

Bid No:JHB 26/03

CLOSING DATE:

16 September 2026@ 11:00

ADVERT DATE:

21 August 2026

SERVICE: *Justice and Constitutional Development: Various
Magistrate's office: Hardach, Kwa-thema, Dunnottar and
Fochville: Installation of backup generators*

CIDB Grading: 4 EB or Higher

*Tender documents will be sold for a non-refundable amount of
R200.00 if not downloaded from www.etenders.gov.za*

*A non-compulsory pre- tender site inspection meeting will be held
in respect of this tender.*

Venue: Mineralia Building, 78 De Korte Street, Braamfontein
(4th Floorboard Room)

Virtual Meeting: N/A

Date: 1 September 2026

Starting time: 10:00 am

Enquiries: *Mr Robert Rono (Project Manager) 072 196 9367*

Ms Nothemba Djalivani 073 194 4475

or

Mr. James Lesejane-011 713 6233

Ms. Margaret Makoti-011 713-6234

**YOU ARE HEREBY INVITED TO TENDER TO THE GOVERNMENT OF THE
REPUBLIC OF SOUTH AFRICA**

**PLEASE TAKE NOTE
CLOSING TIME: 11:00**

**TENDER NUMBER: JHB 26/03
CLOSING DATE : 16/09/2026**

**TENDERS RECEIVED AFTER THE CLOSING TIME AND DATE ARE LATE AND WILL AS A
RULE NOT BE ACCEPTED FOR CONSIDERATION**

Form must be completed and signed in the original that is in ink. Forms with photocopied signatures or other such reproduction of signatures may be rejected.

TENDER DOCUMENTS MAY BE POSTED TO

**REGIONAL MANAGER
Department of Public Works
Private Bag X3
BRAAMFONTEIN
2017**

N

ATTENTION: TENDER SECTION: 7TH FLOOR

Tender documents that are posted must reach the Department of Public Works before the closing date of the tender.

OR

The tender document may be deposited in the tender box which is identified as the tender box of the Department of Public Works and Infrastructure which is located at the main entrance, ground floor, Corner De Beer and De Korte Street, Braamfontein

BRAAMFONTEIN



DE KORTE STREET



**D
E

B
E
E
R

S
T
R**

**PUBLIC
WORKS**

The tender box at the Regional Office: Department Of Public Works, Corner De Beer and De Korte Street, Braamfontein is accessible 24 hours 7 days a week. (Mondays to Fridays)

However, if the tender is late, it will as a rule not be accepted for consideration.

Tenderers should ensure that tenders are delivered timeously to the correct address.

SUBMIT ALL TENDERS ON THE OFFICIAL FORMS- DO NOT RETYPE.

Tenders by telegram, facsimile or other similar apparatus will not be accepted for consideration.

SUBMIT EACH TENDER IN A SEPARATE SEALED ENVELOPE.

The Tender Bulletin is available on the Internet on the following web sites:

1. <http://www.etenders.gov.za>
2. <http://www.dpw.gov.za>



public works
& infrastructure

Department:
Public Works and Infrastructure
REPUBLIC OF SOUTH AFRICA

**VARIOUS MAGISTRATE'S OFFICE:
HARDACH, KWA THEMA, DUNNOTTAR AND FOCHVILLE
INSTALLATION OF BACKUP GENERATORS**

WCS: 056808

JHB26/03

TENDER DOCUMENT

DEPARTMENT OF PUBLIC WORKS

78 Mineralia Building
Corner De Beer and De Korte Streets
Braamfontein, 2017

TABLE OF CONTENTS

VOLUME 1: TENDERING PROCEDURES

T1.1 Tender Notice and Invitation to Tender

Notice and Invitation to Tender PA 04 (EC)

Invitation to Bid PA 32 (EC)

T1.2 Tender Data

Tender Data DPW-03 (EC)

VOLUME 2: RETURNABLE DOCUMENTS

T2.1 List of Returnable Documents

List of Returnable Documents PA 09 (EC)

C1.1 Form of Offer and Acceptance

Form of Offer and Acceptance DPW 07 (EC)

C2.2 Bills of Quantities/ Lump Sum Document (if a returnable document)

Preliminaries for inclusion in Bills of Quantities and Lump Sum Document based on the GCC Series 2000 documentation

Building Work/ Specification

Bills of Quantities/ Specification and Schedule of Rates/ Final Summary

T2.2 Returnable Documents required for Tender Evaluation Purposes

Declaration of interest and Tenderer's Past Supply Chain Management Practices PA 11 (EC)

Resolution of the Board of Directors PA 15.1

Resolution of the Board of Directors to Enter into Consortia or Joint Venture PA 15.2

Special Resolution of Consortia or Joint Ventures PA 15.3

Site Inspection Meeting Certificate DPW 16 (EC)

Preference Point Claim Form in terms of the Preferential Procurement Regulations PA 16

Particulars of Tenderer's Projects DPW 09 (EC)

Declaration of Designated Groups for Preferential Procurement PA 40

T2.2 Returnable Documents that will be incorporated into the Contract

Record of Addenda to Tender Documents DPW 21 (EC)

Schedule of Proposed Subcontractors DPW 15 (EC)

Particulars of Electrical Contractor DPW 22 (EC)

Schedule for Imported Materials and Equipment DPW 23 (EC)

T2.2 Returnable Documents: Other Documents that will be incorporated into the Contract

Undertaking for the Provision of EPWP

Declaration for Security Screening

VOLUME 3: CONTRACT

PART C1: Agreement and Contract Data

C1.2 Contract Data

Contract Data DPW 05 (EC)

C1.3 Form of Guarantee

Form of Guarantee DPW 10.2 (EC)/ DPW 10.4 (EC)

PART C2: Pricing Data

C2.1 Pricing Instructions

Pricing Instructions PG 02.1 (EC)

PART C3: Scope of Work

C.3 Scope of Work

Scope of Works PG 01.1 (EC)

HIV/AIDS Specification and Schedules PW 1544

Occupational Health and Safety Specifications

PART C4: Site Information

C.4 Site Information

Site Information PG 03.1 (EC)

Site Location Maps

VOLUME 1: TENDERING PROCEDURES

T1.1 Tender Notice and Invitation to Tender

PA-04 (EC): NOTICE AND INVITATION TO TENDER

THE DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE INVITES TENDERS FOR:

Project title:	VARIOUS MAGISTRATE'S OFFICE: HARDACH, KWA THEMA, DUNNOTTAR AND FOCHVILLE: INSTALLATION OF BACKUP GENERATORS
-----------------------	---

Tender no:	JHB26/03	Reference no:	
Advertising date:	21 August 2026	Closing date:	16 September 2026
Closing time:	11:00	Validity period:	84 Calendar days

1. REQUIRED CIDB GRADING

It is estimated that tenderers should have a CIDB contractor grading designation of **4 EB** or **4 EB*** or higher.
* Delete "or select tender value range select class of construction works" where only one class of construction works is applicable

It is estimated that potentially emerging enterprises should have a CIDB contractor grading designation of **Not applicable Not applicable PE** or **Not applicable Not applicable PE*** or higher.
* Delete "or select tender value range select class of construction works PE" where only one class of construction works is applicable

2. FUNCTIONALITY CRITERIA APPLICABLE YES ☒ NO ☐

Note 1: Failure to meet minimum functionality score will result in the tenderer being disqualified.

Functionality criteria ¹ :	Weighting factor:
1. KEY PERSONNEL: a) Bidder must submit CV of Electrical Artisan or Electromechanical (Millwright) with experience in similar generator projects, and a certified copy of trade certificate not older than 6 months. b) Bidder must submit CV of Electrical Foreman with experience in similar generator projects. A minimum qualification of Grade 12 and National Senior Certificate or N3 in Electrical Engineering. -Electrical Artisan/ Millwright with 3 years experience 3 points -Electrical Artisan/ Millwright with 4 years experience 6 points -Electrical Artisan/ Millwright with 5 years experience 9 points -Electrical Artisan/ Millwright with 6 years experience 12 points -Electrical Artisan/ Millwright with 7 or more years experience 15 points and -Electrical Foreman with 3 years experience 4 points -Electrical Foreman with 4 years experience 8 points -Electrical Foreman with 5 years experience 12 points -Electrical Foreman with 6 years experience 16 points -Electrical Foreman with 7 or more years experience 20 points Non-submission of the above = 0 points	35

¹The points allocated to each functionality criterion should not be generic but should be determined separately for each tender on a case by case basis.

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".



2. PROJECT EXECUTION PLAN (PEP): Bidders must submit a Project Execution Plan (PEP)/ Programme showing activities and duration thereof. The PEP must be based on the Project Construction Period of 6 months and must reflect the following: a) Key activities b) Critical Path c) Sequencing of activities d) Duration of key activities e) Project cashflow -Programme with (a),(b),(c),(d) and (e) 30 points Non-submission of the above = 0 points	30
3. WORK EXPERIENCE: Bidder must submit project Completion Certificates as proof of work completed in the past 10 years. Projects must be of similar generator projects completed successfully in value grading (value of R1 000 000.00 and above). -Successfully completed 1 project 7 points -Successfully completed 2 project 14 points -Successfully completed 3 project 21 points -Successfully completed 4 project 28 points -Successfully completed 5 project 35 points Non-submission of the above = 0 points	35
Total	100 Points

(Weights for functionality must add up to 100. Weightings will be multiplied by the scores allocated during the evaluation process to arrive at the total functionality points)

Minimum functionality score to qualify for further evaluation:	50
---	----

(Total minimum qualifying score for functionality is 50 Percent, any deviation below or above the 50 Percent, provide motivation below)

3. THE FOLLOWING EVALUATION METHOD FOR RESPONSIVE BIDS WILL BE APPLICABLE:

☐ Method 1 (Financial offer)	☒ Method 2 (Financial and Preference offer)
---	---

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".

3.1. Indicate which preference points scoring system is applicable for this bid:

☒ 80/20 Preference points scoring system	☐ 90/10 Preference points scoring system	☐ Either 80/20 or 90/10 Preference points scoring system
--	---	---

4. RESPONSIVENESS CRITERIA

4.1. Indicate substantive responsiveness criteria applicable for this tender. Failure to comply with the criteria stated hereunder shall result in the tender offer being disqualified from further consideration:

1	☒	Only those tenderers who satisfy the eligibility criteria stated in the Tender Data may submit tenders.
2	☒	Tender offer must be properly received on the tender closing date and time specified on the invitation, completed either electronically (if issued in electronic format), or by writing legibly in non-erasable ink. (All as per Standard Conditions of Tender).
3	☒	Use of correction fluid is prohibited.
4	☒	Submission of a signed bid offer as per the DPW-07 (EC).
5	☒	Submission of DPW-08 (EC): Particulars of Tenderer's Projects.
6	☐	Bidders must comply with DPW-21 (EC): Record of Addenda to tender documents, if any.
7	☐	Submission of DPW-16 signed by the authorised official and completion of bid briefing attendance register.
8	☒	The tenderer shall submit his fully priced Bills of Quantities / Lump Sum Document (complete document inclusive of all parts) together with his tender.
9	☒	The tenderer shall submit his fully priced and completed sectional summary- and final summary pages with the tender.
10	☒	Tenderer shall have a CIDB contractor grading designation of 4EB or higher.
11	☐	
12	☐	
13	☐	
14	☐	
15	☐	

4.2. Indicate administrative requirements applicable for this tender. Tenderers may be required to submit the below documents where applicable.

