PVC/SWA-ECC/PVC/600/1000V grade cable in ground not exceeding 1m deep</u>			
8	6mm ² x 2 - Core	m	60		
		<u>Cable termination to PVC/PVC/SWA-ECC/PVC cable including glands, shrouds, lugs, making off and connections and any additional lengths required</u>			
9	6mm ² x 2 - Core	No	2		
		<u>LIGHTING AND SMALL POWER</u>			
		<u>Rigid PVC conduits</u>			
10	25mm Diameter	m	12		
		<u>GALVANISED CONDUIT</u>			
		<u>Chased and/or fixed in brickwork not exceeding 3000mm above floor level (making good of chase by others)</u>			
11	32mm Diameter	m	60		
		<u>CONDUIT BOXES AND FITTINGS</u>			
12	100 x 50 x 50mm Deep box	No	2		
13	60mm Round galvanised box	No	2		
14	100 x 100 x 50mm Deep weather proof junction box	No	1		
		<u>CONDUCTORS</u>			
		Carried Forward			R
	Bill No. 9				
	Electrical Work				
	Professional Services				
	DPWI - Gqeberha Regional Office				

Brought Forward				R
<u>PVC insulated stranded copper conductors drawn into wireways</u>				
15	1,5mm ²	m	35	
16	2,5mm ²	m	35	
17	4mm ²	m	35	
<u>LIGHT SWITCHES, SWITCHED SOCKET OUTLETS, ETC.</u>				
18	16A, IP67 Single switched socket outlet with external waterproof box	No	1	
<u>EARTHING AND BONDING OF THE COMPLETE LV DISTRIBUTION INSTALLATION</u>				
19	Allow for earthing and bonding of the steel structure, all as required by the applicable regulations and engineer's specification		Item	
<u>TESTING AND COMMISSIONING</u>				
20	Allow for testing, balancing and commissioning the complete electrical installation		Item	
<u>LIGHTNING PROTECTION SYSTEM</u>				
<u>Lightning Protection System to Structures</u>				
Where applicable all steel to the structure shall be suitably earthed to the special earth systems				
Allowance shall further be made that the installed lightning protection system, the nearest earth electrode, be interconnected to the installed electrical earth conductor running with the main supply cable of the building by means of 50mm ² bare copper earth conductor at a depth of 400mm below ground level				
Carried Forward				R
Bill No. 9 Electrical Work Professional Services DPWI - Gqeberha Regional Office				

Brought Forward			R
21	2m long Cadweld type copper electrodes driven into the ground complete with brass coupling between rods, bonding clamps and earth joints.	No	14
22	70mm ² BCEW.	m	80
<u>Sundries</u>			
23	Allow for the installation of a 70mm ² bare copper conductor in the ground and interconnection of the earth electrode and the electrical earth conductor running with the feeder cable to the tank	Item	
24	Allow for the visiting of the site and the carrying out all of the required resistivity tests and the issuing of the test results for approval by the Architect	Item	
25	Allow for the testing of the completed system and the issue of a SABs prescribed certificate	Item	
26	Allow for the required maintenance of the system for the full maintenance period including a final test reading before the end of the period	Item	
<u>DRAWINGS, MANUALS, DATASHEETS, ETC.</u>			
27	Allow for submission of shop drawings	Item	
28	Allow for submission of data sheets and physical samples of socket outlet prior to installation	Item	
29	Allow for submission of all record documentation, including as-built drawings and manuals x3 copies of each, 3 x USB of all information stored.	Item	
Carried to Summary			R
Bill No. 9 Electrical Work Professional Services DPWI - Gqeberha Regional Office			

Item No	Quantity	Rate	Amount
<u>BILL No. 10</u>			
<u>MECHANICAL INSTALLATION</u>			
<u>SUPPLEMENTARY PREAMBLES</u>			
The descriptions of items in this Bill is abbreviated descriptions of the work to be done and of the materials to be used, the tenderer are therefore referred to the full specifications attached to these bills of quantities for the full descriptions and complete specifications			
<u>Proprietary items or materials</u>			
Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Head: Works			
<u>Schedule of information</u>			
Tenderers are advised that information schedules are included with the project specifications. These schedules must be completed and submitted with the Tenders.			
<u>Labelling and Colour Coding</u>			
The cost of labelling and colour coding must be included within the prices of the respective items.			
<u>Pressure Pump with Controller</u>			
1	No	1	
Supply and install a Grundfos CMBE Twin 3-62 pump, duty 1.1kw, 2.5 - 7.9 m3/H and 30m head complete with controls, bolts, vibration damper, 25mm pipe manifold and two ball valves, etc. fixed to concrete plinth (plinth elsewhere)			
Carried Forward			R
Bill No. 10 Mechanical Installation Professional Services DPWI - Gqeberha Regional Office			

Brought Forward			R
<u>Galvanised Cage for Pressure pump consisting of 50 x 50 x 5mm angle iron framework covered with 3mm thick expanded metal mesh, bolted to concrete surface bed.</u>			
2	Single cage 1000mm wide, 800mm long and 1000mm high internally.	No 1	
3	100mm M13 expansion bolt	No 6	
<u>Commissioning, Maintenance, etc</u>			
4	Allow for commissioning and testing of the installation	Item	
5	Allow for 12 month maintenance and guarantee of the installation	Item	
6	Allow for providing operating and maintenance manuals	Item	
Carried to Summary			R
Bill No. 10 Mechanical Installation Professional Services DPWI - Gqeberha Regional Office			

[illegible]

PART C3: SCOPE OF WORK

C3.1: SCOPE OF WORKS
PG-01.2 (EC)

PG-01.2 (EC) SCOPE OF WORKS – JBCC 2000 PRINCIPAL BUILDING AGREEMENT (Edition 6.2 of May 2018)

Project title:	EASTERN CAPE: MDANTSANE LABOUR CENTRE: DEPARTMENT OF EMPLOYMENT AND LABOUR: SUPPLY AND INSTALLATION OF WATER TANKS.		
Tender / Quotation no:	GQEQ-2025/2026-111	Reference no:	14/1/3/2/1/6464/5050

C3. Scope of Works

C3.1 EXTENT OF THE WORKS

The project scope of work entails provision a steel back up water tank complete with booster pump connection. The Water tank will be place of concrete upstand beams. Provision of pipe connections, valve chambers and electrical connection of the booster pumps.

C3.2 ORDER OF THE WORKS

The contractor must submit a construction program upon receipt of all construction information for approval. The construction program must detail the order of works in a logical manner.

C3.3 BUILDINGS OCCUPIED

The facility will be operational during construction. The contractor must get permission from the Principal Agent and DEL representative to access parts of the site and buildings. Contractor must give 48hr notice of any service disruption that may come as result of construction i.e. water supply, sewer connections, electricity supply etc.

C3.4 ACCESS

Access will be granted to the various areas once an agreement has been reached in terms of the successful tender's construction program. No special security is required for workers on site.

Additional all workers must be clothed in official company uniforms bearing company insignia with a fully detailed ID card with a photo. Workers will be limited to the designated areas where work is being executed. The site will however have to remain safe and secure at all times.

C3.5 STANDARD MINIMUM REQUIREMENTS

In terms of section 5(2) of the Construction Industry Development Board Act, 2000 (Act no. 38 of 2000) (the Act), the Construction Industry Development Board is empowered to establish and promote best practice standards, Standard Requirements and Guidelines which includes the following but not limited to:

C3.5.1 cidb Best Practice: Green Building Certification, No. 34158 Government Gazette, 1 April 2011

C3.5.2 cidb Standard for Developing Skills through Infrastructure Contracts, No. 36760 Government Gazette, 23 August 2013

C3.5.3 cidb Standard for Indirect Targeting for Enterprise Development through Construction Works Contracts, No 36190 Government Gazette, 25 February 2013

C3.5.4 cidb Standard for Contract Participation Goals for Targeting Enterprises and Labour through Construction Works Contracts, No. 41237 Government Gazette, 10 November 2017

C3.5.5 cidb Standard for Minimum Requirements for Engaging Contractors and Sub-Contractors on Construction Works Contracts, No. 41237 Government Gazette, 10 November 2017

Any reference to words "Bid" or Bidder" herein and/or in any other documentation shall be construed to have the same meaning as the words "Tender" or "Tenderer".

C3.5.6 cidb Standard for Minimum Requirements for Engaging Contractors and Sub- Contractors on Construction Works Contracts, No. 42021 Government Gazette, 9 November 2018

C3.5.7 cidb Standard for Developing Skills through Infrastructure Contracts, No 48491 Government Gazette, 23 April 2023.

C3.2 – OCCUPATIONAL HEALTH AND SAFETY SPECIFICATION



**public works
& infrastructure**

Department:
Public Works and Infrastructure
REPUBLIC OF SOUTH AFRICA

OCCUPATIONAL HEALTH AND SAFETY SPECIFICATION

FOR

**EASTERN CAPE: GQEBERHA: MDANTSANE LABOUR
CENTRE: DEPARTMENT OF EMPLOYMENT AND
LABOUR: SUPPLY AND INSTALLATION OF WATER
TANKS.**

MANAGED ON BEHALF OF

**THE DEPARTMENT OF EMPLOYMENT AND
LABOUR**

(THE “CLIENT”)

SUPERVISION BY THE DEPARTMENT OF PUBLIC WORKS:

Mr. A. Mgiima - **PROJECT MANAGER**

AND/OR ITS AGENT: [as per CR 5(5)] – {Also refer specifically to Sections 8(2)(g),
8(2)(h) and 37(2) of the Act}

AGENT: **Mr. Mshumpela**

SUPERVISION BY THE PRINCIPAL CONTRACTOR:

PRINCIPAL CONTRACTOR: (full particulars of principle contractor / contractor)

Mr. /Ms/Me - **HEALTH & SAFETY OFFICER (BUILDING)**
(Add full details of this officer)

.....
.....

Mr. /Ms/Me - **HEALTH & SAFETY OFFICER (ELECTRICAL)**
(Add full details of this officer)

.....
.....

Mr. /Ms/Me - **HEALTH & SAFETY OFFICER (MECHANICAL)**
(Add full details of this officer)

.....
.....

Mr. /Ms./Me - **HEAD: PROJECTS & MAINTENANCE**
(Add full details of the head of the project)

.....
.....

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1. PREAMBLE

In terms of Construction Regulation 5(1)(a) of the Occupational Health and Safety Act, 1993 (Act 85 of 1993), the Department of Public Works, as the Client and/or its Agent on its behalf, shall be responsible to prepare a baseline risk assessment for an intended construction work project. In terms of construction regulations 5(1)(b), the client must prepare a suitable, sufficiently documented and coherent site specific Health & Safety Specifications for any intended construction project and provide any Principal Contractor who is making a bid or appointed to perform construction work for the Client and/or its Agent on its behalf with the same.

The Client's further duties are as described in The Act and the Regulations made there-under. The Principal Contractor shall be responsible for the Health & Safety Policy for the site in terms of Section 7 of the Act and in line with Construction Regulation 5 as well as the Health and Safety Plan for the project.

This 'Health and Safety Specifications' document is governed by the "Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), hereinafter referred to as 'The Act'. Notwithstanding this, cognisance should be taken of the fact that no single Act or its set of Regulations can be read in isolation. Furthermore, although the definition of Health and Safety Specifications stipulates 'a documented specification of all health and safety requirements pertaining to associated works on a construction site, so as to ensure the health and safety of persons', it is required that the entire scope of the Labour legislation, including the Basic Conditions of Employment Act be considered as part of the legal compliance system. With reference to this specification document this requirement is limited to all health, safety and environmental issues pertaining to the site of the project as referred to here-in. Despite the foregoing it is reiterated that environmental management shall receive due attention.

Due to the wide scope and definition of construction work, every construction activity and site will be different, and circumstances and conditions may change even on a daily basis. Therefore, due caution is to be taken by the Principal Contractor when drafting the Health and Safety Plan based on these Health and Safety Specifications. Prior to drafting the Health and Safety Plan, and in consideration of the information contained here-in, the contractor shall set up a Risk Assessment Program to identify and determine the scope and details of any risk associated with any hazard at the construction site, in order to identify the steps needed to be taken to remove, reduce or control such hazard. *This Risk Assessment and the steps identified will be the basis or point of departure for the Health and Safety Plan.* The Health and Safety Plan shall include documented 'Methods of Statement' (see definitions under Construction Regulations) detailing the key activities to be performed in order to reduce as far as practicable, the hazards identified in the Risk Assessment.

The Department of Public Works is tasked to provide accommodation and operational facilities to a very large proportion of the approximate 40 National Departments responsible for the governance of the Department of Public Works. A very large number of State employees and public users of the facilities and the services provided there-in directly interacts with the facilities provided by the well-being, health and safety of a great number of people. This Department thus

has directly or indirectly, an impact on the Republic of South Africa as well as the National Parliament.

In this a high premium is to be placed on the health and safety of the most valuable assets of the Department of Public Works. These are its personnel, the personnel of its Clients and the physical assets of which it is the custodian and may also include the public as well. The responsibilities the Department and relevant stakeholders have toward its employees and other people present in the facilities or on the sites are captured further in this specification document. These responsibilities stem from both moral, civil and a variety of legal obligations. The Principal Contractor is to take due cognisance of the above statement.

Every effort has been made to ensure that this specification document is accurate and adequate in all respects. Should it however, contain any errors or omissions they may not be considered as grounds for claims under the contract for additional reimbursement or extension of time, or relieve the Principal Contractor from his responsibilities and accountability in respect of the project to which this specification document pertains. Any such inaccuracies, inconsistencies and/or inadequacies must immediately be brought to the attention of the Agent and/or Client.

2. SCOPE OF HEALTH AND SAFETY SPECIFICATION DOCUMENT

These Specifications should be read in conjunction with the Act, the Construction Regulations and all other Regulations and Safety Standards which were or will be promulgated under the Act or incorporated into the Act and be in force or come into force during the effective duration of the project. The stipulations in this specification, as well as those contained in all other documentation pertaining to the project, including contract documentation and technical specifications shall not be interpreted, in any way whatsoever, to countermand or nullify any stipulation of the Act, Regulations and Safety Standards which are promulgated under, or incorporated into the Act.

3. PURPOSE

The Department is obligated to implement measures to ensure the health and safety of all people and properties affected under its custodianship or contractual commitments, and is further obligated to monitor that these measures are structured and applied according to the requirements of these Health and Safety Specifications. *(All references to the singular shall also be regarded as references to the plural)*

The purpose of this specification document is to provide the relevant Principal Contractor (and his /her contractor) with any information other than the standard conditions pertaining to construction sites which might affect the health and safety of persons at work and the health and safety of persons in connection with the use of plant and machinery; and to protect persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work during the carrying out of construction work for the Department of Public Works. The Principal Contractor (and his /her contractor) is to be briefed on the significant health and safety aspects of the project and to be provided with information and requirements on inter alia:

- a) Safety considerations affecting the site of the project and its environment;
- b) Health and safety aspects of the associated structures and equipment;

- c) Submissions on health and safety matters required from the Principal Contractor (and his /her contractor); and
- d) The Principal Contractor's (and his /her contractor) health & safety plan.

To serve to ensure that the Principal Contractor (and his /her contractor) is fully aware of what is expected from him/her with regard to the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) and the Regulations made there-under including the applicable safety standards, and in particular in terms of Section 7 and 8 of the Act, Construction regulations 7 and 8.

To inform the Principal Contractor that the Occupational Health and Safety Act, 1993 (Act 85 of 1993) in its entirety shall apply to the contract to which this specification document applies. The Construction Regulations promulgated on 07 February 2014 shall apply to any person involved in construction work pertaining to this project, as will the Act.

4. DEFINITIONS - The most important definitions in the Act and Regulations pertaining to this specification document are hereby extracted.

“Purpose of the Act” –

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

“Agent” –

means any person who acts as a representative for a client;

“Client” –

means any person for whom construction work is performed;

“Construction Work” is defined as any work in connection with –

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

“Construction work permit”

means a document issued in terms of construction regulations 3

“Contractor” –

means an employer, as defined in Section 1 of the Act, who performs construction work and includes Principal Contractors;

“Health and Safety File” –

means a file, or other record in permanent form, containing the information required a contemplated in the regulations;

“Health and Safety Plan” –

means a documented plan which addresses hazards identified and includes safe work procedures to mitigate, reduce or control the hazards identified;

“Health and Safety Specification” –

means a documented specification of all health and safety requirements pertaining to the associated works on a construction site, so as to ensure the health and safety of persons;

“Method Statement” –

means a document detailing the key activities to be performed in order to reduce as reasonably as practicable the hazards identified in any risk assessment;

“Principal Contractor” –

means an employer, as defined in section 1 of the Act who performs construction work and is appointed by the client to be in overall control and management of a part of or the whole of a construction site;

“Risk Assessment” –

means a program to determine any risk associated with any hazard at a construction site, in order to identify the steps needed to be taken to remove, reduce or control such hazard.

5. OCCUPATIONAL HEALTH & SAFETY MANAGEMENT

5.1 Structure and Organization of OH&S Responsibilities

5.1.1. Overall Supervision and Responsibility for OH&S

- * The Client and/or its Agent on its behalf to ensure that the Principal Contractor, appointed in terms of Construction Regulation 5(5), implements and maintains the agreed and approved H&S Plan. Failure on the part of the Client or Agent to comply with this requirement will not relieve the Principal Contractor from any one or more of his/her duties under the Act and Regulations.
- * The Chief Executive Officer of the Principal Contractor in terms of Section 16 (1) of the Act to ensure that the Employer (as defined in the Act) complies with the Act. The pro forma Legal Compliance Audit may be used for this purpose by the Principal Contractor or his/her appointed contractor.
- * All OH&S Act (85 /1993), Section 16 (2) appointee/s as detailed in his/her/their respective appointment forms to regularly, in writing, report to their principals on matters of health and safety per routine and ad hoc inspections and on any deviations as soon as observed, regardless of whether the observation was made during any routine or ad hoc inspection and to ensure that the reports are made available to the principal Contractor to become part of site records (Health & Safety File).

- * The Construction Manager and Assistant Construction Manager appointed in terms of Construction Regulation 8(1), 8(2) to regularly, in writing, report to their principals on matters of health and safety per routine and ad hoc inspections and on any deviations as soon as observed, regardless of whether the observation was made during any routine or ad hoc inspection and to ensure that the reports are made available to the principal Contractor to become part of site records (Health & Safety File).
- * All Health and Safety Representatives (SHE-Reps) shall act and report as per Section 18 of the Act.