The Employer reserves the right to request further information regarding the undermentioned criteria. Failing to submit further clarification and/or documentation within seven (7) calendar days from request or as specifically indicated, will disqualify the tender offer from further consideration.

1	☒	Any correction to be initialled by the person authorised to sign the tender documentation as per PA 15.1 or PA 15.2 resolution of board/s of directors / or PA15.3 Special Resolution of Consortia or JV's.
2	☒	Submission of applicable (PA-15.1, PA-15.2, PA-15.3): Resolution by the legal entity, or consortium / joint venture, authorising a dedicated person(s) to sign documents on behalf of the firm / consortium / joint venture.
3	☒	All parts of tender documents submitted must be fully completed in ink and signed where required.
4	☒	Submission of (PA-11): Bidder's disclosure
5	☐	Submission of PA-16.1 (EC): Ownership Particulars
6	☒	Submission of documentation relating to risk assessment criteria as contained in C 2.1 of DPW-03 Tender Data.
7	☒	Submission of (PA 40): Declaration of Designated Groups.
8	☒	Submission of proof of Registration on National Treasury's Central Supplier Database (CSD). Insert the Supplier Registration Number on the form of offer, including proposed sub-contractors if any
9	☒	Data provided by the tenderer in Part 2 of DPW-04 Contract Data (JBCC 2018) or DPW-05 Contract Data (GCC 2015) whichever applicable to be fully completed.
10	☒	The tenderer shall submit his fully priced Bills of Quantities (complete document inclusive of all parts) within 14 calendar days from request.
11	☒	Upon request, submission of fingerprints obtainable from local SAPS including any other additional documentation and information required for vetting purposes.
12	☒	Upon request, submission of a fully completed security clearance application form with supporting documentation and information as required. The security clearance form will be provided by the Employer for projects requiring a security clearance.
13	☒	Compliance to EPWP requirements: The bidder is to sign a declaration to comply with EPWP requirements as well as a declaration for security screening.
14	☒	Submission of a valid original or certified B-BBEE certificate accredited by SANAS or a valid sworn affidavit by commissioner of oath.
15	☒	Submission of a signed bid offer as per the DPW-07 (EC).
16	☒	Submission of DPW-09 (EC): Particulars of Tenderer's Projects.
17	☒	Submission of DPW-16 signed by the authorised official and completion of bid briefing attendance register. Attendance of site brief meeting is non-compulsory.
18	☐	

4.3. Indicate administrative requirements applicable for specific goals, Tenderers will not be required to submit the below document if not provided in the original tender proposals, Failure to comply with the criteria stated hereunder shall result in the tenderer not allocated points for specific goals.

1	☒	Submission of (PA-16): Preference Points Claim Form in terms of the Preferential Procurement Regulations 2022
2	☒	A trust, consortium or joint venture (including unincorporated consortia and joint ventures) must submit a consolidated B-BBEE Certificate issued by a SANAS accredited service provider

5. METHOD TO BE USED TO CALCULATE POINTS FOR SPECIFIC GOALS:

5.1. For procurement transaction with rand value greater than R1 Million and up to R50 Million (Inclusive of all applicable taxes) the specific goals listed in table 1 below are applicable.

Table 1

Serial No	Specific Goals	Preference Points Allocated out of 20	Documentation to be submitted by bidders to validate their claim
1.	An EME or QSE which is at least 51% owned by black people (Mandatory)	10	• SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable.
2.	Located in a specific Local Municipality or District Municipality or Metro or Province area for work to be done or services to be rendered in that area (Mandatory)	2	• Official Municipal Rates Statement which is in the name of the bidder. Or • Any account or statement which is in the name of the bidder. Or • Permission to Occupy from local chief in case of rural areas (PTO) which is in the name of the bidder. Or • Lease Agreement which is in the name of the bidder.
3.	An EME or QSE or any entity which is at least 51% owned by black women (Mandatory)	4	• SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable.
4.	An EME or QSE or any entity which is at least 51% owned by black people with disability (Mandatory)	2	• SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable. and • Medical Certificate indicating that the disability is permanent. Or • South African Social Security Agency (SASSA) Registration indicating that the disability is permanent. Or National Council for Persons with Physical Disability in South Africa registration (NCPDPSA).

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".

5.	An EME or QSE or any entity which is at least 51% owned by black youth (Mandatory)	2	ID Copy and SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable.
----	--	---	---

8.2. For procurement transaction with rand value greater than R50 Million (Inclusive of all applicable taxes) the specific goals listed in table 2 below are applicable.

☐ **NB. The use of one of goal numbers' 4 or 5 is mandatory. The BSC must select either one of the two, but not both.**

Table 2

Serial No	Specific Goals	Preference Points Allocated out of 10	Documentation to be submitted by bidders to validate their claim
1.	An EME or QSE or any entity which is at least 51% owned by black people (Mandatory)	4	SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable.
2.	Located in a specific Local Municipality or District Municipality or Metro or Province area for work to be done or services to be rendered in that area (Mandatory)	2	- Official Municipal Rates Statement which is in the name of the bidder. Or - Any account or statement which is in the name of the bidder. Or - Permission to Occupy from local chief in case of rural areas (PTO) which is in the name of the bidder. Or - Lease Agreement which is in the name of the bidder.
3.	An EME or QSE or any entity which is at least 51% owned by black women (mandatory)	2	SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable.
4. ☐	An EME or QSE or any entity which is at least 51% owned by black people with disability (Mandatory)	2	- SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable. and - Medical Certificate indicating that the disability is permanent.

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".

OR			Or - South African Social Security Agency (SASSA) Registration indicating that the disability is permanent. Or - National Council for Persons with Physical Disability in South Africa registration (NCPDPSA).
	5. ☐	An EME or QSE or any entity which is at least 51% owned by black youth (Mandatory)	2 ID Copy and SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable.

Black people mean Africans, Coloureds and Indians, who - (a) are citizens of the Republic of South Africa by birth or descent; or (b) became citizens of the Republic of South Africa by naturalisation - (i) before 27 April 1994; or (ii) on or after 27 April 1994 and who would have been entitled to acquire citizenship by naturalisation prior to that date. (BROAD-BASED BLACK ECONOMIC EMPOWERMENT ACT No 25899, 2003 of 9 JANUARY 2004)

6. BID EVALUATION METHOD

This bid will be evaluated according to the preferential procurement model in the PPPFA: (Tick applicable preference point scoring system)

☒ 80/20 Preference points scoring system	☐ 90/10 Preference points scoring system	☐ Either 80/20 or 90/10 Preference points scoring system
--	---	---

In case where below/above R 50 000 000 is selected, the lowest acceptable tender will be used to determine the applicable preference point system.

7. ELIGIBILITY IN RESPECT OF RISK TO THE EMPLOYER:

Standard risk management assessment criteria in respect of tenders received for routine projects in the engineering and construction works environments:

Tender offers will be evaluated by an Evaluation Committee based on the technical and commercial risk criteria listed hereunder. Each criterion carries the same weight / importance and will be evaluated individually based on reports presented to the Bid Evaluation Committee by the Professional Team appointed on the project. A tender offer will be declared non-responsive and removed from any further evaluation if any one criterion is found to present an unacceptable risk to the Employer.

In order for the evaluation reports to be prepared by the Professional Team, the Tenderer is obliged to provide comprehensive information on form DPW-09 (EC). Failure to complete the said form will cause the tender to be declared non-responsive and removed from any further consideration. The Employer reserves the right to request additional information over and above that which is provided by the Tenderer on said form. The information must be provided by the Tenderer within the stipulated time as determined by the Bid Evaluation Committee, failing which the tender offer will *mutatis mutandis* be declared non-responsive.

7.1 Technical risks:

Criterion 1: Experience on comparable projects during the past 10 years.

The tendering Service Provider's experience on comparable projects during the past 10 years. The number of current and previous comparable projects performed by the Tenderer as per the evaluation report prepared by the Consultant Team, based on its research and inspection of a representative sample of the Tenderer's current and previous work as reflected on form DPW-09 (EC), as well as, if necessary, of any additional work executed by the Tenderer, not reflected on form DPW-09 (EC). Failing to provide contactable references will result in the tender offer will be *mutatis mutandis* declared non-responsive.

Aspects to be regarded as "comparable" includes (but may be extended according to circumstances): size of projects (measured against monetary value or other project quantifying parameters), nature of projects (building, engineering, high/low rise, etc.), locality/area of execution (site-specific influences, knowledge of local conditions, etc.), complexity of project, projects for similar client department irrespective of end purpose of buildings/facilities created or in progress of being created and time scales of projects (normal, fast track, etc.) and stage of its/their development.

Criterion 2: Contractual commitment and quality of performance on comparable projects during the past 10 years.

Adherence to contractual commitments and quality of performance of comparable current and previous projects performed by the Tenderer during the past 10 years as per the evaluation report prepared by the Consultant Team, based on its research and inspection of a representative sample of the Tenderer's current and previous work as reflected on form DPW-09 (EC), as well as, if necessary, of any additional work executed by the Tenderer, not reflected on form DPW-09 (EC). Failing to provide contactable references will result in the tender offer be *mutatis mutandis* declared non-responsive.

Aspects to be considered include, but are not limited to the following:

1. The level of progress on current projects in relation to the project programme or, if such is not available/applicable, to the contractual construction period in general;
2. The degree to which previous projects have been completed within the contractual completion periods and/or extensions thereto, and the extend of penalties imposed;
3. Project performance: time management & programming of works, timeous ordering of materials and appointment of subcontractors;
4. Financial management: payment to suppliers and cash flow problems;
5. Quality of workmanship: extent of reworks and timeous attention to remedial works;
6. Personnel resources: suitably qualified and experienced, turnover in site staff and labour force, specifically site manager and foreman;
7. Personnel management: extent of labour disputes and ability to resolving labour disputes amicably;
8. Sub-contractors: extent of turnover in subcontractors, general liaison and payment problems experienced;
9. Contract administration: contractual aspects such as complying to laws and regulations, insurances, security, submission of required documentation timeously, reaction to written contract instructions, appointments of subcontractors, etc. as can generally be expected in standard/normal conditions of contract.
10. Health & Safety: adherence to regulations and compliance, and number of transgressions & serious incidents.
11. Plant & equipment: sufficient resources on site and in time.
12. Delays: extent of causing delays, submission of claims timeously, and abuse of or exaggerated delay claims.
13. Final account: extent to which the contractor assisted in finalising the final account.

Criterion 3: Suitably qualified and appropriately experienced human resources

Allocation of suitably qualified and appropriately experienced human resources, both in respect of principals and/or other staff (contract manager, site agent, site foreman including other professional, technical and/or administrative) of the tendering Service Provider to the project, as proof that the tendering Service Provider will be able to react/respond appropriately to the Services required herein. The Company Organogram with CV's and certified ID's of all principals and employed workforce as well as proof of Professional Registration

will be verified. Current and future workload of the tenderer in relation to capacity and capability will also be considered. The tenderer should demonstrate that he or she possesses the necessary professional and technical qualifications and -competence in relation to the scope of work and work to be undertaken.

Criterion 4: Attendance of compulsory bid clarification meeting, if applicable

If applicable, submission of confirmation of DPW-16.1 (PSB) attendance of compulsory bid clarification meeting or proof of attending the compulsory virtual meeting by a suitably qualified and experienced representative of the tenderer in terms of PA-04 (EC): Notice and Invitation to Tender.