5.1.2. *Further (Specific) Supervision Responsibilities for OH&S*

Several appointments or designations of responsible and /or competent people in specific areas of construction work are required by the Act and Regulations. The following competent appointments, where applicable, in terms of the Construction Regulations are required to ensure compliance to the Act, Regulations and Safety Standards.

Required appointments as per the Construction Regulations:-

Item	Regulation	Appointment	Responsible Person
1.	5(1)(k)	Principal contractor for each phase or project	Client
2.	7(1)(c)	Contractor	Principal Contractor
3.	7(2)(c)	Contractor	Contractor
4.	8(1)	Construction Manager	Principal Contractor
5.	8(2)	Construction Manager assistant	Principal Contractor
6.	8(5)	Construction Health and Safety Officer	Principal Contractor
7.	9(1)	Person to carry out risk assessment	Contractor
9.	10(1)(a)	Fall protection planner	Contractor
10.	12 (1)	Temporary works designer	Contractor
12.	13(1)(a)	Excavation supervisor	Contractor
13.	13(2)(b)(ii)(bb)	Professional engineer or technologist	Contractor
14.	13(2)(k)	Explosives expert	Contractor
15.	14(1)	Supervisor demolition work	Contractor
16.	14(11)	Demolition expert	Contractor
18.	16(1)	Scaffold supervisor and scaffold erector	Contractor
19.	17(1)	Suspended platform supervisor	Contractor
20.	17(2)(c)	Compliance plan developer	Contractor
21.	17(8)(c)	Suspended platform expert	Contractor
22.	17(13)	Outrigger expert	Contractor
23.	18(1)	Rope access supervisor	Contractor
24.	19(8)(a)	Material hoist inspector	Contractor
25.	20(1)	Bulk mixing plant supervisor	Contractor
26.	21(2)(b)	Explosive actuator expert	Contractor
27.	22(a)	Crane supervisor	Contractor
28.	24(d)	Temporal electrical installations controller	Contractor
29.	24(e)	Temporal electrical installations inspector	Contractor
30.	28(a)	Stacking and storage supervisor	Contractor
31.	29(h)	Fire equipment inspector	Contractor

This list may be used as a reference or tool to determine which components of the Act and Regulations would be applicable to a particular site, as was intended under paragraph 3 & 4 of the Chapter “Preamble” (page 4) above. This list must not be assumed to be exclusive or comprehensive.

5.2 *Communication & Liaison*

- 5.2.1 OH&S 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.
- 5.2.2 In addition to the above, communication may be directly to the Client or his appointed Agent, verbally or in writing, as and when the need arises.
- 5.2.3 Consultation with the workforce on OH&S matters will be through their Supervisors and H&S Representatives (‘SHE – Reps’)
- 5.2.4 The Principal Contractor will be responsible for the dissemination of all relevant OH&S information to the other Contractors e.g. design changes agreed with the Client and/or its Agent on its behalf and the Designer, instructions by the Client and/or his/her agent, exchange of information between Contractors, the reporting of hazardous/dangerous conditions/situations etc.

6. INTERPRETATION

(i) The Occupational Health and Safety Act and all its Regulations, with the exception of the Construction Regulations, distinguish between the roles, responsibilities and functions of employers and employees respectively. It views consultants and contractors as employees of the “owner” of a construction or operational project, the “owner” being regarded as the employer. Only if formally agreed to by way of the written agreement in this regard between the “owner(s)” and consultant and /or between the “owner(s)” and the contractor(s), will these assumptions be relinquished in favour of the position agreed upon between the relevant parties.

(ii) The position taken by the Construction Regulations is that the “owner”, in terms of its instructions, operates (has to operate) in the role of client as per relevant definition. The contractors working for the “client” are seen to be in two categories, i.e. the Principal Contractor and Contractors. The Principal Contractor has to take full responsibility for the health and safety on the site of the relevant project / contract. This includes monitoring health and safety conditions and overseeing administrative measures required by the Construction Regulations from all contractors on the project site. (Ordinary / sub) Contractors are required to operate under the scrutiny and control (in terms of all health and safety measures which are covered in the Construction Regulations) of the Principal Contractor. Where, for the work the Principal Contractor will have to execute himself, practical health and safety measures are applicable, he will also be subject to the relevant requirements with which (ordinary / sub) Contractors have to comply. The Principal Contractor will, however, not have to actually fulfill such requirements in respect of any of the work / functions of any (ordinary / sub) Contractors on the site for which he has been appointed as Principal Contractor. However, he has to monitor / oversee such processes, ensuring that the requirements are complied with and that the required appointments / evaluations /

inspections / assessments and tests are done and that the records are duly generated and kept as prescribed in the Construction Regulations. This has to feature clearly in the Principal Contractor's Health and Safety Plan.

7. RESPONSIBILITIES

7.1 Client

7.1.1 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.

7.1.2 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.

7.1.3 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.

7.1.4 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.

7.2 Principal Contractor

7.2.1 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.

7.2.2 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.

7.2.3 The Principal Contractor shall provide and demonstrate to the Client 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.

7.2.4 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.

7.2.5 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.)

7.2.6 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.

7.2.7 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.

7.2.8 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.

7.2.9 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.

7.2.10 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.

7.3 **Contractor** (Responsibilities of in terms of this contract and health and safety specification)

As per 7.2 above, as and where applicable or as indicated in the letter of appointment.

8. SCOPE OF WORK

These specifications are applicable to the specific scope of work pertaining to the above-mentioned project as detailed in the tender documents, this amongst all includes:

Provision of steel water tank and booster pump connection for the Mdantsane Department of Employment and Labour Offices, and entails.

- Site clearance for concrete stand upstand beams.
- Site hoarding and demarcation.
- Assembly of Tank Steel Panels.
- Excavations for foundations and pipe laying.
- Electrical Pump connection to the distribution board.
- Lightning Protection.

The scope work must be read in conjunction with the engineer drawings and specifications.

N.B Construction Regulation 5(1)(g) determines that potential contractors submitting tenders have made provision for the cost of health and safety measures during the construction process. The Principal Contractor shall on tendering make provision for the cost of health and safety measures in terms of his/her documented Health and Safety Plan and measures based on these Health and Safety Specifications during the period of the project. The cost shall be duly quantified and clearly identified for such identifiable purpose.

9. HEALTH AND SAFETY FILE

The Principal Contractor must, in terms of Construction Regulation 7(1)(b), keep a Health & Safety File on site at all times that must include all documentation required in terms of the Act and Regulations and must also include a list of all Contractors on site that are accountable to the Principal Contractor and the agreements between the parties and details of work being done. A more detailed list of documents and other legal requirements that must be kept in the Health and Safety File is attached as an addendum to this document.

IMPORTANT:

The Health and Safety File will remain the property of the Client and/or its Agent on its behalf throughout the period of the project and shall be consolidated and handed over to the Client and/or its Agent on its behalf at the time of completion of the project.

10. OH&S GOALS AND OBJECTIVES AND ARRANGEMENTS FOR MONITORING AND REVIEWING OH&S PERFORMANCE

The Principal Contractor is required to maintain an acceptable disabling incident frequency rate (DIFR) and report on this to the Client and/or its Agent on its behalf on a monthly basis.

11. IDENTIFICATION OF HAZARDS AND DEVELOPMENT OF RISK ASSESSMENTS, STANDARD WORKING PROCEDURES (SWP) AND METHOD STATEMENTS

The Principal Contractor is required to develop Risk Assessments, Standard Working Procedures (SWP) and Method Statements for each activity executed in the contract or project. The identification of hazards is over and above the hazards identification programme and those hazards identified during the drafting of the Health and Safety Plan.

12. ARRANGEMENTS FOR MONITORING AND REVIEW

12.1 Monthly Audit by Client and/or its Agent on its behalf

The Client and/or its Agent on its behalf will be conducting Periodic Audits at times agreed with the Principal Contractor Audit to comply with Construction Regulation 7(1)(c)(vii) to ensure that the principal contractor has implemented, is adhering to and is maintaining the agreed and approved OH&S Plan.

12.2 Other audits and inspections by client and/or its agent on its behalf.

The Client and/or its Agent on its behalf reserves the right to conduct any other ad hoc audits and inspections as it and/or its Agent on its behalf deem necessary.

A representative of the Principal Contractor and the relevant Health and Safety Representative(s) (SHE-Reps) must accompany the Client and/or its Agent on its behalf on all Audits and Inspections and may conduct their own audit/inspection at the same time. Each party will, however, take responsibility for the results of his/her own audit/inspection results. The Client and/or its Agent on its behalf may require to be handed a copy of the minutes of the previous Health and Safety Committee meeting reflecting possible recommendations made by that committee to the Employer for reference purposes.

12.3 Reports

12.3.1 The Principal Contractor shall report all incidents where an employee is injured on duty to the extent that he/she:

- * dies
- * becomes unconscious
- * loses a limb or part of a limb
- * is injured or becomes ill to such a degree that he/she is likely either to die or to suffer a permanent physical defect or likely to be unable for a period of at least 14 days either to work or continue with the activity for which he/she was usually employed

OR where:

- * a major incident occurred
- * the health or safety of any person was endangered

- * where a dangerous substance was spilled
 - * the uncontrolled release of any substance under pressure took place
 - * machinery or any part of machinery fractured or failed resulting in flying, falling or uncontrolled moving objects
 - * machinery ran out of control,
- to the Provincial Director of the Department of Labour within seven days and at the same time to the Client and/or its Agent on its behalf.

Refer in this regard to Section 24 of the Act & General Administrative Regulation 8.

12.3.2 The Principal Contractor is required to provide the Client and/or its Agent on its behalf with copies of all statutory reports required in terms of the Act and the Regulations.

12.3.3 The Principal Contractor is required to provide the Client and/or its Agent on its behalf with a monthly “SHE Risk Management Report”.

12.3.4 The Principal Contractor is required to provide a.s.a.p. the Client and/or its Agent on its behalf with copies of all internal and external accident/incident investigation reports including the reports contemplated in 12.7, 12.8.2, 15, 16, 17, 21 and 22 below. As soon as the occurrence of any accident/incident of whatever nature comes to the notice of the Principal Contractor, it shall be reported immediately to the relevant Regional Manager for that particular jurisdiction.

12.4 Review

The Principal Contractor is to review the Hazard Identification, Risk Assessments and Standard Work Processes at each Production Planning and Progress Report meeting as the construction work develops and progresses and each time changes are made to the designs, plans and construction methods and processes.

The Principal Contractor must provide the Client and/or its Agent on its behalf, other Contractors and all other concerned parties with copies of any changes, alterations or amendments as contemplated in the above paragraph.

12.5 Site Rules and other Restrictions

12.5.1 Site OH&S Rules

The Principal Contractor must develop a set of site-specific OH&S rules that will be applied to regulate the Health and Safety Plan and associated aspects of the construction.

When required for a site by law, visitors and non-employees upon entering the site shall be issued with the proper Personal Protective Equipment (PPE) as and when necessary.

12.5.2 Security Arrangements

The Principal Contractor must establish site access rules and implement and maintain these throughout the construction period. Access control must include the rule that non-employees shall at all times be provided with fulltime supervision while on site.

The Principal Contractor must develop a set of Security rules and procedures and maintain these throughout the construction period.

If not already tasked to the H&S Officer appointed in terms of Construction Regulation 6(6), the Principal Contractor must appoint a competent Emergency Controller who must develop contingency plans for any emergency that may arise on site as indicated by the risk assessments. These must include a monthly practice/testing programme for the plans e.g. January: trench collapse, February: flooding etc. and practiced/tested with all persons on site at the time, participating.

12.6 Training

The contents and syllabi of all training required by the Act and Regulations including any other related or relevant training as required must be included in the Principal Contractor's Health and Safety Plan and Health and Safety File.

12.6.1 General Induction Training

All employees of the Principal and other Contractors must be in possession of proof of General Induction training

12.6.2 Site Specific Induction Training

All employees of the Principal and other Contractors must be in possession of Site Specific Occupational Health and Safety Induction or other qualifying training.

12.6.3 Other Training

All operators, drivers and users of construction vehicles, mobile plant and other equipment must be in possession of valid proof of training.

All employees in jobs requiring training in terms of the Act and Regulations must be in possession of valid proof of training as follows:

Occupational Health and Safety Training Requirements: (as required by the Construction Regulations and as indicated by the Health and Safety Specification Document & the Risk Assessment/s and recommendations by the Health and Safety Committee):

- * General Induction (Section 8 of the Act)
- * Site/Job Specific Induction (also visitors) (Sections 8 & 9 of the Act)
- * Site/Project Manager
- * Construction Supervisor
- * OH&S Representatives (Section 18 (3) of the Act)
- * Training of the Appointees indicated in 12.6.1 & 12.6.2 above
- * Operation of Cranes (Driven Machinery Regulations 18 (11)
- * Operators & Drivers of Construction Vehicles & Mobile Plant (Construction Regulation 23)
- * Basic Fire Prevention & Protection (Environmental Regulations 9 and Construction Regulation 29)
- * As a minimum basic First Aid to be upgraded when necessary (General Safety Regulations 3)
- * Storekeeping Methods & Safe Stacking (Construction Regulation 28)
- * Emergency, Security and Fire coordinator

12.7 Accident and Incident Investigation

The Principal Contractor is responsible to oversee the investigation of all accidents/incidents where employees and non-employees were injured to the extent that he/she/they had to receive first aid or be referred for medical treatment by a doctor, hospital or clinic. (General Administrative Regulation 9)

The results of the investigation to be entered into the Accident/Incident Register listed above. (General Administrative Regulation 9)

The Principal Contractor is responsible for the investigation of all non-injury incidents as described in Section 24 (1) (b) & (c) of the Act and keeping a record of the results of such investigations including the steps taken to prevent similar incidents in future.

The Principal Contractor is responsible for the investigation of all road traffic accidents relating to the construction site and keeping a record of the results of such investigations including the steps taken to prevent similar accidents in future.

Notwithstanding the requirements of Section 24 of the Act, ALL incidents shall be investigated and reported on in writing, irrespective of whether such incident gave rise to injury or damage.

12.8 H&S Representatives (SHE-Reps – ‘safety, health & environment’) and H&S Committees

12.8.1 Designation of H&S Representatives(‘SHE – Reps’)

Where the Principal Contractor employs more than 20 persons (including the employees of other Contractors (sub-contractors) he has to appoint one H&S Representative for every 50 employees or part thereof. (Section 17 of the Act and General Administrative Regulation 6. & 7.)

H&S Representatives have to be designated in writing and the designation shall be in accordance with the Collective Agreement as concluded between the parties as is required in terms of General Administration Regulation 6.

12.8.2 Duties and Functions of the H&S Representatives

The Principal Contractor must ensure that the designated H&S Representatives conduct at least a weekly inspection of their respective areas of responsibility using a checklist and report thereon to the Principal Contractor, after which these reports shall be consolidated for submission to the Health and Safety Committee.

H&S Representatives must be included in and be part of accident/incident investigations.

H&S Representatives shall be members of at least one H&S Committee and must attend all meetings of that H&S committee.

12.8.3 Establishment of H&S Committee(s)

The Principal Contractor must establish H&S Committees consisting of designated H&S Representatives together with a number of Employers Representatives appointed as per Section 19(3) that are not allowed to exceed the number of H&S Representatives on the committee. The persons nominated by the employer on a H&S Committee must be designated in writing for such period as may be determined by him. The H&S Committee shall co-opt advisory (temporary) members and determine the procedures of the meetings including the chairmanship.

The H&S Committee must meet minimum monthly and consider, at least, the following Agenda for the first meeting. Thereafter the H&S Committee shall determine its own procedures as per the previous paragraph.

Agenda:

- 1) Opening and determining of chairmanship (only when necessary)
- 2) Minutes of Previous Minutes
- 3) Observations
- 4) Program and Safety considerations
- 5) Hygiene
- 6) Housekeeping improvement
- 7) Incidents & Accidents / Injuries
- 8) Registers:
 - a H&S Rep. Inspections
 - b. Matters of First Aid
 - c. Scaffolding
 - d. Ladders
 - e. Excavations
 - f. Portable Electric Equipment
 - g. Fire Equipment
 - h. Explosive Power Tools
 - i. Power Hand tools
 - j. Incident! Report Investigation
 - k. Pressure Vessels
 - l. Personal Protective Equipment
- 9) Safety performance Evaluations
- 10) Education & Safety promotion program
- 11) First Aid Officials and training in First Aid
- 12) Demarcation of work- /hazardous-/safe areas/walkways
- 13) Posters and signage
- 14) Environmental preservation and conservation
- 15) Specific training programmes
- 16) General
- 17) Date of Next Meeting
- 18) Closing

13. PROJECT/SITE SPECIFIC REQUIREMENTS

The following is a list of specific activities and considerations that have been identified for the project and site and for which Risk Assessments, Standard Working Procedures (SWP), management and control measures and Method Statements (where necessary) have to be developed by the Principal Contractor:

- * Clearing & Grubbing of the Area/Site
- * Site Establishment including:
 - Office/s
 - Secure/Safe Storage and storage areas for materials, plant & equipment
 - Ablution facilities
 - Sheltered dining area
 - Vehicle access to the site
- * Dealing with existing Structures.
- * Location of existing Services
- * Installation & Maintenance of Temporary Construction Electrical Supply, Lighting and Equipment
- * Adjacent Land uses/Surrounding property exposures
- * Boundary & Access control/Public Liability Exposures (Remember: the Employer is also responsible for the OH&S of non-employees affected by his/her work activities.)
- * Health risks arising from neighboring as well as own activities and from the environment e.g. threats by dogs, bees, snakes, lightning, allergies etc.
- * Exposure to Noise
- * Exposure to Vibration
- * Protection against dehydration and heat exhaustion
- * Protection from wet & cold conditions
- * Dealing with HIV/Aids and other diseases as per specific programme provided by the client and/or its Agent on its behalf
- * Use of Portable Electrical Equipment including:
 - Angle grinder
 - Electrical Drilling machine
 - Skill saw
- * Excavations including:
 - Ground/soil conditions
 - Trenching
 - Shoring
 - Drainage
 - Daily inspections
- * Welding including:
 - Arc Welding
 - Gas welding
 - Flame Cutting
 - Use of LP Gas torches and appliances
- * Loading & Offloading of Trucks
- * Aggregate/Sand and other Materials Delivery
- * Manual and Mechanical Handling

- * Lifting and Lowering Operations
- * Driving & Operation of Construction Vehicles and Mobile Plant including:
 - Trenching machine
 - Excavator
 - Bomag Roller
 - Plate Compactor
 - Front End Loader
 - Mobile Cranes and the ancillary lifting tackle
 - Parking of Vehicles & Mobile Plant
 - Towing of Vehicles & Mobile Plant
- * Use and Storage of Flammable Liquids and other Hazardous Substances – the client and/or its Agent on its behalf to be informed of this prior to commencing of the project
- * Layering and Bedding of trench floor
- * Installation of Pipes in trenches
- * Backfilling of Trenches
- * Protection against Flooding
- * Gabion work
- * Use of Explosives - the client and/or its Agent on its behalf to be informed of this prior to commencing of the project
- * Protection from Overhead Power Lines
- * As discovered by the Principal Contractor's hazard identification exercise
- * As discovered from any inspections and audits conducted by the Client and/or its Agent on its behalf or by the Principal Contractor or any other Contractor on site
- * As discovered from any accident/incident investigation.

13.1 The following are in particular requirements depending on scope of works and will form a basis for compliance audits.

1. Administrative & Legal Requirements
2. Education, Training & Promotion
3. Public Safety & Emergency Preparedness
4. Personal Protective Equipment
5. Housekeeping
6. Scaffolding, Formwork & Support work
7. Ladders
8. Electrical Safeguarding
9. Emergency/Fire Prevention & Protection
10. Excavations & Demolition
11. Tools
12. Cranes
13. Personnel & Material Hoists
14. Transport & Materials Handling
15. Site Plant & Machinery
16. Plant & Storage Yards/Site Workshops Specifics
17. Health & Hygiene

14. OUTLINED DATA, REFERENCES AND INFORMATION ON CERTAIN AND/OR SPECIFIC OBLIGATORY REQUIREMENTS TO ENSURE COMPLIANCE

14.1 Administrative & Legal Requirements

OHS Act Section/ Regulation	Subject	Requirements
Construction Regulation 3	Construction work permit	Apply to the Provincial Labour Office for any construction work as defined under CR 3(1)(a)(b) & (c)
Construction. Regulation 4	Notice of carrying out Construction work	Department of Labour notified Copy of Notice available on Site
General Admin. Regulation 4	*Copy of OH&S Act (Act 85 of 1993)	Updated copy of Act & Regulations on site. Readily available for perusal by employees.
COID Construction regulations 5(1)(j)	*Registration with Compensation Insurer	Written proof of registration/Letter of good standing available on Site
Construction. Regulation 5(1)(b) & 5(1)(n)	H&S Specification & Programme	H&S Spec received from Client and/or its Agent on its behalf OH&S programme developed & Updated regularly
Section 8(2)(d) Construction. Regulation 9	*Hazard Identification & Risk Assessment	Hazard Identification carried out/Recorded Risk Assessment and – Plan drawn up/Updated RA Plan available on Site Employees/Sub-Contractors informed/trained
Section 16(2)	*Assigned duties (Managers)	Responsibility of complying with the OH&S Act assigned to other person/s by CEO.
Construction. Regulation 8(1)	Designation of Person Responsible on Site	Competent person appointed in writing as Construction Manager with job description
Construction. Regulation 8(2)	Designation of Assistant for above	Competent person appointed in writing as Assistant Construction Supervisor with job description
Section 17 & 18 General Administrative Regulations 6 & 7	*Designation of Health & Safety Representatives	More than 20 employees - one H&S Representative, one additional H&S Rep. for each 50 employees or part thereof. Designation in writing, period and area of responsibility specified in terms of GAR 6 & 7 Meaningful H&S Rep. reports. Reports actioned by Management.
Section 19 & 20 General Administrative Regulations 5	*Health & Safety Committee/s	H&S Committee/s established. All H&S Reps shall be members of H&S Committees Additional members are appointed in writing. Meetings held monthly, Minutes kept. Actioned by Management.
Section 37(1) &	*Agreement with	Written agreement with (Sub-)Contractors

(2)	Mandataries/ (Sub-)Contractors	List of (Sub-) Contractors displayed. Proof of Registration with Compensation Insurer/Letter of Good Standing Construction Supervisor designated Written arrangements re. H&S Reps & H&S Committee Written arrangements re. First Aid
Section 24 & General Admin. Regulation 8 COID Act Sect.38, 39 & 41	*Reporting of Incidents (Dept. of Labour)	Incident Reporting Procedure displayed. All incidents in terms of Sect. 24 reported to the Provincial Director, Department of Labour, within 3 days. (Annexure 1?)(WCL 1 or 2) and to the Client and/or its Agent on its behalf Cases of Occupational Disease Reported Copies of Reports available on Site Record of First Aid injuries kept
General Admin. Regulation 9	*Investigation and Recording of Incidents	All injuries which resulted in the person receiving medical treatment other than first aid, recorded and investigated by investigator designated in writing. Copies of Reports (Annexure 1) available on Site Tabled at H&S Committee meeting Action taken by Site Management.
Construction. Regulation 10	Fall Prevention & Protection	Competent person appointed to draw up and supervise the Fall Protection Plan Proof of appointees competence available on Site Risk Assessment carried out for work at heights Fall Protection Plan drawn up/updated Available on Site
Construction. Regulation 11	Structures	Information re. the structure being erected received from the Designer including: - geo-science technical report where relevant - the design loading of the structure - the methods & sequence of construction - anticipated dangers/hazards/special measures to construct safely Risk Assessment carried out Method statement drawn up All above available on Site Structures inspected before each shift. Inspections register kept
Construction. Regulation 16	Scaffolding	Competent persons appointed in writing to: - erect scaffolding (Scaffold Erector/s) - act as Scaffold Team Leaders - inspect Scaffolding weekly and after inclement weather (Scaffold Inspector/s) Written Proof of Competence of above appointees available on Site Risk Assessment carried out Inspected weekly/after bad weather. Inspection register/s kept

Construction. Regulation 17	Suspended Platforms	Competent persons appointed in writing to: - control the erection of Suspended platforms - act as Suspended platforms Team Leaders - inspect Suspended Scaffolding weekly and after inclement weather Risk Assessment conducted Certificate of Authorisation issued by a registered professional engineer available on Site/copy forwarded to the Department of Labour The following inspections of the whole installation carried out by a competent person - after erection and before use - daily prior to use. Inspection register kept The following tests to be conducted by a competent person: - load test of whole installation and working parts every three months - hoisting ropes/hooks/load attaching devices quarterly. Tests log book kept Employees working on Suspended Platform medically examined for physical & psychological fitness. Written proof available
Construction. Regulation 13	Excavations	Competent person/s appointed in writing to supervise and inspect excavation work Written Proof of Competence of above appointee/s available on Site Risk Assessment carried out Inspected: - before every shift - after any blasting - after an unexpected fall of ground - after any substantial damage to the shoring - after rain. Inspections register kept Method statement developed where explosives will be/are used
Construction. Regulation 14	Demolition Work	Competent person/s appointed in writing to supervise and control Demolition work Written Proof of Competence of above appointee/s available on Site Risk Assessment carried out Engineering survey and Method Statement available on Site Inspections to prevent premature collapse carried out by competent person before each shift. Inspection register kept
Construction. Regulation 19	Materials Hoist	Competent person appointed in writing to inspect the Material Hoist Written Proof of Competence of above appointee available on Site. Materials Hoist to be inspected weekly by a competent person. Inspections register kept.

Construction. Regulation 21	Explosive actuated fastening device	Competent person appointed to control the issue of the Explosive actuated fastening & cartridges and the service, maintenance and cleaning. Register kept of above Empty cartridge cases/nails/fixing bolts returns recorded Cleaned daily after use Work areas are demarcated!
Construction. Regulation 20	Bulk mixing plant	Competent person appointed to control the operation of the Bulk mixing plant and the service, maintenance and cleaning. Register kept of above Risk Assessment carried out Bulk mixing plant to be inspected weekly by a competent person. Inspections register kept
Construction. Regulation 23/ Driven Machinery Regulations 18 & 19	Cranes & Lifting Machines Equipment	Competent person appointed in writing to inspect Cranes, Lifting Machines & Equipment Written Proof of Competence of above appointee available on Site. Cranes & Lifting tackle identified/numbered Register kept for Lifting Tackle Log Book kept for each individual Crane Inspection: - All cranes - daily by operator - Tower Crane/s - after erection/6monthly - Other cranes - annually by comp. person - Lifting tackle(slings/ropes/chain slings etc.) - daily or before every new application
Construction. Regulation 24/Electrical Machinery Regulations 9 & 10/ Electrical Installation Regulations	*Inspection & Maintenance of Electrical Installation & Equipment (including portable electrical tools)	Competent person appointed in writing to inspect/test the installation and equipment. Written Proof of Competence of above appointee available on Site. Inspections: - Electrical Installation & equipment inspected after installation, after alterations and quarterly. Inspection Registers kept Portable electric tools, electric lights and extension leads must be uniquely identified/numbered. Weekly visual inspection by User/Issuer/Storeman. Register kept.
Construction. Regulation 28/ General Safety Regulation 8(1)(a)	*Designation of Stacking & Storage Supervisor.	Competent Person/s with specific knowledge and experience designated to supervise all Stacking & Storage Written Proof of Competence of above appointee available on Site
Construction. Regulation 29/ Environmental Regulation 9	*Designation of a Person to Co-ordinate Emergency Planning And Fire Protection	Person/s with specific knowledge and experience designated to co-ordinate emergency contingency planning and execution and fire prevention measures Emergency Evacuation Plan developed: - Drilled/Practiced - Plan & Records of Drills/Practices available on Site Fire Risk Assessment carried out All Fire Extinguishing Equipment identified and on register . Inspected weekly. Inspection Register kept

		Serviced annually
General Safety Regulation 3	*First Aid	Every workplace provided with sufficient number of First Aid boxes. (Required where 5 persons or more are employed) First Aid freely available Equipment as per the list in the OH&S Act. One qualified First Aider appointed for every 50 employees. (Required where more than 10 persons are employed) List of First Aid Officials and Certificates Name of person/s in charge of First Aid box/es displayed. Location of First Aid box/es clearly indicated. Signs instructing employees to report all Injuries/illness including first aid injuries
General Safety Regulation 2	Personal Safety Equipment (PSE)	PSE Risk Assessment carried out Items of PSE prescribed/use enforced Records of Issue kept Undertaking by Employee to use/wear PSE PSE remain property of Employer, not to be removed from premises GSR 2(4)
General Safety Regulation 9	*Inspection & Use of Welding/Flame Cutting Equipment	Competent Person/s with specific knowledge and experience designated to Inspect Electric Arc, Gas Welding and Flame Cutting Equipment Written Proof of Competence of above appointee available on Site All new vessels checked for leaks, leaking vessels NOT taken into stock but returned to supplier immediately Equipment identified/numbered and entered into a register Equipment inspected weekly. Inspection Register kept Separate, purpose made storage available for full and empty vessels
Pressure Equipment Regulations (PER)	Pressure Equipment Regulations (PER)	Competent Person/s with specific knowledge and experience designated to supervise the use, storage, maintenance, statutory inspections & testing of Pressure Equipment. Written Proof of Competence of above appointee available on Site Risk Assessment carried out Certificates of Manufacture available on Site Register of Pressure Equipment on Site Inspections & Testing by Approved Inspection Authority (AIA): - after installation/re-erection or repairs - Annual External inspections, - every 36 months. - Register/Log kept of inspections, tests. Modifications & repair A risk based inspection process by an authorised certification body, SAQCC(IPE) registered person

Construction. Regulation 23	Construction Vehicles & Mobile Plant	Operators/Drivers appointed to: - Carry out a daily inspection prior to use - Drive the vehicle/plant that he/she is competent to operate/drive Written Proof of Competence of above appointee available on Site. Record of Daily inspections kept
General Safety Regulation 13A	*Inspection of Ladders	Competent person appointed in writing to inspect Ladders Ladders inspected at arrival on site and weekly there after. Inspections register kept Application of the types of ladders (wooden, aluminium etc.) regulated by training and inspections and noted in register
General Safety regulation 13B	Ramps	Competent person appointed in writing to Supervise the erection & inspection of Ramps. Inspection register kept. Daily inspected and noted in register

14.2 Education & Training

Subject	Requirement
*Company OH&S Policy Section 7(1) *Company/Site OH&S Rules (Section 13(a)) *Induction & Task Safety Training (Section 13(a)) *General OH&S Training (Section 13(a)) *Occupational Health & Safety Promotion	Policy signed by CEO and published/Circulated to Employees Policy displayed on Employee Notice Boards Management and employees committed. Rules published Rules displayed on Employee Notice Boards Rules issued and employees effectively informed or trained: written proof Follow-up to ensure employees understand/adhere to the policy and rules. All new employees receive OH&S Induction Training. Training includes Task Safety Instructions. Employees acknowledge receipt of training. Follow-up to ensure employees understand/adhere to instructions. All current employees receive specified OH&S training: written proof Operators of Plant & Equipment receive specified training Follow-up to ensure employees understand/adhere to instructions. <u>Incident Experience Board indicating e.g.</u> * No. of hours worked without an Injury * No. of days worked without an Injury Mission, Vision and Goal Star Grading - Board kept up to date. Safety Posters displayed & changed regularly Employee Notice Board for OH&S Notices. Site OH&S Competition. Company OH&S Competition. Participation in Regional OH&S Competition Suggestion scheme.

14.3 Public Safety, Security Measures & Emergency Preparedness

Subject	Requirement
*Notices & Signs	Notices & Signs at entrances / along perimeters indicating “No Unauthorised Entry”. Notices & Signs at entrance instructing visitors and non - employees what to do, where to go and where to report on entering the site/yard with directional signs. e.g. “Visitors to report to Office” Notices & Signs posted to warn of overhead work and other hazardous activities. e.g. General Warning Signs
Site Safeguarding	Nets, Canopies, Platforms, Fans etc. to protect members of the public passing / entering the site.
*Security Measures	Access control measures/register in operation Security patrols after hours during weekends and holidays Sufficient lighting after dark
*Emergency Preparedness	Guard has access to telephone/ mobile/other means of emergency communication Emergency contact numbers displayed and made available to Security & Guard Emergency Evacuation instructions posted up on all notice boards (including employees' notice boards) Emergency contingency plan available on site/in yard Doors open outwards/unobstructed Emergency alarm audible all over (including in toilets)
*Emergency Drill & Evacuation	Adequate No. of employees trained to use Fire Fighting Equipment. Emergency Evacuation Plan available, displayed and practiced. (See Section 1 for Designation & Register)

14.4 Personal Protective Equipment

Subject	Requirement
*PPE needs analysis	Need for PPE identified and prescribed in writing. PPE remain property of Employer, not to be removed from premises GSR 2(4)
*Head Protection	All persons on site wearing Safety Helmets including Sub-contractors and Visitors (where prescribed)
*Foot Protection	All employees on site wearing Safety Footwear including Gumboots for concrete / wet work and non-slip shoes for roof work. Visitors to wear same upon request or where prescribed
*Eye and Face Protection	<u>Eye and Face (also Hand and Body) Protection</u> (Goggles, Face Shields, Welding Helmets etc.) used when operating the following: * Jack/ Kango Hammers * Angle / Bench Grinders * Electric Drills (Overhead work into concrete / cement / bricks * Explosive Powered tools * Concrete Vibrators / Pokers * Hammers & Chisels * Cutting / Welding Torches * Cutting Tools and Equipment * Guillotines and Benders * Shears * Sanders and Sanding Machines * CO2 and Arc Welding Equipment * Skill / Bench Saws

	* Spray Painting Equipment etc.
*Hearing Protection	<u>Hearing Protectors</u> (Muffs, Plugs etc.) used when operating the following: * Jack / Kango Hammers * Explosive Powered Tools * Wood/Aluminium Working Machines e.g. saws, planers, routers
*Hand Protection	<u>Protective Gloves</u> worn by employees handling / using: * Cement / Bricks / Steel / Chemicals * Welding Equipment * Hammers & Chisels * Jack / Kango Hammers etc.
*Respiratory Protection	Suitable/efficient prescribed <u>Respirators</u> worn correctly by employees handling / using: * Dry cement * Dusty areas * Hazardous chemicals * Angle Grinders * Spray Painting etc.
*Fall Prevention Equipment	Suitable <u>Safety Belts</u> / Fall Arrest Equipment correctly used by persons working on / in unguarded, elevated positions e.g.: * Scaffolding * Riggers * Lift shafts * Edge work * Ring beam edges etc. Other methods of fall prevention applied e.g. catch nets
*Protective Clothing	All jobs requiring protective clothing (Overalls, Rain Wear, Welding Aprons etc.) Identified and clothing worn.
*PPE Issue & Control	Identified Equipment issued free of charge. All PPE maintained in good condition. (Regular checks). Workers instructed in the proper use & maintenance of PPE. Commitment obtained from wearer accepting conditions and to wear the PPE. Record of PPE issued kept on H&S File. PPE remain property of Employer, not to be removed from premises GSR 2(4)

14.5 Housekeeping

Subject	Requirement
*Scrap Removal System	All items of Scrap/Unusable Off-cuts/Rubble and redundant material removed from working areas on a regular basis. (Daily) Scrap/Waste removal from heights by chute/hoist/crane. Nothing thrown/swept over sides. Scrap disposed of in designated containers/areas Removal from site/yard on a regular basis.
Stacking & Storage	<u>Stacking:</u> * Stable, on firm level surface/base. * Prevent leaning/collapsing * Irregular shapes bonded * Not exceeding 3x the base * Stacks accessible * Removal from top only.

(See Section 1 for Designation & Register)	Storage: * Adequate storage areas provided. * Functional – e.g. demarcated storage areas/racks/bins etc. * Special areas identified and demarcated e.g. flammable gas, cement etc. * Neat, safe, stable and square. * Store/storage areas clear of superfluous material. * Storage behind sheds etc. neat/under control. * Storage areas free from weeds, litter etc.
*Waste Control/Reclamation	Re-usable off-cuts and other re-usable material removed daily and kept to a minimum in the work areas. All re-usable materials neatly stacked/stored in designated areas. (Nails removed/bent over in re-usable timber). Issue of hardware/nails/screws/cartridges etc. controlled and return of unused items monitored.
Sub-contractors (Housekeeping)	Sub-contractors required to comply with Housekeeping requirements.