7.2 Commercial risks:

The financial viability assessment evaluates the risk over the life of the construction period, as to whether the tenderer will be able to deliver the goods and services which are specified in the contract and / or be able to fulfil guarantees or warranties provided for in the contract in order to complete the project successfully for the amount tendered.

Aspects to be considered include but are not limited to, the respective rates tendered, bank rating, financial capability and capacity whether the tenderer has or has access to sufficient financial resources to deliver the goods or services described in the tender documentation (including fulfilling any guarantees or warranty claims), whether the tenderer is not subject to any current or impending legal action (either formal proceedings or notification of legal action) which could impact on the financial standing of the tenderer or the delivery of the goods or services, financial report from auditors as proof of current liquidity, and company or any parent company or investor guarantee/s and financial statements.

8. 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 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. 48491 of 28 April 2023 and the cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract.– 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

9. COLLECTION OF TENDER DOCUMENTS

- ☒ Bid documents are available for free download on e-Tender portal www.etenders.gov.za
- ☒ Alternatively; Bid documents may be collected during working hours at the following address 78 De Korte Street, Braamfontein. A non-refundable bid deposit of R 200 is payable (cash only) on collection of the bid documents.

10. SITE INSPECTION MEETING

A pre-tender site inspection meeting will **be** held in respect of this tender.
Attendance of said pre- tender site inspection meeting is **not compulsory**

The particulars for said pre- tender site inspection meeting or virtual bid clarification / site inspection meeting. are:

Venue:	Mineralia Building 78 De Korte Street Braamfontein 2017		
Virtual meeting link:	N/A		
Date:	01 September 2026	Starting time:	10:00 AM

11. ENQUIRIES

11.1. Technical enquiries may be addressed to:

DPWI Project Manager	Nothemba Djalivani	Telephone no:	
Cellular phone no	073 194 4475	Fax no:	
E-mail	Nothemba.Djalivani@dpw.gov.za		

11.2. SCM enquiries may be addressed to:

SCM Official	Mmatau Molepo	Telephone no:	011 713 6255
Cellular phone no		Fax no:	
E-mail	Mmatau.Molepo@dpw.gov.za		

12. DEPOSIT / RETURN OF TENDER DOCUMENTS

Telegraphic, telephonic, telex, facsimile, electronic and / or late tenders will not be accepted.

Requirements for sealing, addressing, delivery, opening and assessment of tenders are stated in the Tender Data.

All tenders must be completed in non-erasable ink and submitted on the official forms – (forms not to be re-typed).

Tender documents may be posted to: The Director-General Department of Public Works and Infrastructure Private Bag X 3 Braamfontein 2017 Attention: Procurement section: Room G12	OR	Deposited in the tender box at: 78 De Korte Street Mineralia Building De Korte Ground Floor G12
--	-----------	--



Invitation to Bid: PA-32

PART A INVITATION TO BID (EXEMPTION)

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE (NAME OF DEPARTMENT/ PUBLIC ENTITY)					
BID NUMBER:	JHB 26/03	CLOSING DATE:	16/09/2026	CLOSING TIME:	11:00
DESCRIPTION	Various Magistrate's Office: Installation of backup generators: Hardach, Kwa Thema, Dunnottar and Fochville				
THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT					
BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT (STREET ADDRESS)					
Mineralia Building 78 De Korte Street Braamfontein Johannesburg 2017					
OR POSTED TO:					
Private Bag X3 Braamfontein Johannesburg 2017					
SUPPLIER INFORMATION					
NAME OF BIDDER					
POSTAL ADDRESS					
STREET ADDRESS					
TELEPHONE NUMBER	CODE		NUMBER		
CELLPHONE NUMBER					
FACSIMILE NUMBER	CODE		NUMBER		
E-MAIL ADDRESS					
VAT REGISTRATION NUMBER					
		TCS PIN:		OR	CSD No:
ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?		☐ Yes ☐ No		ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS /SERVICES /WORKS OFFERED?	☐ Yes ☐ No
		[IF YES ENCLOSE PROOF]		[IF YES ANSWER PART B:3 BELOW]	
SIGNATURE OF BIDDER				DATE	
CAPACITY UNDER WHICH THIS BID IS SIGNED (Attach proof of authority to sign this bid; e.g. resolution of directors, etc.)					
TOTAL NUMBER OF ITEMS OFFERED				TOTAL BID PRICE ('ALL APPLICABLE TAXES)	
BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO:			TECHNICAL INFORMATION MAY BE DIRECTED TO:		
DEPARTMENT/ PUBLIC ENTITY			CONTACT PERSON		
CONTACT PERSON			TELEPHONE NUMBER		
TELEPHONE NUMBER			FACSIMILE NUMBER		
FACSIMILE NUMBER			E-MAIL ADDRESS		
E-MAIL ADDRESS					

Invitation to Bid: PA-32

PART B TERMS AND CONDITIONS FOR BIDDING

1. BID SUBMISSION:	
1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.	
1.2. ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED-(NOT TO BE RE-TYPED) OR ONLINE	
1.3. BIDDERS MUST REGISTER ON THE CENTRAL SUPPLIER DATABASE (CSD) TO UPLOAD MANDATORY INFORMATION NAMELY: (BUSINESS REGISTRATION/ DIRECTORSHIP/ MEMBERSHIP/IDENTITY NUMBERS; TAX COMPLIANCE STATUS; AND BANKING INFORMATION FOR VERIFICATION PURPOSES).	
1.4. WHERE A BIDDER IS NOT REGISTERED ON THE CSD, MANDATORY INFORMATION NAMELY: (BUSINESS REGISTRATION/ DIRECTORSHIP/ MEMBERSHIP/IDENTITY NUMBERS; TAX COMPLIANCE STATUS MAY NOT BE SUBMITTED WITH THE BID DOCUMENTATION.	
2. TAX COMPLIANCE REQUIREMENTS	
2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.	
2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VIEW THE TAXPAYER'S PROFILE AND TAX STATUS.	
2.3 APPLICATION FOR TAX COMPLIANCE STATUS (TCS) OR PIN MAY ALSO BE MADE VIA E-FILING. IN ORDER TO USE THIS PROVISION, TAXPAYERS WILL NEED TO REGISTER WITH SARS AS E-FILERS THROUGH THE WEBSITE WWW.SARS.GOV.ZA.	
2.4 BIDDERS MAY ALSO SUBMIT A PRINTED TCS TOGETHER WITH THE BID.	
2.5 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE PROOF OF TCS / PIN / CSD NUMBER.	
2.6 WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.	
3. QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS	
3.1. IS THE BIDDER A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)?	☐ YES ☐ NO
3.2. DOES THE BIDDER HAVE A BRANCH IN THE RSA?	☐ YES ☐ NO
3.3. DOES THE BIDDER HAVE A PERMANENT ESTABLISHMENT IN THE RSA?	☐ YES ☐ NO
3.4. DOES THE BIDDER HAVE ANY SOURCE OF INCOME IN THE RSA?	☐ YES ☐ NO
IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN, IT IS NOT A REQUIREMENT TO OBTAIN A TAX COMPLIANCE STATUS / TAX COMPLIANCE SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 2.3 ABOVE.	

Note Well:

- | |
|--|
| <p>a) In respect of non VAT vendors the bidders may not increase the bid price under Section 67(1) of the Value Added Tax Act of 1991 where the relevant transaction would become subject to VAT by reason of the turnover threshold being exceeded and the bidder becomes liable for VAT.</p> <p>b) All delivery costs must be included in the bid price, for delivery at the prescribed destination.</p> <p>c) The price that appears on this form is the one that will be considered for acceptance as a firm and final offer.</p> <p>d) The grand total in the pricing schedule(s), inclusive of VAT, attached to the bid offer must correlate and be transferred to this form (PA32).</p> |
|--|



Invitation to Bid: PA-32

- e) Where there are inconsistencies between the grand total price offer in the pricing schedule(s) and the PA32 price offer, the price offer on the PA32 shall prevail and deemed to be firm and final. No further correspondence shall be entered into in this regard.

¹ All applicable taxes¹ includes value-added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies

T1.2 Tender Data

DPW-03 (EC): TENDER DATA

Project title:	<i>Various Magistrate's Office: Installation of backup generators: Hardach, Kwa Thema, Dunnottar and Fochville</i>
Reference no:	

Tender / Quotation no:	JHB 26/03	Closing date:	16 September 2026
Closing time:	11:00 AM	Validity period:	12 Weeks (84 Calender days)

Clause number:	
	The conditions of tender are the Standard Conditions of Tender as contained in Annex C of the CIDB Standard for Uniformity in Construction Procurement as per Government Notice No. 423 published in Government Gazette No. 42622 of 8 August 2019 and as amended from time to time. (see www.cidb.org.za). The Standard Conditions of Tender make several references to the Tender Data for details that apply specifically to this tender. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the Standard Conditions of Tender. Each item of data given below is cross-referenced to the clause marked "C" in the above mentioned Standard Conditions of Tender.
C.1.1	The employer is the Government of the Republic of South Africa in its Department of Public Works and Infrastructure.
C.1.2	For this contract the three volume approach is adopted. This procurement document has been formatted and compiled under the headings as contained in the CIDB's "Standard for Uniformity in Construction Procurement." The three volume procurement document issued by the employer comprises the following: Volume 1: Tendering procedures T1.1 - Notice and invitation to tender (PA-04 EC) T1.2 - Tender data (DPW-03 EC) Volume 2: Returnable documents T2.1 - List of returnable documents (PA-09 EC) C1.1 - Form of offer and acceptance (DPW-07 EC) C1.2 - Contract Data T2.2 - Returnable schedules Volume 3: Contract Part C1: Agreement and contract data C1.2 - Contract data (Part 1: Data provided by employer) (DPW-04 EC or DPW-05 EC) C1.3 - Form of guarantee (DPW-10.1 EC / DPW-10.3EC or DPW-10.2 EC/DPW-10.4 EC) Part C2: Pricing data C2.1 - Pricing Assumptions (PG-02.2 EC or PG-02.1EC) C2.2 - Bills of Quantities / Lump sum document (if not a returnable document) Part C3: Scope of work C3 - Scope of work (PG-01.2 EC or PG-01.1EC) Part C4: Site information C4 - Site information (PG-03.2 EC or PG03.1EC)

Tender no: JHB 26/03

C.1.4	The Employer's agent is:
Name:	Nothemba Djalivani
Capacity:	Departmental Project Manager
Address:	Mineralia Building 78 De Korte Street Braamfontein Johannesburg 2017
Tel:	073 194 4475
Fax:	
E-mail:	Nothemba.Djalivani@dpw.gov.za

C.2.1	A. ELIGIBILITY IN RESPECT OF CIDB REGISTRATION:
C.3.11	The following tenderers who are registered with the CIDB, or are *capable of being so registered prior to the evaluation of submissions, are eligible to have their tenders evaluated (* tenderers who are capable of being so registered, or who have applied for registration but have not yet received confirmation of such registration, must provide, <u>with this tender</u>, acceptable documentary proof thereof): a) contractors who have a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) or 25 (7A) of the Construction Industry Development Regulations, for a 4 EB or 4 EB** class of construction work; and b) contractors registered as potentially emerging enterprises with the CIDB who are registered in one contractor grading designation lower than that required in terms of a) above: Not applicable Joint ventures are eligible to submit tenders provided that: 1. every member of the joint venture is registered with the CIDB; 2. the lead partner has a contractor grading designation in the 4 EB or 4 EB** class of construction work; and 3. the combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) or 25 (7A) of the Construction Industry Development Regulations for a 4 EB or 4 EB** class of construction work ** Delete "or select tender value range select class of construction works" where only one class of construction works is applicable A contract will be entered into with a tenderer who has in his employ management and supervisory staff satisfying the requirements of the scope of work for labour intensive competencies for supervisory and management staff: Not applicable

Tender no: JHB 26/03

C. FUNCTIONALITY WEIGHTING APPLICABLE TO THIS BID:

Note: Failure to meet minimum functionality score will result in the tenderer being disqualified.