14.6 Working at Heights (including roof work)

Subject	Requirement
Openings	Unprotected openings adequately guarded/fenced/barricaded/catch nets installed
	Roof work discontinued when bad/hazardous weather Fall protection measures (including warning notices) when working close to edges or on fragile roofing material Covers over openings in roof of robust construction/secured against displacement

14.7 Scaffolding / Formwork / Support Work

Subject	Requirement
Access/System Scaffolding	Foundation firm / stable Sufficient bracing. Tied to Structure/prevented from side or cross movement Platform boards in good condition/sufficient/secured. Handrails and toe boards provided. Access ladders / stairs provided. Area/s under scaffolding tidy. Safe/unsafe for use signs Complying with OH&S Act/SABS 085
Free Standing Scaffolding	Foundation firm / stable Sufficient bracing. Platform boards in good condition/sufficient/secured. Handrails and toe boards provided. Access ladders / stairs provided. Area/s under scaffolding tidy. Safe/unsafe for use signs Height to base ratio correct Outriggers used /tied to structure where necessary Complying with OH&S Act/SABS 085
*Mobile	Foundation firm / stable

Scaffolding	Sufficient bracing. Platform boards in good condition/sufficient/secured. Handrails and toe boards provided. Access ladders / stairs provided. Area/s under scaffolding tidy. Safe/unsafe for use signs
*Mobile Scaffolding	Wheels / swivels in good condition Brakes working and applied. Height to base ratio correct. Outriggers used where necessary Complying with OH&S Act/SABS 085
Suspended Scaffolding	Outriggers securely supported and anchored. Correct No. of steel wire ropes used. Platform as close as possible to the structure. Handrails on all sides All winches / ropes / cables / brakes inspected regularly and replaced as prescribed Scaffolding complies with OHS Act (Act 85/93) Winch(es) maintained by competent person(s)
Formwork / Support Work	All components in good condition. Foundation firm / stable. Adequate bracing / stability ensured. Good workmanship / uprights straight and plumb. Good cantilever construction. Safe access provided. Areas under support work tidy. Same standards as for system scaffolding.
Special Scaffolding	Special Scaffolding e.g. Cantilever, Jib and Truss-out scaffolds erected to an acceptable standard and inspected by specialists.
Edges & Openings	Edges barricaded to acceptable standards. Manhole openings covered / barricaded. Openings in floor / other openings covered, barricaded/fenced. Stairs provided with handrails. Lift shafts barricaded / fenced off.

14.8 Ladders

Subject	Requirement
*Physical Condition / Use & Storage	Stepladders - hinges/stays/braces/stiles in order. Extension ladders - ropes/rungs/stiles/safety latch/hook in order. Extension / Straight ladders secured or tied at the bottom / top. No joined ladders used Wooden ladders are never painted except with varnish Aluminium ladders NOT to be used with electrical work All ladders stored on hooks / racks and not on ground. Ladders protrude 900 mm above landings / platforms / roof. Fixed ladders higher than 5 m have cages/Fall arrest system

14.9 Electricity (as part of, or additional to the manual “Safety & Switching Procedures for Electrical Installations”- see attached document)

Subject	Requirement
*Electrical Distribution Boards & Earth Leakage	Colour coded / numbered / symbolic sign displayed. Area in front kept clear and unobstructed. Fitted with inside cover plate / openings blanked off / no exposed “live” conductors / terminals/Door kept close Switches / circuit breakers identified. Earth leakage protection unit fitted and operating. Tested with instrument: Test results within 15 – 30 milliamps Aperture/Opening/s provided for the plugging in and removal of extension leads without the need to open the door Apertures and openings used for extension leads to be protected against the elements and especially rain
*Electrical Installations & Wiring	Temporary wiring / extension leads in good condition / no bare or exposed wires. Earthing continuity / polarity correct: Looking at the open connectors to connect the wiring, the word “Brown” has the letter ‘R’ in it, so the <u>b’R’own</u> wire connects to the ‘R’ight hand connector. “Blue” has the letter ‘L’ in it, so the <u>b’L’ue</u> wire connects to the ‘L’eft hand connector. Cables protected from mechanical damage and moisture. Correct loading observed e.g. no heating appliance used from lighting circuit etc. Light fittings/lamps protected from mechanical damage/moisture. Cable arrestors in place and used inside plugs
*Physical condition of Electrical Appliances & Tools	<u>Electrical Equipment and Tools:</u> (includes all items plugging in to a 16 Amp supply socket) Insulation / casing in good condition. Earth wire connected/intact where not of double insulated design Double insulation mark indicates that no earth wire is to be connected. Cord in good condition/no bare wires/secured to machine & plug. Plug in good condition, connected correctly and correct polarity.

14.10 Emergency and Fire Prevention and Protection

Subject	Requirement
*Fire Extinguishing Equipment	Fire Risks Identified and on record <u>The correct and adequate Fire Extinguishing Equipment available for:</u> * Offices * General Stores * Flammable Store * Fuel Storage Tank/s and catchment well * Gas Welding / Cutting operations * Where flammable substances are being used / applied. * Equipment Easily Accessible
*Maintenance	Fire equipment checked minimum monthly, serviced yearly
*Location & Signs	<u>Fire Extinguishing Equipment:</u> * Clearly visible * Unobstructed * Signs posted including “No Smoking” / “No Naked Lights” where required. (Flammable store, Gas store, Fuel tanks etc.)
* Storage Issue &	Storage Area provided for flammables with suitable doors, ventilation, bund etc.

Control of Flammables (incl. Gas cylinders)	Flammable store neat / tidy and no Class A combustibles. Decanting of flammable substances carried out in ignition free and adequately ventilated area. Container bonding principles applied Only sufficient quantities issued for one task or one day's usage Separate, special gas cylinder store/storage area. Gas Cylinders stored / used / transported upright and secured in trolley/cradle/structure and ventilated. Types of Gas Cylinders clearly identified as well as the storage area and stored separately. Full cylinders stored separately from empty cylinders. All valves, gauges, connections, threads of all vessels to be checked regularly for leaks. Leaking acetylene vessels to be returned to the supplier IMMEDIATELY.
*Storage, Issue & Control of Hazardous Chemical Substances (HCS)	HCS storage principles applied: products segregated Only approved, non-expired HCS to be used Only the prescribed PPE shall be used as the minimum protection Provision made for leakage/spillage containment and ventilation Emergency showers/eye wash facilities provided HCS under lock & key controlled by designated person Decanted/issued in containers as prescribed with information/warning labels Disposal of unwanted HCS by accredited disposal agent No dumping or disposal of any HCS on or inside the storage area or anywhere else on the project site All vessels or containers to be regularly checked for leaks

14.11 Excavations

Subject	Requirement
Excavations, any man-made cavity, trench, pit or depression formed by cutting, digging or scooping	Shored / Braced to prevent caving / falling in. Provided with an access ladder. Excavations guarded/barricaded/lighted after dark in public areas Soil dumped at least 1 m away from edge of excavation On sloping ground soil dumped on lower side of excavation All excavations are subject to daily inspections

14.12 Tools

Subject	Requirement
*Hand Tools	<u>Shovels / Spades / Picks:</u> * Handles free from cracks and splinters * Handles fit securely * Working end sharp and true <u>Hammers:</u> * Good quality handles, no pipe or reinforcing steel handles. * Handles free from cracks and splinters Handles fit securely <u>Chisels:</u> * No mushroomed heads / heads chamfered * Not hardened * Cutting edge sharp and square <u>Saws:</u> * Teeth sharp and set correctly

	* Correct saw used for the job
*Explosive actuated fastening device.	Only used by trained / authorised personnel. Prescribed warning signs placed / displayed where tool is in use. Work area must be properly isolated/demarcated during use of tool. Inspected at least monthly by competent person and results recorded. Issue and return recorded including cartridges / nails and unused cartridges / nails / empty shells recorded. Cleaned daily after use.

14.13 Cranes

Subject	Requirement
Tower Crane	Only operated by trained authorised operator with valid certificate of training Structure - no visible defects Electrical installation good/safe Crane hook: Throat pop marked/safety latch fitted/functional SWL/MML displayed Limit switches with backup switches fitted/operational Access Ladder fitted with backrests/Fall arrest system installed Lifting tackle in good condition/inspection colour coding Lifting tackle checked daily
*Mobile Crane	Only operated by trained authorised operator with valid certificate of training Rear view mirrors Windscreen visibility good Windscreen wipers operating effectively Indicators operational Hooter working Tyres safe/sufficient tread/pressure visibly sufficient No missing Wheel nuts Headlights, taillights operational Reverse alarm working and audible and known by all employees
*Mobile Crane continued	Grease nipples and grease on all joints No Oil leaks Hydraulic pipes visibly sound/no leaks No corrosion on Battery terminals Boom visibly in good condition/no apparent damage Cable/sheaves greased/no visible damage/split wires/corrosion and checked daily Brakes working properly Crane hook: Throat pop marked/safety latch fitted/functional SWL/MML displayed By-pass valves operational Deflection chart displayed/visible to operator/driver Outriggers functional used
*Gantry Crane	Only operated by trained authorised persons Correct slinging techniques used Recognised/displayed on chart signals used Log book kept/up to date Prescribed inspections conducted on crane & lifting tackle and checked daily "Crane overhead" signage, where applicable Crane hook: Throat pop marked/safety latch fitted/functional SWL/MML displayed/load limiting switches fitted/operational

14.14 Builder's Hoist

Subject	Requirement
Builder's Hoist	"Hoist In Operation" - sign displayed. General construction strong and free from patent defects. <u>Tower:</u> * Adequately secured / braced. * At least 900 mm available for over travel. * Barricaded at least 2 100 mm high at ground level and floors. * Landing place provided with gate at least 1 800 high. <u>Platform:</u> * No persons conveyed on platform * Steel wire ropes with breaking strength of six times max. load. * Signal systems used which may include two way radio connection. * Goods prevented from moving / falling off. * Effective brake capable of stopping and holding max. load.

14.15 Transport & Materials Handling Equipment

Subject	Requirement
*Site Vehicles	All Site Vehicles, Dumpers, Bobcats, Loaders etc; checked daily before use by driver / operator. Inventory of vehicles used/operated on site Inspection by means of a checklist / results recorded. No persons riding on equipment not designed or designated for passengers. Site speed limit posted, enforced and not exceeded. Drivers / Operators trained / licensed and carrying proof. No unauthorised persons allowed to drive / operate equipment.
Conveyors	Conveyor belt nip points and drive gear guarded. Emergency stop/lever/brake fitted, clearly marked & accessible and tested to be functional under full load.

14.16 Site Plant and Machinery

Subject	Requirement
Brick Cutting Machine	Operator Trained. Only authorised persons use the machine. Emergency stop switch clearly marked and accessible. Area around the machine dry and slip/trip free/clear of off-cuts All moving drive parts guarded/electrical supply cable protected Operator using correct PPE - eye/face/hearing/foot/hands/body.
*Electric Arc Welder	Welder Trained. Only authorised / trained persons use welder. Earth cable adequately earthed to work. Electrode holder in good condition/safe Cables, clamps & lugs/connectors in good condition. Area in which welding machine is used is dry/protected from wet. Welder using correct PPE - eye/ face/foot/body/respirator. Correct transparent screens & warning signs placed
*Woodworking Machines	Operators Trained. Only authorised persons use machines. Provided with guards. Guards used. Operators using correct PPE - eye/face/feet/hearing

	Circular saws strictly operated according to prescribed methods and settings Only prescribed saw blades (cross-cut, ripping blade, smooth cut, aluminium) shall be used for various applications
*Compressors	Relief valves correctly set and locked / sealed. Maximum Safe Working Pressure (MSWP) indicated on face of pressure gauge: not on glass cover. All drives adequately guarded. Receiver/lines drained daily Hoses good condition/clamped, not wired Compressed air NEITHER used to dust off clothing/PPE/ and work areas NOR on bare skin
Concrete Mixer / Batch Plant	Top platform provided with guardrails. Dust abatement methods in use. Operators using correct PPE - eye / hands / respirators. All moving drive parts guarded. Emergency stops identified / indicated and accessible. Area kept clean/dry/and free from tripping and slipping hazards. Operators overseer identified and crane signals displayed and used.
*Gas Welding / Flame Cutting Equipment	Only authorised/trained persons use the equipment. Torches and gauges in good condition. Flashback arrestors fitted at cylinders and gauges. Hoses in good condition/correct type/all connections with clamps Cylinders stored, used and transported in upright position, secured in trolley / cradle / to structure. All cylinders regularly checked for leaks, leaking cylinders returned immediately Fire prevention/control methods applied/hot work permits

14.17 Plant & Storage Yards/Site Workshops Specifics

Subject	Requirements
Section 8(2)(1) General Machinery Regulation 2(1): Supervision of the Use & Maintenance of Machinery	Person/s with specific knowledge and experience designated in writing to Supervise the Use & Maintenance of Machinery Critical items of Machinery identified/numbered/placed on register/inventory Inspection/maintenance schedules for abovementioned Inspections/maintenance carried out to above schedules Results recorded
General Machinery Regulation 9(2): Notices Operation of Machinery	Schedule D Notice posted in Work areas

Lock-out Procedure	Lock-out procedure in operation
Ergonomics	Ergonomics survey conducted – results on record Survey results applied
Demarcation & Colour Coding	Demarcation principles applied All services, pipes, electrical installation, stop-start controls, emergency controls etc. colour coded to own published or SABS standard Employees trained to identify colour coding
Portable & Bench Grinders	Area around grinder clear/trip/slip free Bench grinders mounted securely/grinder generally in good condition/No excessive vibration On/Off switch/button clearly demarcated/accessible Adequate guards in place Tool rest – secure/square/max. 2 mm gap, perpendicular to drive shaft Stone/disk - correct type and size/mounted correctly/dressed Use of Eye protection enforced
Battery Storage & Charging	Adequately ventilated, ignition free room/area/no smoking sign/s Batteries placed on rubber/wooden surface Emergency shower/eye wash provided No acid storage in area Prescribed methods in place and adhered to when charging batteries
Ancillary Lifting Equipment	Chain Blocks/Tirfors/jacks/mobile gantries etc. identified/numbered on register Chains in good condition/links no excessive wear/checked daily Lifting hooks – throat pop marked/safety latch fitted SWL/MML marked/displayed
Presses/Guillotines/Shears	Only operated by trained/authorised persons Interlocks/lock-outs fitted/PPE worn or used at all times

14.18 Workplace Environment, Health and Hygiene

Subject	Requirement
*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
*Ventilation	Adequate ventilation / extraction / exhausting in hazardous areas e.g. chemicals / adhesives / welding / petrol or diesel/ motors running and in confined spaces / basements.
*Noise	Tasks identified where noise levels exceeds 85 dB at any one time. All reasonable steps taken to reduce noise levels at the source. Hearing protection used where noise levels could not be reduced to below 85 dB.
*Heat Stress	Measures in place to prevent heat exhaustion in heat stress problem areas e.g. steel decks, when the WBGT index reaches 30. (See Environmental Regulation 4) Cold drinking water readily available at all times.
*Ablutions	Sufficient hygiene facilities provided - 1 toilet per 30 employees (National Building Regulations prescribe chemical toilets for Construction sites) Toilet paper available. Sufficient showers provided. Facilities for washing hands provided Soap/cleaning agent available for washing hands

	Means of drying hands available Lock-up changing facilities / area provided. Ablution facilities kept hygienic and clean.
*Eating / Cooking Facilities	Adequate storage facilities provided. Weather protected eating area provided, separate from changing area Refuse bins with lids provided. Facilities kept clean and hygienic.
*Pollution of Environment	Measures in place to minimize dust generation. Accumulation or littering of empty cement pockets, plastic wrapping / bags, packing materials etc. prevented. Spillage / discarding of oil, chemicals and dieseline into storm water and other drains or into existing or newly dug holes/cavities on site expressly prohibited.
*Hazardous Chemical Substances	All substances identified and list available e.g. acids, flammables, poisons etc. Material Safety Data Sheets (MSDS) indicating hazardous properties and emergency procedures in case of incident on file and readily available. Substances stored safely. Expiry dates meticulously checked where applicable

15. THE PRINCIPAL CONTRACTOR'S GENERAL DUTIES

The Principal Contractor shall at all times ensure his status of an “employer” as referred to in the Act, and will abide by his/her responsibilities, duties and functions as per the requirements of the Act and Regulations with specific reference to Section 8 of the Act.

The Principal Contractor shall keep, and on demand make available, a copy of the Act on site at all times and in addition to that he/she will introduce and maintain a file titled “Health and Safety File”, or other record in permanent form, which shall contain all relevant aspects and information as contemplated in the Construction Regulations. He/she will make this file available to the client or his representative whenever necessary or on request to an interested party.

16. THE PRINCIPAL CONTRACTOR'S SPECIFIC DUTIES

The Principal Contractor's specific duties in terms of these specifications are detailed in the Construction Regulations promulgated in February 2014. The Principal Contractor is specifically referred to the following elements of the Construction Regulations:

- Regulation No. 1 - Definitions
- Regulation No. 2 - Scope of application
- Regulation No. 3 - Application of construction permit
- Regulation No. 4 - Notification of construction work
- Regulation No. 7 - Principal Contractor and Contractor
- Regulation No. 8 - Supervision of construction work
- Regulation No. 9 - Risk Assessment
- Regulation No. 28 - Stacking & Storage on construction sites

Regulation No. 30	- Construction employees' facilities
Regulation No. 32	- Approved Inspection authorities
Regulation No. 33	- Offences and penalties

This list must not be taken to be exclusive or exhaustive!

The Principal Contractor shall ensure compliance to the Act and its Regulations and specifically to the above regulations, and document each record in the Health and Safety File.

19. HOUSE KEEPING

Good housekeeping will be maintained at all times as per Construction Regulation 27. Poor housekeeping contributes to three major problems, namely, costly or increased accidents, fire or fire hazards and reduction in production. Good housekeeping will enhance production time.

Particular emphasis is to be placed on the following crucial elements of a construction site:

- Phase priorities and production/plant layout
- Enclosures
- Pits, openings and shoring
- Storage facilities
- Effective, sufficient and maintained lighting or illumination
- Principal sources of injuries e.g. stairways, runways, ramps, loose building material
- Oil, grease, water, waste, rubble, glass, storm water
- Colour coding
- Demarcations
- Pollution
- Waste disposal
- Ablution and hygiene facilities
- First aid

This list must not be taken to be exclusive or exhaustive!

In promotion of environmental control all waste, rubble, scrap etc, will be disposed of at a registered dump site and records will be maintained. Where it is found to be impractical to use a registered dump site or it is not available, the Principal Contractor will ensure that the matter is brought to record with the client or his representative, after which suitable, acceptable alternatives will be sought and applied.

Dross and refuse from metals, and waste matters or by-products whose nature is such that they are poisonous or capable of fermentation, putrefaction or constituting a nuisance shall be treated or disposed of by methods approved of by an inspector.

NOTE: No employer (Principal Contractor) shall require or permit any person to work at night or after hours unless there is adequate, suitable artificial lighting including support services in respect of Health and Safety.

20. LOCKOUT SYSTEMS: - *ELECTRICAL*

A system of control shall be established in order that no unauthorized person can energize a circuit, open a valve, or activate a machine on which people are working or doing maintenance, even if equipment, plant or machinery is out of commission for any period, thus eliminating injuries and damage to people and equipment as far as is reasonably practicable.

Physical/mechanical lock-out systems shall be part of the safety system and included in training. Lockouts shall be tagged and the system tested before commencing with any work or repairs.

21. INCIDENT INVESTIGATION

Inspection and reporting is the best way in which a responsible contractor can control his area of responsibility. All incidents therefore, irrespective of whether it gave rise to loss, injury, damage or not, shall be investigated and the results recorded in the Health and Safety File.

22. GENERAL

The project under control of the Principal Contractor shall be subject to periodic health and safety audits that will be conducted by the client at intervals agreed upon between the Principal Contractor and the client, provided such intervals will not exceed periods of one month. The Principal Contractor is to ensure that he/she and all persons under his control on the construction site shall adhere to the above specifications, as non-conformance will lead to the client taking action as directed by Construction Regulation 5(1) (q). The Principal Contractor should note that he/she shall be held liable for any anomalies including costs and resulting deficiencies due to delays caused by non-conformance and/or non-compliance to the above Health and Safety Specifications and the Health and Safety Plan based on these specifications.

23. IMPORTANT RECORDS TO BE KEPT

- 1 Inspection checklist (template)

The documents are to be used as a point of reference to determine which components of the Act would be applicable to a particular site or task or project,

INSPECTION CHECKLIST

Employer Particulars	
Employer:	
Registered Name of Enterprise:	
Trade Name of Enterprise:	
Company Registration No.:	
SARS Registration No.:	
UIF Registration No.:	
COIDA Registration No.:	
Relevant SETA for EEA purposes:	
Industry Sector:	
Bargaining Council:	
Contact Person:	

Address of Premises:	
Postal Address:	
Telephone Number:	
Fax Number:	
E-mail Address:	
Chief Executive Officer:	
Chief Executive Officer Address:	
Competent Person:	
Maximum power demand: in KW	
Health and Safety Representatives:	
Activities, products manufactured and/ services rendered:	
Raw materials, materials and chemical/ biological substances:	
Total Number of Employees:	Male: Female:

Contractor Particulars	
Contractors:	
Site Address:	
Contracts Manager:	
Managing Director:	
Competent Persons:	
CR16(1): SCAFFOLDING:	
CR17(1): SUSPENDED PLATFORMS:	
CR19(8)(a): MATERIAL HOIST (S):	
CR20(1): BULK MIXING PLANT:	
CR10(1)(a): FALL PROTECTION:	
CR13(1)(a): EXCAVATION WORK:	
CR14(1): DEMOLITION WORK:	
CR21(2)(b): EXPLOSIVE ACTUATED FASTENING TOOLS	
CR28(a): STACKING	

INSPECTION				
SECTION/REGS	ITEM CHECKED	N/A	YES	NO
	APPOINTMENTS			
CR8(1)	Supervisor:			
CR8(2)	Assistant Supervisor:			
CR8(5)	Construction Health and Safety Officer			
S17(1)	Health & Safety Representative: (ratio)			
S19(1)	Health & Safety Committees			
CR 14(1)	Demolition Expert			
	DOCUMENTS			
GAR 9(1)	Records of Incidents			

GAR 4	Copy of the Act			
GAR 7	Safety Reps Report			
Section 20(2)	Safety Committee Minutes			
DMR 18(7)	Lifting Machines, hand-powered lifting devices and lifting tackle			
CR 3(4)	Application for Construction Work Permit			
CR 4	Notification of Construction Work			
CR 9(6)	Risk Assessment			
CR 7(7)	Proof of the Health & Safety Induction Training			
CR 11(2)(c)	Structures			
CR13(2)(i)	Excavations			
CR7(1)(g)	Medical Certificates of Fitness			
CR 17(11)	Suspended platforms; inspections and performance test records			
CR 7(1)	Health & Safety File			
CR 17(11)	Suspended Platforms' Performance Records			
CR 19(8)(c)	Material Hoists Record Book			
CR21(2)(g)	Explosive actuated fastening device register			
CR 23(1)(k)	Construction Vehicle & Mobile Plant Register			
CR 24(e)	Electrical Installation & Machinery Register			
	INCIDENTS			
GAR 8(1) S24	Reported			
GAR 9(1)	Recorded Investigated Action Taken			
	PUBLIC SITE			
FR 2(1)	Sanitary Facilities			
CR 30(1) (c)	Changing Facilities for each sex			
CR 27(f)	Perimeter fence & no admittance			
CR 27(g)	Overhead protection netting/falling objects			
NB Notice	Pedestrian warning			
	PERSONAL SAFETY EQUIPMENT			
	Items Issued:			
GSR 2(3)	Items Required:			
S23	(What is the payment on each item?)			
	SAFETY PLANS			
	FIRST AID			
GSR 3(6)	Name(s) of First Aider(s):			
CR 5(1)(b)	Client's Health & Safety Specification			
CR7(1)(a)	Principal's contractor H&S Plan			
	FIRE HAZARD & PRECAUTIONS			
GR29	Flammables used, waste, hot work, diesel, fuel, gas			
	ELECTRICAL INSTALLATIONS & MACHINERY			
CR24	Guarding to Electrical Installations			
	ILLUMINATION			
ER 3(6)	Dangerous Places and signage as well			
	Housekeeping			
ER6(2)(b),(c),(d)	Clear space storage			
ER6(3)	Disposal of waste			

The guidelines and conditions provided in this attached document form an integral constituent of the Health and Safety Specifications. It is therefore a condition of acceptance that no Health and Safety Plan shall be complete unless all relevant elements of this document applicable to the above project have been included in the Health and Safety Plan. The final approval of the Health and Safety Plan in terms of CR5(1)(l) shall be subject to this requirement based on the following certification by the Principal Contractor or his Agent:

IMPORTANT CONTACT DETAILS

(FOR HEALTH & SAFETY ASPECTS ONLY)

The contractor is to add all the important contact information about essentials services, support and assistance.

SERVICE

NUMBER

CONTACT PERSON



Hospital



Ambulance



Water

Electricity



Police



Fire Brigade



Engineer

C3.3: ELECTRICAL ENGINEERING SPECIFICATIONS



public works
& infrastructure

Department:
Public Works and Infrastructure
REPUBLIC OF SOUTH AFRICA

NATIONAL DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

ELECTRICAL ENGINEERING SERVICES

**MDANTSANE LABOUR CENTRE
SUPPLY AND INSTALLATION OF WATER TANKS
(WCS 056632)**

PROJECT ELECTRICAL SPECIFICATIONS

DATE : 18TH OCTOBER 2024

Prepared for:

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Construction Project Management
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PART 1 – GENERAL SPECIFICATIONS

1.1. INTRODUCTION

- 1.1.1. These General Specifications cover the general technical requirements for the equipment, materials, installation, testing, commissioning and maintenance of electrical installations for the Department. These requirements must be read in conjunction with the Documents as specified below as well as the other sections of this document.
- 1.1.2. The source documents used for the incorporation of this document are the Standard specifications PW 354 part A, B and C and the South African National standards. The Standard Specifications can be located on the departmental website, consultant guidelines section. www.publicworks.gov.za.
- 1.1.3. Unless otherwise stated the description on of each item shall be deemed to include manufacturing, conveying and delivering, unloading, storing, unpacking, hoisting, setting, fitting and fixing in position, cutting, waste, patterns, templates, plant, temporary works, return of packings, establishment charges, profit and other obligations arising out of the conditions of contract.

1.2. DEFINITIONS

- 1.2.1. The table below provide a description of the main terms in the document but are not limited to:

No.	Term	Description
1.	General Specification	The general specifications provide a broad description of work and materials that is required for a project.
2.	Standard Specification	The standard specifications are pre-established guidelines that are widely used and accepted on projects, they ensure consistency and quality by setting uniform standards for material, methods and practices.
3.	Project specification	The project specification are specific to a particular project and detail the requirements for that project, they include all the necessary information to complete the project according to the client's need and the project conditions. It is the combination of the General, Standard and detailed specifications.
4.	Detailed Specification / Detail Specification	The detailed specifications provide an in-depth description of every aspect of works, including the quality of materials, workmanship and methods implemented.
5.	Particular Specification	The particular specification are tailored information to address a specific requirements or conditions of a project that are not covered by the general, standard or detailed specifications. The focus is on unique aspects for further detail.
6.	Supplementary Specification	The supplementary specifications modify the general or detailed specifications, they address specific conditions or requirements that arise during the project and are not covered by the original project specifications.
7.	Contractor	"Contractor" shall mean the person, partnership, company or firm appointed for the supply, installation, testing, commissioning and maintenance of the Electrical Installation. In the case of the Electrical Installation being a sub-contract, nominated in terms of the Main Contract or otherwise, the word "Contractor" shall also mean "Sub-Contractor" in terms

		of the Sub-Contract Conditions for the specific installation. Where applicable the Builder or Principal Contractor shall be referred to as "Main Contractor".
8.	Accredited / Competent Person	A person who has the necessary knowledge, training, experience, and qualifications specific to the work being performed. This person must be capable of identifying potential hazards and taking appropriate measures to mitigate them. Additionally, they must be authorized to take corrective actions to ensure a safe working environment by a statutory body.
9.	Quality Specification	Department Standard Specification Part C.
10.	Wiring Code	SANS 10142
11.	Earthing	Connection of the exposed-conductive-parts of an installation to the main earth terminal of that installation
12.	Equipotential Bonding	Electrical connection maintaining various exposed-conductive-parts and extraneous-conductive-parts at substantially the same potential.
13.	Departments Authorised representative	The department Authorised representative may be the Project manager, Engineer, Principal agent, Employer's Representative, or Engineer's representative.
14.	Department	The Department in the context of this document refers to the Department of Public works and Infrastructure.
15.	Documents	The complete set of contract documents, including the Department's Tender Conditions, Tender Qualifications, the Standard Specification and the Detailed Specification including all drawings and variation orders issued in terms of the contract and all other contract documents of the contract
16.	Submittals	Documents, shop drawings, datasheets, samples, Mock-ups or other items that a contractor submits to the professional team for approval prior to manufacture, purchase or installation.
17.	Reputable Brand	A reputable brand in construction is one that is widely recognized for its quality, reliability, and trustworthiness. These brands have established a strong reputation over time through consistent delivery of high-quality products and services, excellent customer service, and adherence to industry standards.

1.3. INSTALLATION WORK

- 1.3.1. The complete installation shall comply with the requirements of all parts of the specifications and laws of the Republic of South Africa. Should any discrepancies or contradictions exist between the general/standard specifications and the detailed specification for the specific installation, then the detailed specifications will take precedence.
- 1.3.2. In the event of discrepancies between the drawings, specifications and bill of quantities then the Department shall decide whether the work as executed shall be remeasured on site or whether remeasurement shall be effected from the working drawings only. The decision must be provided in writing before the commencement of any works.
- 1.3.3. The Department's authorised representative will inspect the installation from time to time during the progress of the work. Discrepancies of the contract will be pointed out to the Contractor and these must be remedied at the contractor's expense in accordance with the

contract. Under no circumstances will these inspections relieve the Contractor of his obligations in terms of the Documents and Contract.

- 1.3.4. The Contractor must notify the Department timeously (Minimum 7 days) when the installation reaches important stages of completion (e.g. before closing cable trenches, before casting concrete, etc.) so that the Department's authorised representative may schedule his inspections in the best interest of all parties concerned.

1.4. COMPLIANCE WITH REGULATIONS

- 1.4.1. The installation must be erected and tested in accordance with the South African Acts, Department's quality specifications and Regulations or IEC/EN regulations where applicable.
- 1.4.2. The entire installation must be carried out in accordance with SANS Regulations, by-laws, and the Occupational Health and Safety Act.
- 1.4.3. No claims for extras in respect of failure by the Contractor to comply with any regulations will be considered.
- 1.4.4. Where conflict exists between regulations, specifications or drawings, the said conflict must be referred to the Department's authorised representative in writing for his ruling.

1.5. CODES OF PRACTICE OR STANDARD SPECIFICATION

- 1.5.1. Where reference is made to any Regulations, Code of Practice or Standard specification in this document, the latest edition or amendment will be applicable.

1.6. NOTICES AND FEES

- 1.6.1. The Contractor must give all notices required by and pay all necessary fees, including any inspection fees, which may be due to the local Supply Authority.
- 1.6.2. On production of the official account, only the net amount of the fee charged by the Supply Authority for connection of the installation to the supply mains, will be refunded to the Contractor by the Employer.
- 1.6.3. The Contractor must issue all notices and pay all of the required fees in respect of the installation to the authorities, and shall exempt the Department from all losses, claims, costs or expenditures which may arise as a result of the Contractor's negligence in complying with the requirements of the regulations.
- 1.6.4. It is the responsibility of the Contractor to make the necessary arrangements with the local Supply Authority at his own cost and to supply the labour, equipment and means to inspect, test and commission the installation to the satisfaction of the Local and Supply Authorities.
- 1.6.5. The Contractor must supply and install all notices and warning signs that are required by the relevant laws, regulations and/or the Documents.

1.7. SITE CONDITIONS

- 1.7.1. Tenderers are advised to visit the site and acquaint themselves with all local conditions pertaining to the execution of the installation before tender closing date or as indicated on the tender document with the permission of the department. No claims from the contractor which may arise from insufficient knowledge of site access, type of site, labour conditions,

establishment space, transport and loading/unloading facilities, power and water supply, etc. will be considered after submission of tenders.

- 1.7.2. For services where prior permission is required before contractors can visit the site, a visit will be arranged for all interested parties at the request of the Department.

1.8. COMPETENCE OF PERSONNEL, WORKMANSHIP AND STAFF

- 1.8.1. All work must be executed and supervised by suitably qualified staff. Only "ACCREDITED/COMPETENT PERSONS" will be permitted to carry out and supervise electrical work on site. Copies of all qualifications, certifications and registration must be issued to the Department's authorised representative prior to the commencement of works.
- 1.8.2. Except in the case of electrical installations supplied by a single-phase electricity supply at the point of supply, an accredited person must exercise general control over all electrical installation work being carried out.
- 1.8.3. The workmanship must be of the highest grade and to the satisfaction of the Department's authorised representative.
- 1.8.4. All inferior work that is not in accordance with the Department's Quality specifications, SANS regulations, on indication by the Department's authorised representative, must immediately be removed and rectified by and at the expense of the Contractor.
- 1.8.5. The Contractor must at all times have an adequate number of employees available during the construction period to ensure that the electrical works does not delay the construction programme.

1.9. ELECTRICAL EQUIPMENT AND QUALITY OF MATERIALS

- 1.9.1. Only materials of first class quality must be used and all materials must be subject to the approval of the Department's authorised representative. Departmental specifications for various materials to be used on this Contract are attached to, referred to and form part of this specification.
- 1.9.2. Wherever applicable the material is to comply with the relevant South African Bureau of Standards, South African National Standards, specifications, or to IEC specifications, where no SANS exist.
- 1.9.3. All equipment and fittings supplied must be in accordance with the specifications, suitable for the relevant supply voltage and frequency and must be approved by the Department's authorised representative.
- 1.9.4. Materials and equipment used in this Contract must, where possible, comply with the specifications. Proof of compliance must be submitted prior to installation of any materials or equipment in the form of submittals.
- 1.9.5. The Contractor must submit samples of all materials or equipment for approval by the Engineer and Employer before installation, unless prior approval to the contrary has been obtained in writing from Department's authorised representative. Such samples must be labelled, documented and held for purposes of comparison with equipment and materials installed and will be released on satisfactory completion of the Contract.
- 1.9.6. All apparatus, components, fittings and materials supplied and/or installed, whether expressly specified herein or not, must conform in respect of quality, tests and performance as indicated in the detailed and quality specification.

1.9.7. Where a certain manufacturer's material or apparatus is mentioned in the drawings or specifications, such materials or apparatus shall be provided as specified, except where an alternative to this condition is allowed in the specifications. Where a detailed specification for material or apparatus is not provided, it must be understood that all normal requirements for the use of such materials or equipment will apply.

1.9.8. Where certain products of a specified manufacturer are unobtainable, substitutes may be offered, but only be supplied after written consent by the Department's authorised representative.

1.10. MAINTENANCE OF INSTALLATIONS

1.10.1. With effect from the date of the Practical completion/completion certificate dependent on the type of contract, the contractor must at his own expense undertake the regular servicing of the installation during the maintenance period stipulated by the contract and must make all adjustments necessary for the correct operation thereof.

1.10.2. If during the said period the installations is not in working order for any reason for which the Contractor is responsible, or if the installations develops defects, the contractor must immediately upon being notified thereof take steps to remedy the defects and make any necessary adjustments.

1.10.3. Should such stoppages be so frequent as to become troublesome, or should the installations otherwise prove unsatisfactory during the said period the Contractor must, if called upon by the Department's authorised representative, at his own expense replace the whole of the installations or such parts thereof as the Department's authorised representative may deem necessary with apparatus specified by the Department's authorised representative.

1.11. SCHEDULE OF FITTINGS

1.11.1. In all instances where schedule of light fittings, socket outlet, electronic equipment and power points are attached to or included on the drawings, these schedules are to be regarded as forming part of the specification.

1.12. SWITCHES AND SOCKET OUTLETS

1.12.1. All switches and switch-socket outlet combination units must conform to the Department standard specifications Part C (Quality Specification) and relevant SANS regulations, which form part of this specification.

1.12.2. All socket outlets must be in accordance with SANS 164, unless other types are distinctly specified or indicated on the drawings or detailed specifications.

1.12.3. All light switches and socket outlets must be installed in accordance with SANS 10400-S or otherwise indicated.

1.12.4. 5A Socket outlets are only permitted to supply power to light fittings in accordance with SANS 10142-1.