Functionality Criteria	Weighting Factor
1. KEY PERSONNEL: a) Bidder must submit CV of Electrical Artisan or Electromechanical (Millwright) with experience in similar generator projects, and a certified copy of trade certificate not older than 6 months. b) Bidder must submit CV of Electrical Foreman with experience in similar generator projects. A minimum qualification of Grade 12 and National Senior Certificate or N3 in Electrical Engineering. -Electrical Artisan/ Millwright with 3 years experience 3 points -Electrical Artisan/ Millwright with 4 years experience 6 points -Electrical Artisan/ Millwright with 5 years experience 9 points -Electrical Artisan/ Millwright with 6 years experience 12 points -Electrical Artisan/ Millwright with 7 or more years experience 15 points and -Electrical Foreman with 3 years experience 4 points -Electrical Foreman with 4 years experience 8 points -Electrical Foreman with 5 years experience 12 points -Electrical Foreman with 6 years experience 16 points -Electrical Foreman with 7 or more years experience 20 points Non-submission of the above = 0 points	35
2. PROJECT EXECUTION PLAN (PEP): Bidders must submit a Project Execution Plan (PEP)/ Programme showing activities and duration thereof. The PEP must be based on the Project Construction Period of 6 months and must reflect the following: a) Key activities b) Critical Path c) Sequencing of activities d) Duration of key activities e) Project cashflow -Programme with (a),(b),(c),(d) and (e) 30 points Non-submission of the above = 0 points	30
3. WORK EXPERIENCE: Bidder must submit project Completion Certificates as proof of work completed in the past 10 years. Projects must be of similar generator projects completed successfully in value grading (value of R1 000 000.00 and above).	35

-Successfully completed 1 project	7 points	
-Successfully completed 2 project	14 points	
-Successfully completed 3 project	21 points	
-Successfully completed 4 project	28 points	
-Successfully completed 5 project	35 points	
Non-submission of the above = 0 points		
Total		100 Points

(Weightings will be multiplied by the scores allocated during the evaluation process to arrive at the total functionality points)

Minimum functionality score to qualify for further evaluation:	50
--	----

☐

D. METHOD TO BE USED TO CALCULATE POINTS FOR SPECIFIC GOALS

D1. For procurement transaction with rand value greater than R2 000,00 and up to R1 Million (Inclusive of all applicable taxes) the specific goals listed below are applicable.

Table 1

Serial No	Specific Goals	Preference Points Allocated out of 20	Documentation to be submitted by bidders to validate their claim
1.	An EME or QSE which is at least 51% owned by black people (Mandatory)	10	SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable.
2.	Located in a specific Local Municipality or District Municipality or Metro or Province area for work to be done or services to be rendered in that area (Mandatory)	2	- Official Municipal Rates Statement which is in the name of the bidder. Or - Any account or statement which is in the name of the bidder. Or - Permission to Occupy from local chief in case of rural areas (PTO) which is in the name of the bidder.



			Or
			Lease Agreement which is in the name of the bidder.
3.	An EME or QSE which is at least 51% owned by black women (Mandatory)	4	SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable.
4.	An EME or QSE which is at least 51% owned by black people with disability (Mandatory)	2	- SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable. and - Medical Certificate indicating that the disability is permanent. Or - South African Social Security Agency (SASSA) Registration indicating that the disability is permanent. Or - National Council for Persons with Physical Disability in South Africa registration (NCPDPSA).
5.	An EME or QSE which is at least 51% owned by black youth (Mandatory)	2	ID Copy and SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable.



D2. For procurement transaction with rand value greater than R1 Million and up to R50 Million (Inclusive of all applicable taxes) the specific goals listed in table 1 below are applicable.

Table 2

Serial No	Specific Goals	Preference Points Allocated out of 20	Documentation to be submitted to bidders to validate their claim
1.	An EME or QSE or any entity which is at least 51% owned by black people (Mandatory)	10	SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable.
2.	Located in a specific Local Municipality or District Municipality or Metro or Province area for work to be done or services to be rendered in that area (Mandatory)	2	- Official Municipal Rates Statement which is in the name of the bidder Or - Any account or statement which is in the name of the bidder. Or - Permission to Occupy from local chief in case of rural areas (PTO) which is in the name of the bidder Or



				Lease Agreement which is in the name of the bidder.
3.	An EME or QSE or any entity which is at least 51% owned by black women (Mandatory)	4		SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable.
4.	An EME or QSE or any entity which is at least 51% owned by black people with disability (Mandatory)	2		- SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable. and - Medical Certificate indicating that the disability is permanent. Or - South African Social Security Agency (SASSA) Registration indicating that the disability is permanent. Or National Council for Persons with Physical Disability in South Africa registration (NCPDPSA).
5.	An EME or QSE or any entity which is at least 51% owned by black youth (Mandatory)	2		ID Copy and SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable.



D3. For procurement transaction with rand value greater than R50 Million (Inclusive of all applicable taxes) the specific goals listed in table 2 below are applicable.

NB. The use of one of goal numbers' 4 or 5 is mandatory. The BSC must select either one of the two, but not both.

Table 3

Serial No	Specific Goals	Preference Points Allocated out of 10	Documentation to be submitted bidders to validate their claim
1.	An EME or QSE or any entity which is at least 51% owned by black people (Mandatory)	4	SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable.



	2.	Located in a specific Local Municipality or District Municipality or Metro or Province area for work to be done or services to be rendered in that area (Mandatory)	2	- Official Municipal Rates Statement which is in the name of the bidder. Or - Any account or statement which is in the name of the bidder. Or - Permission to Occupy from local chief in case of rural areas (PTO) which is in the name of the bidder. Or - Lease Agreement which is in the name of the bidder.	
	3.	An EME or QSE or any entity which is at least 51% owned by black women (mandatory)	2	SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable.	
	4. ☐	An EME or QSE or any entity which is at least 51% owned by black people with disability (Mandatory)	2	- SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable. and - Medical Certificate indicating that the disability is permanent. Or - South African Social Security Agency (SASSA) Registration indicating that the disability is permanent. Or National Council for Persons with Physical Disability in South Africa registration (NCPDPSA).	
	5. ☐	An EME or QSE or any entity which is at least 51% owned by black youth (Mandatory)	2	ID Copy and SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable.	

Black people mean Africans, Coloureds and Indians, who - (a) are citizens of the Republic of South Africa by birth or descent; or (b) became citizens of the Republic of South Africa by naturalisation - (i) before 27 April 1994; or (ii) on or after 27 April 1994 and who would have been entitled to acquire citizenship by naturalisation prior to that date. (BROAD-BASED BLACK ECONOMIC EMPOWERMENT ACT No 25899, 2003 of 9 JANUARY 2004)

Tender no: JHB 26/03

E. ELIGIBILITY IN RESPECT OF RISK TO EMPLOYER:

Standard risk management assessment criteria in respect of tenders received for routine projects in the engineering and construction works environments:

Tender offers will be evaluated by an Evaluation Committee based on the technical and commercial risk criteria listed hereunder. Each criterion carries the same weight / importance and will be evaluated individually based on reports presented to the Bid Evaluation Committee by the Professional Team appointed on the project. A tender offer will be declared non-responsive and removed from any further evaluation if any one criterion is found to present an unacceptable risk to the Employer.

In order for the evaluation reports to be prepared by the Professional Team, the Tenderer is obliged to provide comprehensive information on form DPW-09 (EC). Failure to complete the said form will cause the tender to be declared non-responsive and removed from any further consideration. The Employer reserves the right to request additional information over and above that which is provided by the Tenderer on said form. The information must be provided by the Tenderer within the stipulated time as determined by the Bid Evaluation Committee, failing which the tender offer will *mutatis mutandis* be declared non-responsive.

E.1 Technical risks:

Criterion 1: Experience on comparable projects during the past 10 years.

The tendering Service Provider's experience on comparable projects during the past 10 years. The number of current and previous comparable projects performed by the Tenderer as per the evaluation report prepared by the Consultant Team, based on its research and inspection of a representative sample of the Tenderer's current and previous work as reflected on form DPW-09 (EC), as well as, if necessary, of any additional work executed by the Tenderer, not reflected on form DPW-09 (EC). Failing to provide contactable references will result in the tender offer will be *mutatis mutandis* declared non-responsive.

Aspects to be regarded as "comparable" includes (but may be extended according to circumstances): size of projects (measured against monetary value or other project quantifying parameters), nature of projects (building, engineering, high/low rise, etc.), locality/area of execution (site-specific influences, knowledge of local conditions, etc.), complexity of project, projects for similar client department irrespective of end purpose of buildings/facilities created or in progress of being created and time scales of projects (normal, fast track, etc.) and stage of its/their development.

Criterion 2: Contractual commitment and quality of performance on comparable projects during the past 10 years.

Adherence to contractual commitments and quality of performance of comparable current and previous projects performed by the Tenderer on comparable projects during the past 10 years as per the evaluation report prepared by the Consultant Team, based on its research and inspection of a representative sample of the Tenderer's current and previous work as reflected on form DPW-09 (EC), as well as, if necessary, of any additional work executed by the Tenderer, not reflected on form DPW-09 (EC). Failing to provide contactable references will result in the tender offer be *mutatis mutandis* declared non-responsive.