1.12.5. The following sample labelling shall be used for socket outlets, switches, isolators etc:
a) DB-NAME CIRCUIT BREAKER NUMER CIRCUIT TAG

eg. DB-GG CB4 P2

1.13. SWITCHGEAR

- 1.13.1. Switchgear, which includes circuit breakers, iron-clad switches, interlocked switch-socket outlet units, contactors, time switches, etc. are to be in accordance with the Departmental Quality Specifications which form part of this specification and shall be equal and similar in quality to such brands as may be specified.
- 1.13.2. For uniform appearance of switchboards and protection coordination, only one approved make of each of the different classes of switchgear mentioned in the Quality Specifications shall be used throughout the installations. All switchgear to be SABS approved or have an ASTA diamond mark or CE markings.

1.14. DISTRIBUTION BOARDS

- 1.14.1. All distribution boards must be in accordance with the types as specified, be constructed according to the shop or type drawings and must be approved by the Department's authorised representative prior to manufacture or installation.
- 1.14.2. In all instances where provision is to be made on boards for the supply authority's main switch and/or metering equipment the contractor must ensure that all requirements of the authorities concerned in this respect are met.
- 1.14.3. Any construction or standard type board proposed, as an alternative to that specified must have the prior approval of the Department's authorised representative.
- 1.14.4. All busbars, wiring, terminals, etc., are to be adequately insulated and all wiring is to enter the switchgear from the back of the board. The switchgear must be mounted within the boards to give a flush front panel. Cable and boxes and other ancillary equipment must be provided where required.
- 1.14.5. Each unoccupied opening of a distribution board must be fitted with a blanking plate.
- 1.14.6. There must be labelling for the internal bars, termination points and identification of incoming and outgoing circuits to allow for ease of tracing, isolation, testing and debugging.
- 1.14.7. Clearly engraved labels are to be mounted below every switch. The working of the labels in English, is to be according to the layout drawings or as directed by the Department's authorised representative and must be confirmed on site. Flush mounted boards to be installed with the top of the board 2,0m above the finished floor level.
- 1.14.8. The distribution boards must have a danger notice on or near it.
- 1.14.9. All distribution boards 10kA or above are to be provided with a type test certificate.
- 1.14.10. Distribution boards with alternative supply must have a notice to indicate the type of alternative supply feed and a power-on indicator.

1.15. CONDUIT AND ACCESSORIES

- 1.15.1. The type of conduit and accessories required for the service, i.e. whether the conduit and accessories shall be of the screwed type, plain-end type or of the non-metallic type and whether metallic conduit shall be black enamelled or galvanised, is specified in the detailed specification section of this specification.

1.15.2. Unless other methods of installation are specified for certain circuits, the installation shall be in conduit throughout. No open wiring or mechanically unprotected wiring in roof spaces or elsewhere will be permitted.

1.15.3. The conduit and conduit accessories shall comply fully with the applicable SANS as set out below and the conduit shall bear the mark of approval of the South African Bureau of Standards.

- a) Screwed metallic conduit and accessories: SANS 61386-1 and 21.
- b) Plain-end metallic conduit and accessories: SANS 61386-1 and 21.
- c) Non-metallic conduit and accessories: SANS 61386-1 and 21.

1.15.4. All conduit fittings except couplings, shall be of the inspection type. Where cast metal conduit accessories are used, these shall be of malleable iron. Zinc base fittings will not be allowed.

1.15.5. Bushes used for metallic conduit shall be brass and shall be provided in addition to locknuts at all points where the conduit terminates at switchboards, switch-boxes, draw-boxes, etc.

1.15.6. Draw-boxes are to be provided in accordance with the "Wiring Code" and wherever necessary to facilitate easy wiring.

1.15.7. For light and socket outlet circuits, the conduit used shall have an external diameter of 20mm. In all other instances the sizes of conduit shall be in accordance with the "Wiring Code (SANS 10142)" for the specified number and size of conductors, unless otherwise directed in the detailed specification or indicated on the drawings.

1.15.8. Only one manufactured type of conduit and conduit accessories will be permitted throughout the installation to ensure uniformity.

1.15.9. Running joints in screwed conduit are to be avoided and all conduit systems shall be set or bent to the required angles. The use of normal bends must be kept to a minimum with exception of larger diameter conduits where the use of such bends is essential.

1.15.10. All metallic conduit shall be manufactured of mild steel with a minimum thickness of 1,2mm for plain-end conduit and 1,6mm in respect of screwed conduit.

Under no circumstances will conduit having a wall thickness of less than 1,6mm be allowed in screed laid on top of concrete slabs.

1.15.11. Bending and setting of conduit must be done with special bending apparatus manufactured for the purpose and which are obtainable from the manufacturers of the conduit systems. Damage to conduit resulting from the use of incorrect bending apparatus or methods applied must on indication by the Department's authorised representative, be completely removed and rectified and any wiring already drawn into such damaged conduits must be completely renewed at the Contractor's expense.

1.15.12. Conduit and conduit accessories used for flame-proof or explosion proof installations and for the suspension of luminaires as well as all load bearing conduit shall in all instances be of the metallic screwed type.

1.15.13. All conduit and accessories used in areas within 50 km of the coast shall be galvanised to SANS 32 and SANS 121.

1.15.14. Tenderers must ensure that general approval of the proposed conduit system to be used is obtained from the local electricity supply authority prior to the submission of their tender.

Under no circumstances will consideration be given by the Department to any claim submitted by the Contractor, which may result from a lack of knowledge in regard to the supply authority's requirements.

1.16. CONDUIT IN ROOF SPACES

- 1.16.1. Conduit in roof spaces shall be installed parallel or at right angles to the roof members and shall be secured at intervals not exceeding 1,5m by means of suitable saddles screwed to the roof timbers.
- 1.16.2. Nail or crampets will not be allowed.
- 1.16.3. Where non-metallic conduit has been specified for a particular service, the conduit shall be supported and fixed with saddles with a maximum spacing of 450 mm. The Contractor shall supply and install all additional supporting timbers in the roof space as required.
- 1.16.4. Under flat roofs, in false ceilings or where there is less than 0,9m of clearance, or should the ceilings be insulated with glass wool or other insulating material, the conduit shall be installed in such a manner as to allow for all wiring to be executed from below the ceilings.
- 1.16.5. Conduit runs from distribution boards shall, where possible terminate in fabricated sheet steel draw-boxes installed directly above or in close proximity to the boards.
- 1.16.6. All conduits are to be supplied with draw wires.

1.17. SURFACE MOUNTED CONDUIT

- 1.17.1. Wherever possible, the conduit installation is to be concealed in the building work; however, where unavoidable or otherwise specified in the detailed specifications, conduit installed on the surface must be plumbed or levelled and only straight lengths shall be used.
- 1.17.2. The use of inspection bends is to be avoided and instead the conduit shall be set uniformly and inspection coupling used where necessary.
- 1.17.3. No threads will be permitted to show when the conduit installation is complete, except where running couplings have been employed.
- 1.17.4. Running couplings are only to be used where unavoidable, and shall be fitted with a sliced couplings as a lock nut.
- 1.17.5. Conduit is to be run on approved spaced saddles rigidly secured to the walls.
- 1.17.6. Alternatively, fittings, tees, boxes, couplings etc., are to be cut into the surface to allow the conduit to fit flush against the surface. Conduit is to be bedded into any wall irregularities to avoid gaps between the surface and the conduit.
- 1.17.7. Crossing of conduits is to be avoided, however, should it be necessary purpose-made metal boxes are to be provided at the junction. The finish of the boxes and positioning shall be in keeping with the general layout.
- 1.17.8. Where several conduits are installed side by side, they shall be evenly spaced and grouped under one purpose-made saddle.
- 1.17.9. Distribution boards, draw-boxes, industrial switches and socket outlets etc., shall be neatly recessed into the surface to avoid double sets.

- 1.17.10. In situations where there are no ceilings the conduits are to be run along the wall plates and the beams.
- 1.17.11. Painting of surface conduit shall match the colour of the adjacent wall finishes, there should be no flaking or peeling of paint from the conduit after it is painted. The preparation and painting must be in accordance with guidelines from the paint manufacturer or the architect.
- 1.17.12. Only approved plugging materials such as aluminium inserts, fibre plugs, plastic plugs, etc., and round-head screws shall be used for fixing saddles, switches, socket outlets, etc., to walls, wood plugs and the plugging in joints in brick walls are not acceptable.
- 1.17.13. All surface conduit to be galvanised unless otherwise indicated in the detailed specifications.
- 1.17.14. All conduits are to be supplied with draw wires.

1.18. CONDUIT IN CONCRETE SLABS

- 1.18.1. In order not to delay building operations the Contractor must ensure that all conduits and other electrical elements which are to be cast in the concrete columns and slabs are installed timeously.
- 1.18.2. The Contractor shall have a representative in attendance at all times when the casting of concrete takes place with the sign off of all embedded electrical elements prior to the casting.
- 1.18.3. Draw-boxes, expansion joint boxes and round conduit boxes are to be provided where necessary. Sharp bends of any nature will not be allowed in concrete slabs.
- 1.18.4. Draw and/or inspection boxes shall be grouped under one common cover plate, and must preferably be installed in passages or male toilets.
- 1.18.5. All boxes, etc., are to be securely fixed to the shuttering to prevent displacement when concrete is cast. The conduit shall be supported and secured at regular intervals and installed as close as possible to the neutral axis of concrete slabs and/or beams.
- 1.18.6. Before any concrete slabs are cast, all conduit droppers to switchboards shall be neatly spaced and rigidly fixed.
- 1.18.7. All conduits are to be supplied with draw wires.

1.19. CHASES AND BUILDER'S WORK

- 1.19.1. Except where otherwise specified the Builder or Main Contractor shall be responsible for the builder's work related to the installation of conduits, outlet boxes, switchboard trays, bonding trays and other wall outlet boxes and will undertake the necessary chasing and cutting of walls and the provision of openings in ceilings and floors for luminaries and other electrical outlets. The Contractor shall notify the Builder or Main Contractor of his requirements and the responsibility lies with the Contractor to ensure that all builder's work is clearly indicated or marked in accordance with his requirements prior to chasing.
- 1.19.2. Electrical materials to be built in must be supplied, placed and fixed in position by the Contractor when required to do so by the Builder or Main Contractor. The Contractor shall also ensure that these materials are installed in the correct positions and a quality checklist must be signed confirming the fixing and position before plastering.

1.19.3. Where no Builder or Main Contractor is available, the Contractor must provide all chases and is required to cover conduits installed. Chases shall be deep enough to ensure that the top of conduits are at least 12 mm below the finished surface of the plaster.

1.19.4. Where the Contractor is responsible for the cutting of chases or the building in of conduits and other equipment, he will be held responsible for all damage as a result of this work and will be required to make good to the satisfaction of the Department.

1.19.5. Under no circumstances shall face brick walls or finished surfaces be chased or cut without the written permission of the Department. Where it is necessary to cut or drill holes in the concrete structure, the prior permission of the Department shall be obtained.

1.19.6. Chases must be made by means of a cutting machine and not using a chisel and hammer, this ruling is particularly applicable but not exclusively to the rewiring and renewal of existing installations.

1.20. FLEXIBLE CONNECTIONS FOR CONNECTING UP OF STOVES, MACHINES, ETC.

1.20.1. Flexible tubing connections shall be of galvanised steel construction, and in damp situations of the plastic sheathed galvanised steel type. Other types may only be used subject to the prior approval of the Department's site electrical representative.

1.20.2. Connectors for coupling onto the flexible tubing shall be of the gland or screw-in types, manufactured of either brass or cadmium or zinc plated mild steel, and the connectors after having been fixed onto the tubing, shall be durable and mechanically sound.

1.20.3. Aluminium and zinc alloy connectors will not be acceptable.

1.21. WIRING

1.21.1. Except where otherwise specified in the detailed specification and drawings, wiring shall be carried out in conduit throughout. Only one circuit per conduit will be permitted.

1.21.2. No wiring shall be drawn into conduit until the conduit installation has been completed and all conduit ends provided with bushes. All conduits to be clear of moisture and debris before wiring is commenced.

1.21.3. Unless otherwise specified in the detailed specification or indicated on the service drawings, the wiring of the installation shall be carried out in accordance with the "Wiring Code". Further to the requirements concerning the installation of earth conductors to certain light points as set out in the "Wiring Code", it is a specific requirement of this document that where plain-end metallic conduit or non-metallic conduit has been used, earth conductors must be provided and drawn into the conduit with the main conductors to all points, including all luminaires and switches throughout the installation.

1.21.4. Minimum wiring sizes for lighting circuits is to be carried out with 2,5mm² conductors and a 2,5mm²-earth conductor. For socket outlet circuits the wiring shall comprise 4mm² conductors and a 2,5mm²-earth conductor. In certain instances, as will be directed in the detailed specification, the sizes of the aforementioned conductors may be increased for specified circuits. Sizes of conductors to be drawn into conduit in all other instances, such as feeders to distribution boards, power points etc., shall be as specified elsewhere in this specification or indicated on the drawings. Sizes of conductors not specified must be determined in accordance with the "Wiring Code".

1.21.5. The loop-in system shall be followed throughout, and no joints of any description will be permitted.

- 1.21.6. The wiring shall be done in PVC insulated to SANS 1507 or unless otherwise specified in the detailed specifications.
- 1.21.7. Where wiring ends connect onto switchgear, switches, luminaires etc., the end strands must be lugged and firmly secured. Cutting away of wire strands of any cable will not be allowed.
- 1.21.8. No exposed copper on conductor at the point of termination will be accepted.
- 1.21.9. All wiring to be terminated and labelled in accordance with SANS 10142-1.

1.22. EARTHING OF INSTALLATION

- 1.22.1. The Earthing and Bonding must be done in accordance with SANS 10313 and SANS 10292.
- 1.22.2. The Earthing system objectives are to protect persons against direct and indirect contact with the electrical system elements and equipment. Another objective is to provide a short path for any fault to return to earth.
- 1.22.3. The earthing system utilised in South Africa is generally but not limited to the TN-C-S and TN-S.
- 1.22.4. To avoid differences of potential between circuits, which can arise with many earthing systems, a common earth will be installed either for power, IT and communication equipment.
- 1.22.5. The earthing and bonding system will comprise:
- a) Earth grid with earth electrodes
 - b) Main earth terminal located in Substation/LV Room
 - c) Earth terminal in each distribution board
 - d) Protective conductor for the MV/LV transformer
 - e) Protective conductors for circuits
 - f) Equipotential Bonding conductors

1.22.6. Main earthing

- 1.22.6.1. The type of main earthing must be as required by the supply authority if other than the Employer, and in any event as directed by the Department's authorised representative, who may require additional earthing to meet test standards.
- 1.22.6.2. In order to achieve the desired resistance of less than 10Ω, interconnected electrodes would have to be installed in the form of an earth grid.
- 1.22.6.3. The earth grid shall consist of a number of electrodes buried to a specified depth (quantity and depth are dependent on soil resistivity tests to be done by specialist) and interconnected in a linear array with bare copper earth wire.
- 1.22.6.4. The earth mat resistance for the transformers, generators and sensitive equipment should be less than 1Ω.
- 1.22.6.5. Where required an earth mat shall be provided, the minimum size, unless otherwise specified, being 1,0m x 1,0m and consisting of hard-drawn bare copper wires at 250mm centres, brazed at all intersections.
- 1.22.6.6. Alternatively or additionally earth rods or trench earths may be required as specified or

directed by the Department's authorised representative.

1.22.6.7. Installations shall be effectively earthed in accordance with the "Wiring Code" and to the requirements of the supply authority. All earth conductors shall be stranded copper with or without green PVC installation dependent on the application.

1.22.6.8. Connection from the main earth bar on the main board must be made to the cold water main, the incoming service earth conductor, if any and the earth mat or other local electrode by means of 12mm x 1,60 mm solid copper strapping or 16 mm² stranded (not solid) bare copper wire or such conductor as the Department's authorised representative may direct. Main earth copper strapping where installed below 3m from ground level, must be run in 20 mm diameter conduit securely fixed to the walls. If metallic conduit is used then it needs to be bonded accordingly.

1.22.6.9. All other metallic hot and cold water pipes shall be connected with 12mm x 0,8mm perforated for solid copper strapping (not conductors) to the nearest switchboard. The strapping shall be fixed to the pipework with brass nuts and bolts and against walls with brass screws at 150-mm centres. In all cases where metal water pipes, down pipes, flues, etc., are positioned within 1,6m of switchboards an earth connection consisting of copper strapping shall be installed between the pipework and the board. In vertical building ducts accommodating both metal water pipes and electrical cables, all the pipes shall be earthed at each distribution board.

1.22.7. Roofs, gutters and down pipes

1.22.7.1. Where service connections consist of overhead conductors, all metal parts of roofs, gutters and down pipes shall be earthed. One bare 10mm² copper conductor shall be installed over the full length of the ceiling void, fixed to the top purlin and connected to the main earth conductor and each switchboard. The roof and gutters shall be connected at 15m intervals to this conductor by means of 12mm X 0,8mm copper strapping (not conductors) and galvanised bolts and nuts. Self-tapping screws are not acceptable. Where service connections consist of underground supplies, the above requirements are not applicable.

1.22.8. Sub-distribution boards

1.22.8.1. A separate earth connection shall be supplied between the earth busbar in each sub-distribution board and the earth busbar in the Main Switchboard. These connections shall consist of a bare or insulated stranded copper conductors installed along the same routes as the supply cables or in the same conduit as the supply conductors. Alternatively armoured cables with earth continuity conductors included in the armouring may be utilised where specified or approved.

1.22.9. Sub-circuits

1.22.9.1. The earth conductors of all sub-circuits shall be connected to the earth busbar in the supply board in accordance with SANS 10142. If earth continuity cables are used for motor loads then an additional earth cable will still be required for additional safety.

1.22.9.2. The minimum standard for the earthing protective conductor as follows:

- a) For phase cables cross sectional area less than 16mm², the protective conductor will be the same as for the phase cable.
- b) For phase cables between 16 and 35mm² the protective conductor will be 16mm².
- c) For phase cables larger than 35mm², the protective conductor will be half the phase cable with the minimum of 16mm².

1.22.10. Ring Mains

- 1.22.10.1. Common earth conductors may be used where various circuits are installed in the same wire way in accordance with SANS 10142. In such instances the sizes of earth conductors shall be equivalent to that of the largest current carrying conductor installed in the wire way, alternatively the size of the conductor shall be as directed by the Department's authorised representative. Earth conductors for individual circuits branching from the ring main shall be connected to the common earth conductor with T-ferrules or soldered. The common earth shall not be broken.