Aspects to be considered include, but are not limited to the following:

1. The level of progress on current projects in relation to the project programme or, if such is not available/applicable, to the contractual construction period in general;
2. The degree to which previous projects have been completed within the contractual completion periods and/or extensions thereto, and the extend of penalties imposed;

Tender no: JHB 26/03

	3. Project performance: time management & programming of works, timeous ordering of materials and appointment of subcontractors; 4. Financial management: payment to suppliers and cash flow problems; 5. Quality of workmanship: extent of reworks and timeous attention to remedial works; 6. Personnel resources: suitably qualified and experienced, turnover in site staff and labour force, specifically site manager and foreman; 7. Personnel management: extent of labour disputes and ability to resolving labour disputes amicably; 8. Sub-contractors: extent of turnover in subcontractors, general liaison and payment problems experienced; 9. Contract administration: contractual aspects such as complying to laws and regulations, insurances, security, submission of required documentation timeously, reaction to written contract instructions, appointments of subcontractors, etc. as can generally be expected in standard/normal conditions of contract. 10. Health & Safety: adherence to regulations and compliance, and number of transgressions & serious incidents. 11. Plant & equipment: sufficient resources on site and in time. 12. Delays: extent of causing delays, submission of claims timeously, and abuse of or exaggerated delay claims. 13. Final account: extent to which the contractor assisted in finalising the final account. Criterion 3: Suitably qualified and appropriately experienced human resources Allocation of suitably qualified and appropriately experienced human resources, both in respect of principals and/or other staff (contract manager, site agent, site foreman including other professional, technical and/or administrative) of the tendering Service Provider to the project, as proof that the tendering Service Provider will be able to react/respond appropriately to the Services required herein. The Company Organogram with CV's and certified ID's of all principals and employed workforce as well as proof of Professional Registration will be verified. Current and future workload of the tenderer in relation to capacity and capability will also be considered. The tenderer should demonstrate that he or she possesses the necessary professional and technical qualifications and -competence in relation to the scope of work and work to be undertaken. Criterion 4: Attendance of compulsory bid clarification meeting, if applicable If applicable, submission of confirmation of DPW-16.1 (PSB) attendance of compulsory bid clarification meeting or proof of attending the compulsory virtual meeting by a suitably qualified and experienced representative of the tenderer in terms of PA-04 (EC): Notice and Invitation to Tender. E.2 Commercial risks: The financial viability assessment evaluates the risk over the life of the construction period, as to whether the tenderer will be able to deliver the goods and services which are specified in the contract and / or be able to fulfil guarantees or warranties provided for in the contract in order to complete the project successfully for the amount tendered. Aspects to be considered include but are not limited to, the respective rates tendered, bank rating, financial capability and capacity whether the tenderer has or has access to sufficient financial resources to deliver the goods or services described in the tender documentation (including fulfilling any guarantees or warranty claims), whether the tenderer is not subject to any current or impending legal action (either formal proceedings or notification of legal action) which could impact on the financial standing of the tenderer or the delivery of the goods or services, financial report from auditors as proof of current liquidity, and company or any parent company or investor guarantee/s and financial statements.
C.2.7	For particulars regarding a pre-tender site inspection meeting, see Notice and Invitation to Tender T1.1

Tender no: JHB 26/03

C.2.12	If a tenderer wishes to submit an alternative tender offer, the only criteria permitted for such alternative tender offer is that it demonstrably satisfies the Employer's standards and requirements. A tenderer may submit alternative tender offers only if a main tender offer, strictly in accordance with all the requirements of the tender documents, is also submitted. Provided that the tenderer's main tender offer is according to specification and would under normal circumstances be recommended for acceptance, his alternative tender offer may also be considered for the purpose of the award of the contract. Calculations, drawings and all other pertinent technical information and characteristics as well as modified or proposed Pricing Data must be submitted with the alternative tender offer to enable the Employer to evaluate the efficacy of the alternative and its principal elements, to take a view on the degree to which the alternative complies with the Employer's standards and requirements and to evaluate the acceptability of the pricing proposals. Calculations must be set out in a clear and logical sequence and must clearly reflect all design assumptions. Pricing Data must reflect all assumptions in the development of the pricing proposal. Acceptance of an alternative tender offer will mean acceptance in principle of the offer. It will be an obligation of the contract for the tenderer, in the event that the alternative is accepted, to accept full responsibility and liability that the alternative offer complies in all respects with the Employer's standards and requirements. The modified Pricing Data must include an amount equal to 5% of the amount tendered for the alternative offer to cover the Employer's costs of confirming the acceptability of the detailed design before it is constructed. Alternative tender offer permitted: Yes ☐ No ☒
C.2.13.2	The list of Returnable Documents identifies which of the documents a tenderer must complete when submitting a tender offer. The tenderer must submit his tender offer by completing the Returnable Documents, signing the "Offer" section in the "Form of Offer and Acceptance" and delivering the Returnable Documents back to the Department.
C.2.13.5	The Employer's address for delivery of tender offers and identification details to be shown on each tender offer package are as per Notice and Invitation to Tender T1.1.
C.2.13.6 C.3.5	A two-envelope procedure will not be followed.
C.2.15	The closing time for submission of tender offers is as per Notice and Invitation to Tender T1.1.
C.2.16	The tender offer validity period is as per Notice and Invitation to Tender T1.1.
C.2.16.3	Omit the wording of the last sentence for those projects which are subject to CPAP
C.2.18	The tenderer will be required to submit his fully priced Bills of Quantities / Lump Sum Document (complete document inclusive of all parts): ☒ Together with his tender; or ☐ The tenderer shall submit his fully priced and completed sectional summary- and final summary pages with the tender and thereafter submit the fully completed Bills of Quantities within fourteen (14) calendar days of the date requested to do so prior to the award of the contract.
C.2.19	Access shall be provided for inspections, tests and analysis as may be required by the Employer.
C.3.4.1 C.3.4.2	The location for opening of the tender offers, immediately after the closing time thereof shall be at: Mineralia Building 78 De Korte Street Braamfontein Johannesburg 2017
C.3.8	The words "responsive tender" and "acceptable tender" shall be construed to have the same meaning.

Tender no: JHB 26/03

C.3.9.3	Omit the wording and replace with the following: "Notify the tenderer of all errors, omissions and/or rate imbalances that are identified in the tender offer and request the tenderer to, within a stipulated time, accept the total of prices as corrected in accordance with C.3.9.4."
C.3.9.4	Omit the wording of the first sentence and replace with the following: "In cases where tender offers contain errors, omissions and/or rate imbalances, these are to be corrected as follows:"
C.3.9.4	Add sub paragraph c) to C.3.9.4, as follows: "c) If the tenderer does not accept the corrected tender offer, or cannot reach consensus with the Employer on a corrected tender offer, the tender is to be classified as not acceptable/non responsive and removed from further contention."
C.3.11.1	The procedure for the evaluation of responsive tenders is Method 2: Financial Offer and Preference.
C.3.13	Add the following to sub paragraph a), as follows: The tenderer or any of its directors is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act, 2004 (Act No. 12 of 2004) as a person prohibited from doing business with the public sector;
C.3.17	Provide to the successful tenderer one copy of the signed contract document.

VOLUME 2: RETURNABLE DOCUMENTS

T2.1 List of Returnable Documents

PA-09 (EC): LIST OF RETURNABLE DOCUMENTS

Project title:	Various Magistrate's Office: Installation of backup generators: Hardach, Kwa Thema, Dunnottar and Fochville		
Tender / Quote no:	JHB 26/03	Reference no:	
Receipt Number:			

1. RETURNABLE DOCUMENTS REQUIRED FOR TENDER EVALUATION PURPOSES

Note: Failure to submit the applicable documents will result in the tender offer being disqualified from further consideration.

Tender document name	Number of pages issued	Returnable document
Form of Offer and Acceptance (DPW-07 EC)	4 Pages	Yes
Declaration of Interest and Tenderer's Past Supply Chain Management Practices (PA-11)	4 Pages	Yes
Resolution of Board of Directors (PA-15.1) (if applicable)	1 Page	Yes
Resolution of Board of Directors to enter into Consortia or JV's (PA-15.2) (if applicable)	2 Pages	Yes
Special Resolution of Consortia or JV's (PA-15.3) (if applicable)	3 Pages	Yes
Preference points claim form in terms of the Preferential Procurement Regulations 2017 (PA – 16)	5 Pages	Yes
Certificate of independent Bid Determination (PA – 29)	4 Pages	Yes
Declaration Certificate for Local Production and Content for designated sectors (PA – 36 and Annexure/s C)	N/A	Yes
Fully completed Declaration of Designated Groups for Preferential Procurement (PA 40)	2 Pages	Yes
Registration on National Treasury's Central Supplier Database (CSD).	-	Yes
Particulars of Tenderer's Projects (DPW-09 EC)	2 Pages	Yes
Site Inspection Meeting Certificate (DPW-16 EC) (if applicable).	1 Page	No
Record of attending compulsory virtual bid clarification / site inspection meeting (if applicable).	1 Page	No
Record of Addenda to tender documents (DPW-21 EC)	1 Page	Yes
Site Inspection Meeting Certificate (DPW-16 EC) (if applicable)	1 Page	No
Proof of 30% Subcontracting participation and related documents in terms of the Preferential Procurement Regulations 2017 (if applicable).		No
Invitation to Bid (PA-32)	3 Pages	Yes

* In compliance with the requirements of the CIDB SFU Annexure G

Tender no: **JHB 26/03**

2. ADDITIONAL RETURNABLE DOCUMENTS REQUIRED FOR TENDER EVALUATION PURPOSES

Note: Failure to submit the applicable documents will result in the Tenderer having to submit same upon request within a stipulated time and if not complied with, will result in the tender offer being disqualified from further consideration. [See also C.2.18 of the Standard Conditions of Tender]

Tender document name	Number of pages issued	Returnable document
Any <u>additional</u> information required to complete a risk assessment (<i>if applicable</i>)	-	Yes

3. RETURNABLE DOCUMENTS THAT WILL BE INCORPORATED INTO THE CONTRACT

Note: Failure to submit the applicable documents will result in the Tenderer having to submit same upon request within a stipulated time and if not complied with, will result in the tender offer being disqualified from further consideration. [See also C.2.18 of the Standard Conditions of Tender]

Tender document name	Number of pages issued	Returnable document
Schedule of proposed sub-contractors (DPW-15 EC) (<i>if applicable</i>)	1 Page	Yes
Particulars of Electrical Contractor (DPW-22 EC) (<i>if applicable</i>)	1 Page	Yes
Mechanical / Electrical / Security Work material and equipment schedules (<i>if applicable</i>)	Pages	Yes
Schedule for Imported Materials and Equipment (DPW-23 EC) (<i>if applicable</i>)	1 Page	Yes

4. OTHER DOCUMENTS THAT WILL BE INCORPORATED INTO THE CONTRACT

(Insert a tick in the "Returnable document" column to indicate which documents must be returned with the tender)

Note: Failure to submit the applicable documents will result in the tender offer being disqualified from further consideration.

Tender document name	Number of pages issued	Returnable document
Priced Bills of Quantities / Lump Sum Document (complete document inclusive of all parts)	Pages	☒ Yes ☐ No
Fully priced and completed sectional summary- and final summary pages with the tender.	Pages	☒ Yes ☐ No
<i>insert document name</i>	Pages	☐ Yes ☐ No
<i>insert document name</i>	Pages	☐ Yes ☐ No
<i>insert document name</i>	Pages	☐ Yes ☐ No

Tender no: **JHB 26/03**

5. ADDITIONAL INFORMATION THAT MAY BE REQUIRED FOR TENDER EVALUATION PURPOSES

Legal Status of Tendering Entity:	Documentation to be submitted with the tender, or which may be required during the tender evaluation:
If the Tendering Entity is:	
a. A close corporation, incorporated prior to 1 May 2011 under the Close Corporations Act, 1984 (Act 69 of 1984, as amended)	Copies of the Founding Statement – CK1
b. A profit company duly registered as a private company. [including a profit company that meets the criteria for a private company, whose Memorandum of Incorporation states that the company is a personal liability company in terms of Section 8(2)(c) of the Companies Act, 2008 (Act 71 of 2008, as amended)].	Copies of: i. Certificate of Incorporation – CM1; ii. Shareholding Certificates of all Shareholders of the company, plus a signed statement of the company's Auditor, certifying each Shareholder's ownership / shareholding percentage relative to the total; and/or iii. Memorandum of Incorporation in the case of a personal liability company.
c. A profit company duly registered as a private company in which any, or all, shares are held by one or more other close corporation(s) or company(ies) duly registered as profit or non-profit company(ies).	Copies of documents referred to in a. and/or b. above in respect of all such close corporation(s) and/or company(ies).
d. A profit company duly registered as a public company.	Copy of Certificate of Incorporation – CM1, and a signed statement of the company's Secretary or Auditor confirming that the company is a public company.
e. A non-profit company, incorporated in terms of Section 10 and Schedule 1 of the Companies Act, 2008 (Act 71 of 2008, as amended).	Copies of: i the Founding Statement – CK1; and ii the Memorandum of Incorporation setting out the object of the company, indicating the public benefit, cultural or social activity, or communal or group interest.
f. A natural person, sole proprietor or a Partnership	Copy(ies) of the Identity Document(s) of: i. such natural person/ sole proprietor, or each of the Partners to the Partnership.
g. A Trust	Deed of Trust duly indicating names of the Trustee(s) and Beneficiary (ies) as well as the purpose of the Trust and the mandate of the Trustees.