1.22.11. Non-metallic Conduit

- 1.22.11.1. Where non-metallic conduit is specified or allowed, the installation shall comply with the Department's standard quality specification for "conduit and conduit accessories".
- 1.22.11.2. Standard copper earth conductors shall be installed in the conduits and fixed securely to all metal appliances and equipment, including metal switch boxes, socket-outlet boxes, draw-boxes, switchboards, luminaires, etc. The securing of earth conductors by means of self-threading screws will not be permitted.

1.22.12. Flexible Conduit

- 1.22.12.1. An earth conductor shall be installed in all non-metal flexible conduit. This earth conductor shall not be installed externally to the flexible conduit but within the conduit with the other conductors. The earth conductor shall be connected to the earth terminals at both ends of the circuit.

1.22.13. Connection

- 1.22.13.1. Under no circumstances shall any connection points, bolts, screws, etc., used for earthing be utilised for any other purpose. It will be the responsibility of the Contractor to supply and fit earth terminals or clamps on equipment and materials that must be earthed where these are not provided.
- 1.22.13.2. Unless earth conductors are connected to proper terminals, the end shall be tinned and lugged.

1.23. LIGHTNING PROTECTION SYSTEM

- 1.23.1. The lightning protection risk assessment must be done by the specialist to validate the assumptions of the design engineer in the concept design.
- 1.23.2. The lightning protection system must be installed by a Lightning Protection System Specialist. Prior to carrying out the installation, the specialist must test the soil resistivity of the site and report to the Department's authorised representative on the sufficiency of the concept design for the site conditions.
- 1.23.3. The lightning protection is the primary protection against direct or indirect strikes that induce overvoltage. The secondary protection will consist of surge arrestors in the distribution boards.
- 1.23.4. The Lightning protection system must be done in accordance with SANS 62305, 62561 and SANS 10313.

1.23.5. The lightning protection system will consist of an aerial conductor system, down conductor system, test points and an earthing systems that consists of earth rods, spikes or plates.

1.23.6. The specialist must test the resistance to earth of each earth electrode and of the complete lightning protection system. This resistance must be less than 10Ω.

1.24. MOUNTING AND POSITIONING OF LUMINAIRES

1.24.1. The contractor is to note that in the case of board and acoustic tile ceilings, i.e. as opposed to concrete slabs, coordination with the building contractor is necessary to ensure that as far as possible the luminaires are symmetrically positioned with regard to the ceiling pattern.

1.24.2. The layout of the luminaires as indicated on the drawings must be adhered to as far as possible and must be confirmed with the Department's authorised representative. The contractor is responsible to ensure that the luminaries are free of damage, debris and is installed in an aesthetic manner. The contractor is to ensure that the fixing of suspended luminaire are correct and safe to prevent the falling of fittings, there should be an additional safety wire connection in accordance with the manufacturer's requirements to ensure additional safety.

1.24.3. Incandescent and Fluorescent luminaires are not permitted to be installed in any installation in accordance with the requirements of SANS 204, 10400 XA and Green building policy.

1.25. INSPECTION, TESTS AND COMMISSIONING

1.25.1. On completion of the erection and installation of works and before practical completion is achieved, a full test will be carried out on the installation for a period of sufficient duration to determine the satisfactory working thereof. During this period the installations will be inspected and the Contractor shall make good, to the satisfaction of the Department's authorised representative, any defects which may arise.

1.25.2. The contractor to inspect and test the services installation in accordance with the Wiring Code, the Regulations of the Supplier of Electricity and the Occupational Health and Safety Act 85. Record test results on printed test sheets and submit to the Department's authorised representative.

1.25.3. The Contractor must provide all instruments and equipment required for testing and any water, power and fuel required for the commissioning and testing of the installations at completion.

1.25.4. The following tests should be conducted in accordance with regulation but are not limited to the following unless otherwise indicated:

- a) Ensure correct polarity, verify polarity and phase identification.
- b) Continuity and resistance of earth conductor including all bonding conductors.
- c) Continuity of ring circuit.
- d) Earth electrode resistance.
- e) Insulating resistance of the cable.
- f) Earth fault loop impedance test.
- g) Operation of earth leakage protection devices and circuit breakers.
- h) Earthing and lightning protection
- i) Luminosity test
- j) Equipment test
- k) Generator and UPS testing
- l) Electronic system testing
- m) ICT system testing

- 1.25.5. After inspection and testing, timeously arrange for any inspection and test by the Supplier of electricity if required, and assist as necessary the Inspector of the Supplier of electricity by providing access, tools, instruments and attendance.
- 1.25.6. Replace any portion of the services installation that does not comply with the Wiring Code or the Specification. Such replacement shall be done at the Contractor's expense.
- 1.25.7. Submit a "Certificate of Compliance by an accredited person" Annexure 1 in terms of the Occupational Health and Safety Act 85, Electrical Installation Regulation 1992, to the Client and forward a copy to the Engineer.
- 1.25.8. Timeously (at least 14 days) advise the Department's authorised representative of all inspections and tests as the Department's authorised representative reserves the right to witness such inspections and tests. The Department's authorised representative shall have the power at any time to examine any part of the works or materials intended for use in or on the works either on site, or at the place of manufacture or storage.
- 1.25.9. On completion of the works, the contractor shall submit three indexed volumes of operation and maintenance manuals to the Department's authorised representative.
- 1.25.10. All information must be recorded and provided in electronic format with DWG drawings formats to the Department.
- 1.25.11. Approval of the final Operations and Maintenance Manuals should be a prerequisite for issuing of a Certificate of Practical Completion of the installation.
- 1.25.12. The Manuals should contain the following information if applicable:
 - a) Cover Page
 - b) Contact Personnel & Emergency contact personnel
 - c) Scope of Work
 - d) Operating Instructions
 - e) Normal Operation
 - f) Safety Measures
 - g) Fault Finding Guide
 - h) Equipment Information
 - i) Schedule of Information
 - j) List of Spares and Agents
 - k) Design Data
 - l) Factory acceptance and site acceptance certificates
 - m) As Commissioned Data
 - n) Maintenance Requirements & Checklists
 - o) Manufacturers Service Recommendations
 - p) Manufactures Literature
 - q) Equipment Brochures
 - r) Approved Shop Drawings, Exploded Views and Wiring Diagrams
 - s) As Built Drawings for all systems
 - t) Electrical Drawings
 - u) System Layouts (General arrangement layouts) and Schematics
 - v) Certificate of compliance
 - w) Signed QCP(Quality control plan) documentation
 - x) Training Certificates/Register

1.26. VERIFICATION AND CERTIFICATION OF ELECTRICAL INSTALLATION (CERTIFICATE OF COMPLIANCE AND TEST REPORT

- 1.26.1. On completion of the installation, a certificate of compliance must be issued to the Department's authorised representative in terms of the Occupational Health and Safety Act, 1993 (Act 85 of 1993).
- 1.26.2. Certificate of completion must also be issued for Earthing and lightning protection installation and all applicable Electronic installation in accordance with South African National Standards and Occupational Health and Safety Act.

PART 2: DETAILED SPECIFICATIONS

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PART 2: DETAILED SPECIFICATIONS

2.1. INTENT OF SPECIFICATION

2.1.1. The objective is the supply and installation of water tanks at Mdantsane Labour center for Department of Employment and Labour in Mdantsane, Eastern Cape, South Africa.

2.2. EXTENT OF SCOPE

2.2.1. This Contract covers the manufacture, supply, factory testing, insurance, delivery, transport, handling, storing, erection, site welding and making good coatings, aligning, fixing, supporting, connecting, adjusting, guaranteeing, site testing, painting, commissioning, handing over in complete working order, providing as-built drawings, operating and maintenance instructions in triplicate, instructing staff and attending to defects for the electrical works as described in greater detail in this document and/or shown on the drawings and/or set out in the Bills of Quantities and as briefly described below:

2.2.2. The works covered by this Contract will include but not be limited to the following:

- a) Supply and install of 20A, 5kA curve D circuit breaker in the essential section of distribution board SDB-HALL.
- b) Supply and install conduit and sleeve from Hall building to pump set.
- c) Supply and install approximately 40m 2,5 sqmm x 2C PVC ECC 600V/1000V low voltage cable with glands and accessories.
- d) Supply and install IP67 socket outlet dependent on the required receptacle electrical input of the pump set, mounted within 1m of the pump sets.
- e) Terminate power point to pump sets.
- f) Earthing and lightning protection for the metal tank area.
- g) Certificate of compliance to be provided for complete installation.

2.3. COMPLIANCE WITH REGULATIONS AND STANDARDS

2.3.1. The entire installation shall be carried out in accordance with the latest revision and amendments of the following but not limited to:

- a) The Occupational Health and Safety Act
- b) The Basic Conditions of Employment Act
- c) The Local Fire Office Regulations.
- d) Electricity Regulations Act
- e) Occupational Health and Safety Act with all regulations
- f) Department of Public Works: General Electrical Specifications part A, B and C.
- g) SANS 10400 – The National Building Regulations
- h) SANS 10142-1 – The Code of Practice for the Wiring of Premises
- i) SANS 62305 – Protection against lightning
- j) SANS 10292 – Earthing of low voltage installation
- k) SANS 1973 - Low voltage switchgear and control gear assemblies.
- l) All relevant regulations and bylaws.

2.4. NOTICES AND FEES

2.4.1. There are no notices or fees required to be paid to the supply authority due to sufficient capacity of the existing supply on site.

2.5. DRAWINGS

- 2.5.1. The drawings generally show the scope and extent of the proposed work and shall not be held as showing every minute detail of the work to be executed, further clarity of the drawings are indicate in the specifications or BOQ.
- 2.5.2. The position of distribution boards, power points, switches and light points that may be influenced by built-in furniture must be established on site, prior to these items being installed.
- 2.5.3. Two copies of shop drawings shall be submitted to the Department's authorised representative for approval and to demonstrate compliance with contract Documents. Shop drawings are drawings, diagrams, illustration, schedules, performance charts, brochures and other data which are prepared by the contractor, manufacturer, supplier or distributor and which illustrate some portion of the work.
- 2.5.4. The Department's authorised representative's approval of shop drawings or samples shall not relieve the contractor of responsibility for any deviation from the requirements of this contract unless the contractor has informed the Department's authorised representative in writing of such deviation at the time of submission of shop drawings or samples and the Department's authorised representative has given written approval for the specific deviation, nor shall the Department's authorised representative's approval relieve the contractor of responsibility for errors or omissions in the shop drawings or samples.
- 2.5.5. A complete set of the drawings shall be issued to the contractor after installation to be marked up by the contractor to indicate the "As-Built" installation as a prerequisite to completion.

2.5.6. Schedule of Drawings

No.	Title	Drawing Number
1	There are no drawings required.	
2		
3		
4		
5		

2.6. CLIMATIC CONDITIONS

- 2.6.1. All equipment offered must be de-rated for the conditions below, the climate conditions must be validated by the contractor.

Location	Design Condition	Design Condition Value
981 Mdantsane Access-Weg, Mdantsane Unit 1, Mdantsane 5219, Eastern Cape, South Africa	Altitude	255,27 m
	Maximum ambient temperature	40 °C
	Minimum ambient temperature	-2 °C
	Maximum ambient humidity	52 %

2.7. MAINTENANCE OF ELECTRICAL SUPPLY

- 2.7.1. All interruptions of the electrical supply that may be necessary for the execution of the work, will be subject to prior arrangement between the contractor, client and the Department's authorised representative.

2.8. SUPPLY AND CONNECTION

2.8.1. The power supply is existing on site and will not be upgraded for this installation. The connection to the pump set will be from an existing distribution board located in the hall building.

2.9. BALANCING OF LOAD

2.9.1. The Contractor is required to balance the load as equally as possible over the multiphase supply.

2.10. DISTRIBUTION BOARDS

2.10.1. There are no new distribution boards required for this installation since there is an existing distribution board but testing and labelling will be required in accordance with the extent of scope.

2.10.2. General

- a) In all instances where provision is to be made on boards for the supply authority's main switch and/or metering equipment the contractor must ensure that all requirements of the authorities concerned in this respect are met.
- b) All busbars, wiring, terminals, etc., are to be adequately insulated and all wiring is to enter the switchgear from the back of the board. The switchgear shall be mounted within the boards to give a flush front panel. Cable and boxes and other ancillary equipment must be provided where required.
- c) The Contractor shall supply and install the distribution boards as indicated on the drawings and listed in the Distribution board schedule. All distribution boards shall be equipped in accordance with the Single Line Diagrams and must be approved by the Department's authorised representative prior to installation.
- d) The doors and architrave of the Distribution Boards shall be painted as per the schedule.
- e) All distribution boards shall have a minimum of 30% spare space. Where circuit breaker sizes are shown for spare ways on the single line diagrams, these circuit breakers shall be fitted at time of manufacture.

2.10.3. Internal wiring

- a) Standard 600/1000 V grade PVC-insulated stranded annealed copper conductors to SANS 1507 shall be used for the internal power wiring of switchboards. The smallest conductor size to be used for power wiring in switchboards shall be 2.5mm². Flexible cord of minimum size 1,0mm² may be used for control wiring.
- b) Where heat generating equipment is present and the internal temperature of the board is likely to exceed 50°C, silicon-rubber insulated stranded conductors shall be used.
- c) Wiring shall be arranged in horizontal and vertical rows and shall be bound with suitable plastic straps or installed in PVC wiring channels. Under no circumstances may PVC adhesive tape be used for the bunching of conductors or for the colour identification of conductors.
- d) Bunched conductors shall be neatly formed to present a uniform appearance without

twisting or crossing the conductors. Conductors leaving the harnesses shall be so arranged that they are adjacent to the chassis.

- e) All wiring between different panels within the same switchboard shall be installed in wiring channels.
- f) Grommets shall be installed in each hole in the metal work through which conductors pass.
- g) All wiring shall be installed away from terminals, clamps or other current carrying parts. Wiring shall also be kept away from exposed metal edges or shall be protected where they cross metal edges.
- h) Where conductors change direction, smooth bends shall be formed with a radius of at least 5 times the outside diameter of the conductor or harness.
- i) Where neutral connections are looped between the terminals of instruments, it is essential that the two conductor ends be inserted into a common lug or ferrule and are crimped or soldered together in order that the neutral connection is not broken when the conductors are removed from one of the instruments.
- j) Wiring should as far as possible be confined to the front portions of switchboards for ease of access. This requirement is important for wiring between smaller circuit-breakers and the associated main circuit-breaker as well as the wiring from circuit-breakers to lighting and socket-outlet circuits.
- k) A maximum of two conductors will be allowed per equipment terminal. In the event of more conductors being connected to the same equipment terminal (e.g. a main circuit-breaker feeding other circuit-breakers), stub bus-bars shall be provided for the various conductors.

2.10.4. Load End Connections

- a) The supply end connections to all equipment shall under all circumstances be at the top and the load end connections at the bottom.

2.10.5. Wiring to Circuit-breakers

- a) Equipment with a rating exceeding the current rating of 70mm² conductors shall be connected by means of bus-bars to the main bus-bars. Looped connections may only be installed for a maximum of two outgoing circuits. Where there are more than two outgoing circuits, busbars shall be used and equipment connected individually to the bus-bars. Where miniature circuit-breakers are mounted in continuous rows and supplied by bus-bars connected to each MCB, each busbar shall be supplied by a separate conductor. This conductor shall be connected to the busbar by means of a separate lug and not via an MCB terminal.

2.10.6. Identification

- a) The colour of the conductors for all 220/250 V circuits shall correspond to the colour of the supply phase for that circuit. Neutral conductors shall be black.
- b) All other conductors in the board, supplying control circuits, etc. shall be coded in colours other than those specified above. A colour code shall be devised for each board and the colour code shall be shown on the wiring diagrams.

- c) All conductors that terminate at wiring terminals and all conductors used for the internal wiring of the switchboard shall further be identified at both ends by means of durable cable marking ferrules. PVC or other tape is not acceptable.
- d) The numbers on the markers shall be shown on the wiring diagrams.

2.10.7. Labelling

- a) All distribution boards shall be provided with a legend card and holder. The legend card shall be typed and laminated, and shall indicate as a minimum the circuit breaker number, the circuit type (e.g. Lighting, Power, Air Conditioning, etc), the Circuit Number as shown on the drawings, and a brief description of the circuit. For example, a lighting circuit shown as L1 on the drawings and fed by circuit breaker number 1 shall be labelled as follows:

CB1 L1 - Lighting Area

- b) All distribution boards shall be labelled with an engraved label, detailing the distribution board name, where the distribution board is fed from, the cable size, the Fault Level and the phase rotation, e.g.

DB Name: DB 2
Fed from: DB 1
Size of phase cable: 16 mm² x 4C PVC/ECC/SWA
Size of earth cable: 10 mm²
Fault Level: 5kA
Phase Rotation: Clockwise

- c) Cascading labels shall be used for all sub-distribution boards with a nominal fault level of over 5kA, as well as on the Main LV Board.

2.10.8. Schedule of Distribution Boards

- a) There are no new distribution boards required.

2.11. CABLES

- 2.11.1. The Contractor shall supply and completely install all distribution cables as indicated on the drawings, and listed in the Schedule of Cables.
- 2.11.2. The storage, transportation, handling and laying of the cables shall be according to first class practice, and the contractor shall have adequate and suitable equipment and labour to ensure that no damage is done to cables during such operations.
- 2.11.3. The cable-trenches shall be excavated to a depth of 0,9m deep below ground level and shall be 450mm wide for one to three cables, and the width shall be increased where more than three cables are laid together so that the cables may be placed at least two cable diameters apart throughout the run. The bottom of the trench shall be level and clean and the bottom and sites free from rocks or stones liable to cause damage to the cable.