Signed by the Tenderer:

Name of representative	Signature	Date

C1.1 Form of Offer and Acceptance

DPW-07 (EC): FORM OF OFFER AND ACCEPTANCE

Project title:	Various Magistrate's Office: Installation of backup generators: Hardach, Kwa Thema, Dunnottar and Fochville		
Tender / Quotation no:	JHB 26/03	Reference no:	

OFFER

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

Installation of backup generators at Hardach, Kwa Thema, Dunnottar and Fochville Magistrate's Offices.

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

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

THE TOTAL OFFER INCLUSIVE OF ALL APPLICABLE TAXES ("All applicable taxes" includes value-added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies) **IS:**

Rand (in figures) R

Rand (in words)

The amount in words takes precedence over the amount in figures. The award of the tender may be subjected to further price negotiation with the preferred tenderer(s). The negotiated and agreed price will be considered for acceptance as **a firm and final offer**.

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

THIS OFFER IS MADE BY THE FOLLOWING LEGAL ENTITY: (cross out block which is not applicable)

Company or Close Corporation: And: Whose Registration Number is: And: Whose Income Tax Reference Number is: CSD supplier number:.....	OR	Natural Person or Partnership: Whose Identity Number(s) is/are: Whose Income Tax Reference Number is/are: CSD supplier number:.....
--	----	--

*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".

**Any reference to the words "payment reduction" herein shall be construed to have the same meaning as the word "retention"

For Internal & External Use

Effective date 5 July 2022

Page 1 of 4
Version 2022/4

Tender / Quotation no: JHB 26/03

AND WHO IS (if applicable):	
Trading under the name and style of:	
AND WHO IS:	
Represented herein, and who is duly authorised to do so, by: Mr/Mrs/Ms: In his/her capacity as:	Note: A Resolution / Power of Attorney, signed by all the Directors / Members / Partners of the Legal Entity must accompany this Offer, authorising the Representative to make this offer.

SIGNED FOR THE TENDERER:

Name of representative	Signature	Date

WITNESSED BY:

Name of witness	Signature	Date

This Offer is in respect of: (Please indicate with an "X" in the appropriate block)

- The official documents ☐
- The official alternative ☐
- Own alternative (only if documentation makes provision therefore) ☐

(N.B.: Separate Offer and Acceptance forms are to be completed for the main and for each alternative offer)

SECURITY OFFERED:

- (a) the Tenderer accepts that in respect of contracts up to R1 million, a payment reduction** of 5% of the contact value (excluding VAT) will be applicable and will be deducted by the Employer in terms of the applicable conditions of contract
- (b) in respect of contracts above R1 million, the Tenderer offers to provide security as indicated below:
- (1) cash deposit of 10 % of the Contract Sum (excluding VAT) Yes ☐ No ☐
 - (2) variable construction guarantee of 10 % of the Contract Sum (excluding VAT) Yes ☐ No ☐
 - (3) payment reduction of 10% of the value certified in the payment certificate (excluding VAT) Yes ☐ No ☐
 - (4) cash deposit of 5% of the Contract Sum (excluding VAT) and a payment reduction of 5% of the value certified in the payment certificate (excluding VAT) Yes ☐ No ☐
 - (5) fixed construction guarantee of 5% of the Contract Sum (excluding VAT) and a payment reduction of 5% of the value certified in the payment certificate (excluding VAT) Yes ☐ No ☐

NB. Guarantees 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 35 of 1998)] or by a bank duly registered in terms of the Banks Act, 1990 (Act 94 of 1990) on the pro-forma referred to above. No alterations or amendments of the wording of the pro-forma will be accepted.

*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".

**Any reference to the words "payment reduction" herein shall be construed to have the same meaning as the word "retention"

For Internal & External Use

Effective date 5 July 2022

Page 2 of 4
Version 2022/04

Tender / Quotation no: JHB 26/03

The Tenderer elects as its *domicilium citandi et executandi* in the Republic of South Africa, where any and all legal notices may be served, as (physical address):

Other Contact Details of the Tenderer are:

Telephone No. Cellular Phone No.

Fax No.

Postal address

Banker Branch.....

Registration No of Tenderer at Department of Labour

CIDB Registration Number:

ACCEPTANCE

By signing this part of this form of offer and acceptance, the Employer identified below accepts the Tenderer's offer. In consideration thereof, the Employer shall pay the Contractor the amount due in accordance with the conditions of contract identified in the contract data. Acceptance of the Tenderer's offer shall form an agreement between the Employer and the Tenderer upon the terms and conditions contained in this agreement and in the contract that is the subject of this agreement.

The terms of the contract are contained in:

Part C1 Agreement and contract data, (which includes this agreement)

Part C2 Pricing data

Part C3 Scope of work

Part C4 Site information and drawings and documents or parts thereof, which may be incorporated by reference into the above listed Parts.

Deviations from and amendments to the documents listed in the tender data and any addenda thereto as listed in the tender schedules as well as any changes to the terms of the offer agreed by the Tenderer and the Employer during this process of offer and acceptance, are contained in the schedule of deviations attached to and forming part of this agreement. No amendments to or deviations from said documents are valid unless contained in this schedule.

The Tenderer shall within two weeks after receiving a completed copy of this agreement, including the schedule of deviations (if any), contact the Employer's agent (whose details are given in the contract data) to arrange the delivery of any securities, bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the conditions of contract identified in the contract data. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

Notwithstanding anything contained herein, this agreement comes into effect on the date when the tenderer receives one fully completed original copy of this document, including the schedule of deviations (if any). Unless the tenderer (now contractor) within five (5) working days of the date of such receipt notifies the employer in writing of any reason why he/she cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the parties.

For the Employer:

Name of signatory	Signature	Date

*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".

**Any reference to the words "payment reduction" herein shall be construed to have the same meaning as the word "retention"

For Internal & External Use

Effective date 5 July 2022

Page 3 of 4
Version 2022/04

Tender / Quotation no: JHB 26/03

Name of Organisation:	Department of Public Works and Infrastructure
Address of Organisation:	<i>Mineralia Building 78 De Korte Street Braamfontein Johannesburg 2017</i>

WITNESSED BY:

Name of witness	Signature	Date

Schedule of Deviations

1.1.1. Subject:
Detail:
1.1.2. Subject:
Detail:
1.1.3. Subject:
Detail:
1.1.4. Subject:
Detail:
1.1.5. Subject:
Detail:
1.1.6. Subject:
Detail:

By the duly authorised representatives signing this agreement, the Employer and the Tenderer agree to and accept the foregoing schedule of deviations as the only deviations from and amendments to the documents listed in the tender data and addenda thereto as listed in the tender schedules, as well as any confirmation, clarification or changes to the terms of the offer agreed by the Tenderer and the Employer during this process of offer and acceptance.

It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the tender documents and the receipt by the Tenderer of a completed signed copy of this Agreement shall have any meaning or effect in the contract between the parties arising from this agreement.

*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".

**Any reference to the words "payment reduction" herein shall be construed to have the same meaning as the word "retention"

For Internal & External Use

Effective date 5 July 2022

Page 4 of 4
Version 2022/04

C2.2 Bills of Quantities/ Lump Sum Document (if a returnable document)

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE



public works
& infrastructure

Department:
Public Works and Infrastructure
REPUBLIC OF SOUTH AFRICA

Installation of a 60kVA Diesel Generator at Kwa-Thema Magistrate Court
Installation of a 100kVA Diesel Generator at Hardach Magistrate Court
Installation of a 100kVA Diesel Generator at Fochville Magistrate Court
Installation of a 100kVA Diesel Generator at Dunnotar Magistrate Court
(BOQ)

Comprising of:

Schedule 1 - Preliminaries and General
Schedule 2 - Generator Installation - Kwa-Thema Magistrate Court
Schedule 3 - Electrical Installation - Kwa-Thema Magistrate Court
Schedule 4 - Generator Installation - Hardach Magistrate Court
Schedule 5 - Electrical Installation - Hardach Magistrate Court
Schedule 6 - Generator Installation - Fochville Magistrate Court
Schedule 7 - Electrical Installation - Fochville Magistrate Court
Schedule 8 - Generator Installation - Dunnotar Magistrate Court
Schedule 9 - Electrical Installation - Dunnotar Magistrate Court
Summary

SCHEDULE 1 - PRELIMINARIES GENERAL

 REPUBLIC OF SOUTH AFRICA GENERATOR INSTALLATION AT KWA-THEMA, HARDACH, FOCHVILLE AND DUNNOTAR MAGISTRATE COURTS					
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	PART 1A: PRELIMINARY AND GENERAL				
	The agreement is to be the General Conditions of Contract (GCC 2010) (Second Edition), Published by the SA Institution of Civil Engineering.				
	The preliminaries are to be the Construction and management requirements for works contracts - Part 1: General engineering and construction works (SANS 1921 -1: 2004 Edition 1) prepared by Standards South Africa and shall be deemed to be incorporated herein.				
	Tenderers are referred to the abovementioned documents for the full intent and meaning of each clause thereof (hereinafter referred to by heading and clause number only) for which such allowance must be made as may be considered necessary.				
	Where standard clauses or alternatives are not entirely applicable to this contract such modifications, corrections or supplements as will apply are given under each relevant clause heading.				
	Where any item is not relevant to this specific contract such items is marked N/A (signifying "not applicable").				
	Adjustment of the preliminaries: each item priced, is to be allocated to one or more of the three categories, where "F" denotes a fixed amount (amount not to be varied), "V" denotes an amount variable in proportion to				
A1	General (Clause 1)				
	F: V: T:	Item			
A2	Basis of Contract (Clause 2)				
	F: V: T:	Item			
A3	Engineer (Clause 3)				
	F: V: T:	Item			
A4	Contractor's General Obligation (Clause 4)				
	F: V: T:	Item			
A5	Time and Related Matters (Clause 5)				
	F: V: T:	Item			
	CARRIED FORWARD				