- 2.11.4. The Contractor must take all necessary precautions to prevent the trenching work being in any way a hazard to the personnel and public and to safeguard all structures, roads, sewage works or other property on the site from any risk of subsidence and damage.
- 2.11.5. In the trenches the cables shall be laid on a 75mm thick bed of river sand and be covered with a 150-mm layer of earth before the trench is filled in.
- 2.11.6. All joints in underground cables and terminations shall be made either by means of compound filled boxes according to the best established practice by competent cable jointers using first class materials or by means of approved epoxy-resin pressure type jointing kits. Epoxy-resin joints must be made entirely in accordance with the manufacturer's instructions and with materials stipulated in such instructions. Low tension PVCA cables are to be made off with sealing glands and materials designed for this purpose which must be of an approved make. Where cables are cut and not immediately made off, the ends are to be sealed without delay.
- 2.11.7. The laying of cables shall not be commenced until the trenches have been inspected and approved. The cable shall be removed from the drum in such a way that no twisting, tension or mechanical damage is caused and must be adequately supported at intervals during the whole operation. Particular care must be exercised where it is necessary to draw cables through pipes and ducts to avoid abrasion, elongation or distortion of any kind. The ends of such pipes and ducts shall be sealed to approval after drawing in of the cables.
- 2.11.8. Backfilling (after bedding) of the trenches is to be carried out with a proper grading of the material to ensure settling without voids, and the material is to be tamped down after the addition of every 150mm. The surface is to be made good as required.
- 2.11.9. On each completed section of the laid and jointed cable, the insulation resistance shall be tested to approval with an approved "Megger" type instrument of not less than 500 V for low tension cables.
- 2.11.10. Earth continuity conductors are to be run with all underground cables constituting part of a low tension distribution system. Such continuity conductors are to be stranded bare copper of a cross-sectional area equal to at least half that of one live conductor of the cable, but shall not be less than 4mm² or more than 70mm². A single earth wire may be used as earth continuity conductor for two or more cables run together, branch earth wires being brazed on where required.
- 2.11.11. Laying, jointing and making off of electrical cables**
- 2.11.11.1. No cable is to be laid before the cable trench is approved and the soil qualification of the excavation is agreed upon by the Contractor and Department's authorised representative.
- 2.11.11.2. After the cable has been laid and before the cable trench is back-filled the inspector must ensure that the cable is properly bedded and that there is no undesirable material included in the bedding layer.
- 2.11.11.3. All cable jointing and the making off of the cables must only be carried out by qualified experienced cable jointers. Helpers of the jointers may not saw, strip, cut, solder, etc. The cable and other work undertaken by them must be carried out under the strict and constant supervision of the jointer.
- 2.11.11.4. Before the Contractor allows the jointer to commence with the jointing work or making off of the cable (making off is recognized as half a joint) he must take care and ensure:

- a) That he has adequate and suitable material available to complete the joint properly and efficiently. Special attention must be given to ensure the cable ferrules and cable lugs are of tinned copper and of sufficient size.
- b) That the joint pit is dry and that all loose stones and material are removed,
- c) That the walls and banks of the joint pit are reasonable firm and free from loose material which can fall into the pit.
- d) That the necessary coffer-dams or retaining walls are made to stop the flow of water into the joint pit.
- e) That the joint pit is provided with suitable groundsheets so that the jointing work is carried out in clean conditions.
- f) That the necessary tents or sails are installed over the joint pit to effectively avert unexpected rainfall and that sufficient light or lighting is provided.
- g) That the necessary means are available to efficiently seal the jointing or cable end when an unexpected storm or cloudburst occurs, regardless of how far the work has progressed.
- h) That the cables and other materials are dry, undamaged and in all respects are suitable for the joint work or making off.
- i) That the heating of cable oil, cable compound, plumbers metal and solder is arranged that they are at the correct temperature when required so that the cable is not unnecessarily exposed to the atmosphere and consequently the ingress of moisture (care must be taken of overheating).
- j) Flow temperatures of cable oil and compound must be determined with suitable thermometers. Cable oil and compound must not be heated to exceed the temperatures given on the containers and precaution must be taken to ensure that the tin is not overheated in one position. The whole mass must be evenly and proportionally heated.
- k) Temperatures of solder and plumbers metal may be tested with brown paper (testing time: 3 seconds). The paper must colour slightly - not black or burnt).

2.11.11.5. Before the paper-insulated cables are joined, they must be tested for the presence of moisture by the cable jointers test. This consists of the insertion of a piece of unhandled insulated impregnated paper tape in warm cable oil heated to a temperature of $130 \pm 5^{\circ}\text{C}$.

2.11.11.6. Froth on the surface of the oil is an indication that moisture is present in the impregnated insulation and the amount of the froth gives an indication of the moisture present.

2.11.11.7. If the cable contains moisture or is found to be otherwise unsuitable for jointing or making of the inspector is to be notified immediately and he will issue the necessary instruction to cope with the situation.

2.11.11.8. The joint or making off of paper insulated cables must not be commenced during rainy weather.

2.11.11.9. Once a joint is in progress the jointer must proceed with the joint until it is complete and before he leaves the site.

2.11.11.10. The jointer must ensure that the material and his tools are dry at all times, reasonably clean and absolutely free from soil.

2.11.12. Relating to the jointing of the cable the following requirements apply:

- a) All jointing must be carried out in accordance with recognized and tried techniques and comply strictly with the instructions given by the supplier of the jointing kit.
- b) The cables must be twisted by hand so that the cores can be joined according to the core numbers. If necessary the cable is to be exposed for a short distance to accomplish this. Under no circumstances may the cores in a joint be crossed so as to

enable cores to be joined according to the core numbers. If it is not possible to twist the cables so that the preceding requirements can be met, then cores are to be joined in the normal way without any consideration of the core numbers.

- c) Normally the cables will have profile conductors. The conductors shall be pinched with gas pliers to form a circular section, bound with binding wire so that they do not spread, and then tinned before jointing.
- d) Jointing ferrules, the length of which are at least 6 times the diameter of the conductors, must be slid over the conductor ends to be joined and pinched tightly. Then they are soldered by means of the ladle process whilst being pinched further closed.
- e) Use resin only as a flux. The slot opening in the ferrule must be completely filled, including all depressions.
- f) Remove all superfluous metal with a cloth dipped in tallow. Work during the soldering process must be from top to bottom. Rub the ferrule smooth and clean with aluminium oxide tape after it has cooled down to ensure that there are not any sharp points or edges.
- g) The spaces between the conductor strands must be completely filled by soldering process and must be carried out quick enough to prevent the paper insulation from burning or drying out unnecessarily.
- h) After the ferrules have been rubbed smooth and clean, they and the exposed cores must be treated with hot cable oil (110°C) to remove all dust and moisture. These parts are to be thoroughly basted with the oil.
- i) The jointer must take care that his hands are dry and clean before the joint is insulated. Also the insulating tape which is to be used must first be immersed in warm cable oil (110°C) for a sufficient period to ensure that no moisture is present.
- j) After the individual cores have been installed they must be well basted with hot cable oil and again after the applicable separator and/or belt insulation tape is applied before the lead joint sleeve is placed in position.
- k) The lead joint sleeve must be thoroughly cleaned and prepared before it is placed on the cable and must be kept clean during the whole jointing process. Seal the filling apertures of the sleeve with tape until the sleeve is ready for compound filling.
- l) The plumbing joints employed to solder the joint sleeve to the cable sheath, must be cooled off with tallow and the joint sleeve is to be filled with compound while it is still warm. Top up continuously until the joint is completely filled to compensate for the compound shrinkage.
- m) The outer joint box must be clean and free from corrosion. After it has been placed in position it must be slightly heated before being filled with compound. Top up until completely full.

2.11.13. Schedule of cables, conduit and wiring

- a) Supply, install and connect the following feeder and sub-feeder cables, conduit and wiring which are indicated in detail on the single line diagram:

No.	FROM	TO	SIZE AND TYPE	ESTIMATE LENGTH (m)	LOAD (kVA)	CURRENT (A)	VOLT DROP (%)
1	SDB – HALL	PUMP SET	2,5mm ² 2-core ECC cable	40	1,3	5,65	3,49

2.12. SWITCHGEAR

2.12.1. All circuit breakers shall be of the same manufacture throughout.

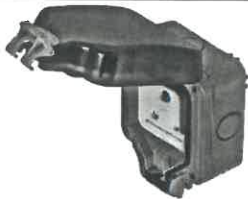
2.12.2. An additional 20A curve D circuit breaker will be required to be installed in the existing distribution board SDB-HALL.

2.13. SWITCHES, SOCKET OUTLETS AND POWER POINTS

2.13.1. All socket outlets will be euro socket outlets to comply with the requirements in accordance with SANS 10142-1 and SANS 164.

2.13.2. The installation of switches and socket outlets must conform to clause of the general specifications, SANS 10142, SANS 164, SANS 10400-S and the following Schedule:

2.13.3. Schedule of power points

No.	Type	Description	Area	Picture
1.	External	IP67 weather proof socket outlet for pump set	External within 1m of the pump set	

2.13.4. Weather proof socket outlet to be mounted within 1m of the pump set, socket outlet to be mounted on unistrut or pedestal.

2.13.5. Switches shall have protected terminals for safe wiring.

2.14. LIGHT FITTINGS AND LAMPS

2.14.1. There is no lighting included in this installation.

2.15. WIRE WAYS, WIRING CHANNELS AND POWER SKIRTING

2.15.1. General

2.15.1.1. All wire ways will be designed to ensure conformity with SANS 10142 and the following percentage of utilisation will not be exceed:

- a) 40% for conduit
- b) 35% for ducting
- c) 45% for trunking

2.15.1.2. In accordance with SANS 10198-4 the minimum burial depth of cables to the centre of the cable or sleeve at an ambient temperature of 30°C, soil temperature of burial depth of 25°C and a thermal resistivity of 1,2K.m/W as follows:

- a) 500mm for 600/1000V cables
- b) 800mm for greater 1000V Medium voltage cables

2.15.1.3. The bedding will be a minimum of 75mm thick for all sleeves and cables.

2.15.2. Sleeves

- 2.15.2.1. Where cables cross under roadways, other services and where cables enter buildings, the cables shall be installed in earthenware or high-density polyethylene pipes.
- 2.15.2.2. The ends of all sleeves shall be sealed with a non-hardening watertight compound after the installation of cables. All sleeves intended for future use shall likewise be sealed.
- 2.15.2.3. Installation of 32mm PVC sleeve between the building to the power point of the pump set.
- 2.15.3. **Conduit**
- 2.15.2.4. Installation of 32mm galvanized conduit from the distribution board then surface on the building, coupled to the 32mm PVC sleeve through a junction to the pump set.

2.16. EARTHING AND LIGHTNING PROTECTION SYSTEM

2.16.1. Earthing and Equipotential Bonding System

- 2.16.1.1. The Earthing and Bonding shall be done in accordance with SANS 10313 and SANS 10292.
- 2.16.1.2. All accessible extraneous conductive parts associated with a water pump motor shall be bonded to the earth continuity conductor. These parts include the suction pipe, delivery pipe and pump casing accordance with SANS 10142-1.

2.16.2. Lightning Protection System

- 2.16.2.1. The provision of a lightning protection system is mandatory for this installation based on the risk assessment.
- 2.16.2.2. The Lightning Protection System shall be done in accordance with SANS 62305, 62561 and SANS 10313 by a specialist after providing a soil resistivity report and design to ensure an overall resistance of less than 1Ω.

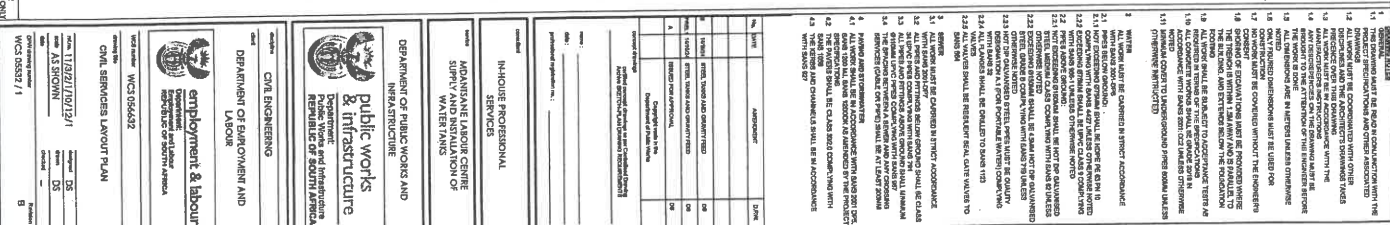
PART 3: ELECTRICAL WORK MATERIAL SCHEDULE & DATASHEETS

- 3.1. The Contractor shall complete the following schedules, provide datasheets and submit them to the Department's authorised representative within 21 days of the date of the acceptance of the tender.
- 3.2. The schedules will be scrutinised by the Electrical Engineer and should any material offered not comply with the requirements contained in the specification, the contractor will be required to supply material in accordance with the contract at no additional cost.

NB: Only one manufacturer's name to be inserted for each item.

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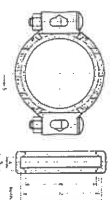
C3.4: CIVIL ENGINEERING DRAWINGS



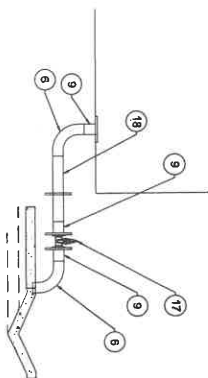
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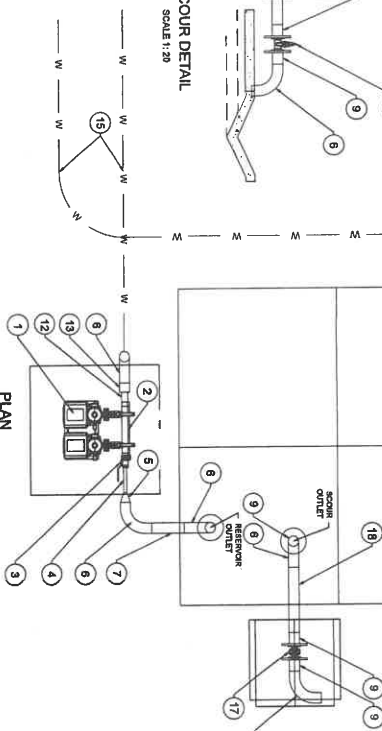


SANS 815-2 CAST IRON COUPLING



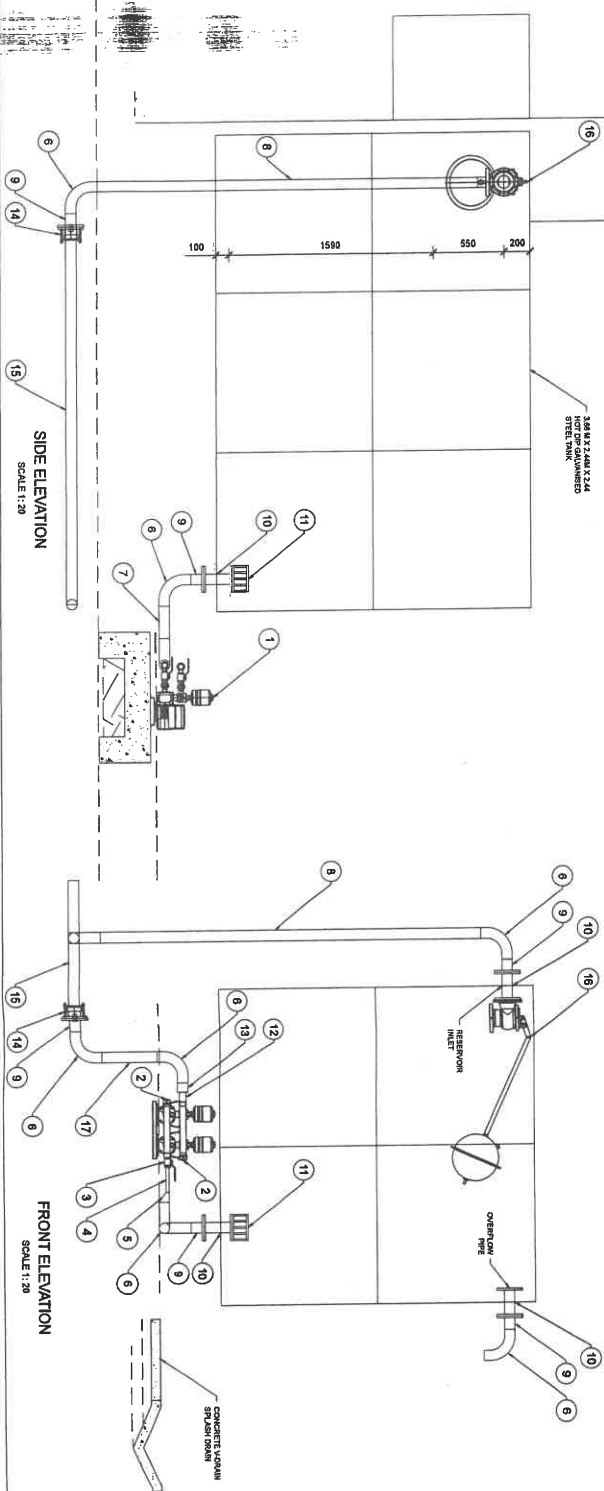
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SCALE 1:21

SCALE 1:21



SIDE ELEVATION

SCALE 1:20

FRONT ELEVATION

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Audrey SWETZ-KALINOWSKI INTERIOR DESIGNER

NAME : _____
DATE : _____
ADDRESS AND PHONE NO. : _____

Cover Sheet

INTROUSE PROFESSIONAL SERVICES

**Public works
& infrastructure**

Department of
Public Works and Infrastructure

DEPARTMENT OF PUBLIC WORKS AND
INFRASTRUCTURE

PROVIDING SOLUTIONS FOR
SUPPORT AND INSTALLATION OF
WATER TANKS

employment & labour
Department of
Employment and Labour
Ministry of Labour
Republic of South Africa

WCS number WCS 056432

drawing title

EMERGENCY WATER SUPPLY DETAILS

DATE 11/03/92/11/07/21

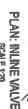
BY AS SHOWN

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DRIVE drawing number WCS 05532 / 3

Revision A



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PART C4: SITE INFORMATION

C4: SITE INFORMATION
PG-03.2 (EC)

PG-03.2 (EC) SITE INFORMATION – JBCC 2000 PRINCIPAL BUILDING AGREEMENT (EDITION 6.2 OF MAY 2018)

Project title:	EASTERN CAPE: GQEBERHA: MDANTSANE LABOUR CENTRE: DEPARTMENT OF EMPLOYMENT AND LABOUR: SUPPLY AND INSTALLATION OF WATER TANKS.			
Tender no:	GQEQ-2025/2026-111	WCS no:	056632	Reference no: 14/1/3/2/1/6464/5050

C4 Site Information

The site is located in Mdantsane Unit 1, and is approximately 18 km from East London. The position of the proposed water tank is at a higher level than the buildings. There are existing underground services that the contractor need to take note of when excavating and laying pipes.



Figure 1: Site Plan