SCHEDULE 1 - PRELIMINARIES GENERAL

 REPUBLIC OF SOUTH AFRICA 11-01-2014 11-01-2014 GENERATOR INSTALLATION AT KWA-THEMA, HARDACH, FOCHVILLE AND DUNNOTAR MAGISTRATE COURTS					
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BROUGHT FORWARD				
A6	Payment and Related Matters (Clause 6)				
	F: V: T:	Item			
A7	Quality and Related Matters (Clause 7)				
	F: V: T:	Item			
A8	Risk and Related Matters (Clause 8)				
	F: V: T:	Item			
A9	Termination of Contract (Clause 9)				
	F: V: T:	Item			
A10	Claims and Disputes (Clause 10)				
	F: V: T:	Item			
	SECTION B: SANS 1921-1:2004 (Edition 1): CONSTRUCTION AND MANAGEMENT REQUIREMENTS FOR WORKS CONTRACTS: PART 1				
B1	Scope				
	F: V: T:	Item			
B2	Normative references				
	F: V: T:	Item			
B3	Definitions				
	F: V: T:	Item			
B4	Requirements for construction and management				
	F: V: T:	Item			
B4.1	General				
	F: V: T:	Item			
B4.2	Responsibilities for design and construction				
	F: V: T:	Item			
B4.3	Planning, programme and method statements				
	F: V: T:	Item			
B4.3	Planning, programme and method statements				
	F: V: T:	Item			
B4.4	Quality assurance				
	F: V: T:	Item			
	CARRIED FORWARD				

SCHEDULE 1 - PRELIMINARIES GENERAL

 GENERATOR INSTALLATION AT KWA-THEMA, HARDACH, FOCHVILLE AND DUNNOTAR MAGISTRATE COURTS						
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
	BROUGHT FORWARD					
B4.5	Settling out					
	F: V: T:	Item				
B4.6	Management and disposal of water					
	F: V: T:	Item				
B4.7	Blasting					
	F: V: T:	Item				
B4.8	Works adjacent to services and structures					
	F: V: T:	Item				
B4.9	Management of the works and site					
	F: V: T:	Item				
B4.10	Earthworks					
	F: V: T:	Item				
B4.11	Testing					
	F: V: T:	Item				
B4.12	Materials, samples and fabrication drawings					
	F: V: T:	Item				
B4.13	Equipment					
	F: V: T:	Item				
B4.14	Site establishment					
	F: V: T:	Item				
B4.15	Survey control					
	F: V: T:	Item				
B4.16	Temporary works					
	F: V: T:	Item				
B4.17	Existing services					
	F: V: T:	Item				
B4.18	Health and safety					
	F: V: T:	Item				
	CARRIED FORWARD					

SCHEDULE 1 - PRELIMINARIES GENERAL

 Department of Water and Sanitation REPUBLIC OF SOUTH AFRICA						
GENERATOR INSTALLATION AT KWA-THEMA, HARDACH, FOCHVILLE AND DUNNOTAR MAGISTRATE COURTS						
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
	BROUGHT FORWARD					
B4.19	Environmental requirements					
	F: V: T:	Item				
B4.20	Alterations, additions, extensions and modifications to existing works					
	F: V: T:	Item				
B4.21	Inspection of adjoining structures, services, buildings and property.					
	F: V: T:	Item				
B4.22	Attendance on nominated and selected subcontractors					
	F: V: T:	Item			N/A	
	SECTION C: SCOPE OF WORK IN ACCORDANCE WITH SANS 10403					
	(The reference to clauses refer to table B.1 of SANS 1921-1:2004)					
C1	Certification by recognised bodies - (Clause 4.4)					
	F: V: T:	Item				
C2	Agreement - (Clause 4.5)					
	F: V: T:	Item				
C3	Other services and facilities - (Clause 4.8)					
	F: V: T:	Item				
C4	Recording of weather - (Clause 5.2)					
	F: V: T:	Item				
C5	Management meetings - (Clause 5.3)					
	F: V: T:	Item				
C6	Daily records - (Clause 5.6)					
	F: V: T:	Item				
C7	Permits - (Clause 5.9)					
	F: V: T:	Item				
C8	Proof of compliance with the law - (Clause 5.10)					
	F: V: T:	Item				
	CARRIED FORWARD					

SCHEDULE 1 - PRELIMINARIES GENERAL

 REPUBLIC OF SOUTH AFRICA DEPARTMENT OF POLICE AND PREVENTIVE SERVICES GENERATOR INSTALLATION AT KWA-THEMA, HARDACH, FOCHVILLE AND DUNNOTAR MAGISTRATE COURTS					
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BROUGHT FORWARD				
	SECTION D: SPECIFICATION DATA ASSOCIATED WITH SANS 1921-1:2004 (Table A.1)				
D1	Requirements for drawings, information and calculations for which the contractor is responsible - (Clause 4.1.7)				
	F: V: T:	Item			
D2	The planning, programme and method statements- (Clause 4.3)				
	F: V: T:	Item			
D3	Samples of materials. Workmanships and finishes - (Clause 4.12.1)				
	F: V: T:	Item			
D4	Fabrication drawings that the contractor is to provide and deliver to the employer - (Clause 4.12.2)				
	F: V: T:	Item			
D5	Office for the foreman - (Clause 4.14.3)				
	F: V: T:	Item			
D6	Telephone - (Clause 4.14.3)				
	F: V: T:	Item			
D7	Office for inspector of works - (Clause 4.14.3)				
	F: V: T:	Item			N/A
D8	Telephone in office for inspector of works - (Clause 4.14.3)				
	F: V: T:	Item			N/A
D9	Provision and erection of signboards - (Clause 4.14.6)				
	F: V: T:	Item			N/A
D10	Termination, diversion or maintenance of existing services - (Clause 4.17.1)				
	F: V: T:	Item			
D11	Services which are known to exist - (Clause 4.17.3)				
	F: V: T:	Item			
D12	Detection apparatus - (Clause 4.17.4)				
	F: V: T:	Item			
	CARRIED FORWARD				

SCHEDULE 1 - PRELIMINARIES GENERAL

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BROUGHT FORWARD				
D13	Additional health and safety requirements - (Clause 4.18)				
	F: V: T:	Item			
	SECTION E: SPECIFIC PRELIMINARIES (Section E contains specific preliminaries items which apply to this contract except where "N/A" (Not applicable) appears against the item.				
E1	WORKING OVER THE WEEKEND Contractor to make allowance to work over the weekend in order to allow for the disconnection of utilities and the connection of the generator. The weekend to be used for disconnection and connection and must be communicated to the Department two weeks in advance.				
	F: V: T:	Item			
E2	SITE INSTRUCTIONS Site instructions issued on site are to be recorded in triplicate in a Site Instruction book which is to be maintained on site by the Contractor				
	F: V: T:	Item			
E3	PLANT RECORD At every site meeting, the Contractor shall provide the Engineer/Principal agent with a written record, in schedule form, reflecting the number, type and capacity of all plant, excluding hand tools, currently used on the works.				
	F: V: T:	Item			
E4	SITE OFFICE The Contractor is to allow for the provision and removal of a site office in accordance with the Principal Agent's requirements. To accommodate 6 persons.				
	F: V: T:	Item			
E5	TRADE NAMES Wherever a Trade Name for any product has been described in the Bill of Quantities, the Bidder'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 the submission of the Bids.				
	F: V: T:	Item			
	CARRIED FORWARD				

SCHEDULE 1 - PRELIMINARIES GENERAL

 Department of Public Works and Infrastructure REPUBLIC OF SOUTH AFRICA					
GENERATOR INSTALLATION AT KWA-THEMA, HARDACH, FOCHVILLE AND DUNNOTAR MAGISTRATE COURTS					
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BROUGHT FORWARD				
E6	INACCURATE AND DEFECTIVE WORK EXECUTED UNDER PREVIOUS CONTRACT				
	The contractor shall, after taking possession of the site and before commencing the work, check all levels, liners, profiles and the like and satisfy himself as to the dimensional accuracy of all work executed under the previous contract which may affect his work.				
	Should any inaccurate or detective work be found, the contractor shall immediately notify the principal agent in writing requesting his instructions with regard thereto and afford every facility to those rectifying such inaccurate or defective work.				
	F: V: T:	Item			
E7	VIEWING THE SITE IN SECURITY AREAS				
	If the site is situated in a security area and the bidder must arrange with the Authorities to obtain permission to enter the site for Bidding purposes.				
	F: V: T:	Item			
E8	COMMENCEMENT OF WORKS IN SECURITY AREAS				
	If the works falls within a security area, the contractor must arrange with the Authorities and give the necessary notices 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.				
	F: V: T:	Item			
E9	ENTRANCE PERMITS TO SECURITY AREAS				
	If 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 be issued from the time to time regarding the protection of persons and property under the control of the Authority.				
	F: V: T:	Item			
E10	PROHIBITION ON TAKING PHOTOGRAPHS				
	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 photographs, except when authorised thereto by or on behalf of the Minister				
	The same prohibition is also applicable to all Correctional Institutions in terms of article 44.1 of the Correctional Services Act 8 of 1959.				
	F: V: T:	Item			
	CARRIED FORWARD				

SCHEDULE 1 - PRELIMINARIES GENERAL

 Department of Public Works and Infrastructure REPUBLIC OF SOUTH AFRICA GENERATOR INSTALLATION AT KWA-THEMA, HARDACH, FOCHVILLE AND DUNNOTAR MAGISTRATE COURTS					
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BROUGHT FORWARD				
E11	TOILET FACILITIES				
	Allow for the supply and removal of portable toilet facilities. The contractor is to maintain the cleanliness of the facilities throughout the contract period. The contractor must provide enough toilets for his/her entire workforce.				
	F: V: T:	Item			
E12	MANAGEMENT OF WATER				
	Water for Construction purposes must be obtained from alternative water sources (i.e. supply other than water that is produced and distributed by a regulated water service authority from a licensed water treatment works for human consumption), e.g. dams, rivers, boreholes, springs, rainwater harvesting, recycled sewerage water, etc. The alternative water source shall not be of an inferior quality/ standard than that required for construction purposes. The client reserves the right through his agents to test such supplies or request certificates confirming the grade and nature of the water supply. Relevant knowledge of the respective area will be an advantage.				
	F: V: T:	Item			
E13	OCCUPATIONAL HEALTH AND SAFETY ACT & CONSTRUCTION REGULATIONS				
	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 Bill of Quantities. Provision for pricing thereof is made under items E12.1 to E12.15 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 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 6 of Section 1: Preliminaries (Part 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.				
	All references hereafter are to Regulations of the Construction Regulations, 2003 issued under the Occupational Health and Safety Act, 1993 (Act No 85 of 1993).				
	CARRIED FORWARD				

SCHEDULE 1 - PRELIMINARIES GENERAL

 REPUBLIC OF SOUTH AFRICA Department of Public Works and Infrastructure GENERATOR INSTALLATION AT KWA-THEMA, HARDACH, FOCHVILLE AND DUNNOTAR MAGISTRATE COURTS					
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BROUGHT FORWARD				
	The contractor shall, in submitting his bid, demonstrate that he has made provision for the cost of compliance with the specified health and safety requirements, the Act and the Construction Regulations.				
	F: V: T:	Item			
E13.1	NOTIFICATION OF CONSTRUCTION WORK (Construction Regulations 3)				
	The contractor shall, before commencing work, notify the Department of Labour of the intend construction work in terms o Regulation 3. The Contractor shall submit the notification in writing, on the appropriate form, prior to commencement of work.				
	F: V: T:	Item			
E13.2	HEALTH AND SAFETY PLAN (Construction regulations 5.4)				
	The Contractor shall provide and demonstrate to the Principal Agent a suitable and sufficiently documented health and safety plan based on the Act, Construction Regulations and the health and safety specification, which shall be applied from the date of commencement of and for the duration of the construction work. The Contractor shall ensure that a copy of the health and safety plan is available on request to an employee, inspector, sub contractor or principal agent all in terms of Regulation 5.				
	F: V: T:	Item			
E13.3	REGISTRATION WITH THE COMPENSATION FUND (Construction Regulations 5.3 f)				
	The Contractor shall provide proof of his registration and good standing with the Compensation Fund or a licensed compensation insurer prior to the commencement of work				
	F: V: T:	Item			
E13.4	HEALTH AND SAFETY FILE (Construction Regulation 5.7)				
	The contractor shall ensure that a health and safety file, which shall include all documentation required in terms of health and safety specification, the Act and the Construction Regulations, is opened and kept on site and made available to the Principal Agent or inspector upon request. Upon completion of the works, the contractor shall hand over a consolidated health and safety file to the principal agent.				
	F: V: T:	Item			
	CARRIED FORWARD				

SCHEDULE 1 - PRELIMINARIES GENERAL

 Department of Public Works and Infrastructure REPUBLIC OF SOUTH AFRICA					
GENERATOR INSTALLATION AT KWA-THEMA, HARDACH, FOCHVILLE AND DUNNOTAR MAGISTRATE COURTS					
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BROUGHT FORWARD				
E13.5	SUPERVISION OF CONSTRUCTION WORK (Safety officers) (Construction Regulation 6)				
	The Contractor shall appoint a full-time competent employee in writing as the construction supervisor, with the duty of supervising the construction work.				
	The Contractor shall appoint a full-time or part-time construction safety officers in writing to assist in the control of all safety related aspects on the site. Such appointments are required to ensure that at all times the requirements of the Act and Construction Regulations are adhered to. Refer to Regulation 6.				
	F: V: T:	Item			
E13.6	RISK ASSESSMENT AND SAFETY POLICY (Construction Regulation 7)				
	Before commencing work the Contractor shall cause a risk assessment to be performed by a competent person appointed in writing and the risk assessment shall form part of the health and safety plan. A copy of the risk assessment shall be available on site at all times for inspection.				
	The Contractor shall at all time carry out the works in a manner to avoid the risk of bodily harm to persons or risk of damage to any property. He shall take all precautions regarding training of employees in any hazards and the related work procedures, health and safety induction training of employees, visitors or any other persons entering the site and provide personal protective equipment to all employees and visitors to site which are necessary and adequate to eliminate any conditions which contribute to the risk of injury to persons or damage to property in terms of Regulation 7.				
	F: V: T:	Item			
E13.7	SIGNIFICANT HAZARD IDENTIFICATION RISK ASSESSMENT PREPARED BY THE DESIGN CONSULTANTS				
	The Contractor shall allow for additional financial provision, if any , to take the necessary precautions regarding the significant hazards and risks identified and assessed by the design consultants.				
	F: V: T:	Item			N/A
E13.8	ADDITIONAL FINANICAL PROVISION				
	The Contractor shall allow for additional financial provision, if any, to comply with the requirements of the Occupational Health and Safety Act (Act No 85 of 1993) and the Construction Regulations issued there under which have not been specifically elsewhere.				
	F: V: T:	Item			
	CARRIED FORWARD				

SCHEDULE 1 - PRELIMINARIES GENERAL

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BROUGHT FORWARD				
E13.9	FALL PROTECTION PLAN (Construction Regulation 8) The Contractor shall, before commencing any construction work submit a fall protection plan identified all steps to be taken in order to ensure the continued adherence to the fall protection plan and shall include a risk assessment of all work carried out from a relevant position. The fall protection plan shall form part of the health and safety plan and file.				
	F: V: T:	Item			
E13.10	PHYSICAL AND PSYCHOLOGICAL FITNESS (Construction Regulation 8.2 (b)) The Contractor and sub-contractor shall before commencing any construction work submit proof of his employees that shall carried out work from an elevated position their physical and psychological fitness and shall be recorded in the health and safety file.				
	F: V: T:	Item			
E13.11	CONSTRUCTION VEHICLES AND MOBILE PLANT (Construction Regulations 21) The Contractor and sub-contractors shall ensure that all operated workers received training and been certified competent to operate such vehicles, and are physical and psychological fit to operate such construction vehicles and mobile plants and shall be recorded in the health and safety file.				
	F: V: T:	Item			
E13.12	TRAINING (Construction Regulation 8 (c)) The Contractor and sub-contractor shall, before commencing any construction work, submit his training program of all his employees. This program shall form part of the health and safety plan.				
	F: V: T:	Item			
E13.13	DEMOLITION WORK (Construction Regulations 12) The Contractor shall, before any demolition work shall be carried out, submit all methods of demolition to be used. This method shall form part of the health and safety plan and file.				
	F: V: T:	Item			
	CARRIED FORWARD				

SCHEDULE 1 - PRELIMINARIES GENERAL

 REPUBLIC OF SOUTH AFRICA Department of Public Works and Infrastructure Office of the Registrar of Buildings GENERATOR INSTALLATION AT KWA-THEMA, HARDACH, FOCHVILLE AND DUNNOTAR MAGISTRATE COURTS					
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BROUGHT FORWARD				
E13.14	REMOVAL AND DISPOSAL OF ASBESTOS				
	MATERIAL (Asbestos Regulation)				
	The principle contractor shall appoint a contractor that is registered with the Department of Labour as an AIA.				
	The contractor must allow for:				
	NOTIFICATION OF ASBESTOS PROCESSING				
	PERSONAL PROTECTIVE EQUIPMENT				
	PACKAGING AND TRANSPORT AND STORAGE TO DISPOSAL SITE				
	DEMOLITION WORK				
	LABELLING, INFORMATION, ETC.				
	F: V: T:	Item			N/A
E13.15	RISK COMPLIANCE AREAS (As Outlined in "Volume Three": Covid-19 Guidelines for Management of Risk on Construction Sites and Covid-19 addendum (Item 1-12) attached to Health and Safety specification)				
	· Disinfection of the workplace at regular intervals as outlined within the Guidelines "Annexure A"				
	Workplace Preparation Procedure;				
	· Ensure Staff and Security Staff have PPEs (i.e. masks, gloves, sanitizers, etc.)				
	· Installed thermal scanners to check temperature of all staff and visitors. Ensure training of Security Staff for use of thermal scanners. Register to be implemented for staff and visitors to site with identification criteria "ID number, Name, Age, Health Status and Contact details";				
	· Isolation room identified/constructed on site;				
	· Ensure sanitizers and soap are available in locker rooms for staff;				
	· Ensure staff or visitors are wearing masks before entering;				
	· Ensure social distance on site;				
	· Notification about the restriction of the number of people allowed on site at one time;				
	· Disinfection of rooms for meetings and strictly keeping to social distancing and wearing masks;				
	· Plans to rotate work force on percentage allowable on site to comply with regulations;				
	· Permits issued by Authorising Authority for Work Force and vehicles for Cross Provincial and District Borders				
	F: V: T:	Item			
	CARRIED FORWARD				

SCHEDULE 1 - PRELIMINARIES GENERAL

 REPUBLIC OF SOUTH AFRICA GENERATOR INSTALLATION AT KWA-THEMA, HARDACH, FOCHVILLE AND DUNNOTAR MAGISTRATE COURTS					
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BROUGHT FORWARD				
E14	IMPLEMENTATION OF LABOUR-INTENSIVE INFRASTRUCTURE PROJECTS UNDER THE EXPANDED PUBLIC WORKS PROGRAMME (EPWP)				
	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 (Contract, ID Copy, Attendance register, Proof of payment) 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 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			
E14.1	DECLARATION - EPWP PROGRAMME				
	The contractor must adhere to all rules, regulations and requirements regarding the EPWP programme, specifically but not limited to the following:				
	1. Labour intensive construction methods (LIC)				
	1.1 Comply to implementation of LIC BOQ items specified elsewhere in the tender documents				
	2. Recruitment and placement of EPWP NYS (Not Applicable)				
	2.1 Recruitment, placement and exposure training of 25 (Twenty five) participants				
	2.2 Comply to EPWP BOQ specifications and code of good practice				
	3. Recruitment and placement of local labourers				
	3.1 Recruitment and placement of minimum 5 (Five) local labourers				
	3.2 Comply with applicable wage order/determination or agreement, in terms of labour relations act or wage act				
	CARRIED FORWARD				

SCHEDULE 1 - PRELIMINARIES GENERAL

 DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE REPUBLIC OF SOUTH AFRICA					
GENERATOR INSTALLATION AT KWA-THEMA, HARDACH, FOCHVILLE AND DUNNOTAR MAGISTRATE COURTS					
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BROUGHT FORWARD				
	4. Comply with EPWP monthly reporting requirements				
	Monthly prepare and submit below EPWP reports attached to monthly payments certificate				
	4.1 All employees and EPWP participants contracts				
	4.2 All employees and EPWP participants certified SA ID copies				
	4.3 All employees and EPWP attendance register				
	4.4 All employees and EPWP proof of payment				
	4.5 EPWP reports populated on standard templates				
	5. Penalties for non compliance				
	Acknowledge non compliance of R3000-00 (Three thousand rand) per month per participant				
	F: V: T:	Item			
E15	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. Provision for pricing of HIV/AIDS awareness is made under items E14.1 to E14.5 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 31.0 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				
E15.1	AWARENESS CHAMPION				
	Selection, appointment, briefing and making available of an Awareness Champion including provision of all relevant services, all in accordance with the HIV/AIDS Specification				
	F: V: T:	Item			
E15.2	AWARENESS WORKSHOPS				
	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 multimedia 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			
	CARRIED FORWARD				

SCHEDULE 1 - PRELIMINARIES GENERAL

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BROUGHT FORWARD				
E15.3	POSTERS, BOOKLETS, VIDEOS, ETC. 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			
E15.4	ACCESS TO CONDOMS 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			
E15.5	MONITORING 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			
E16	CONSTRUCTION VEHICLES FOR DELIVERY OF EQUIPMENT Allow for vehicles such as truck cranes, forklifts, etc. for the moving of the generator into place and delivery of other necessary equipment for the project. F: V: T:	Item			
E17	ALTERNATE POWER SUPPLIES FOR CONSTRUCTION Allow for the supply of portable generators and/or other alternate power supplies for construction equipment in the event of power failure on the premises. F: V: T:	Item			
	CARRIED FORWARD TO SUMMARY				

SCHEDULE 2 - GENERATOR INSTALLATION: KWA-THEMA MAGISTRATE COURT

 GENERATOR INSTALLATION AT KWA-THEMA, HARDACH, FOCHVILLE AND DUNNOTAR MAGISTRATE COURTS ELECTRICAL ENGINEERING SERVICES					
TENDER NUMBER:					
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
2.1	EMERGENCY STANDBY GENERATOR UNIT				
	Supply, Deliver, install and commissioning of standby generator complete with sound attenuators as specified for the following sizes:				
	The Engine shall be a Diesel Fuelled, cold starting liquid cooled, compression ignition, direct injection industrial type as complying with SANS 8528. The cooling system shall be thermostatically controlled entirely self-contained and shall consist of a radiator, fan and Circulation pump as per DPWI specification.				
	The following form part of genset: Water jacket heater, fuel level indicator, fire fuse link shut off system, drip tray, battery charger, battery charger amp meter, fuel filling pump, Anti vibration mounts.				
	60kVA prime, 3 Phase silent-type Genset with integrated internal fuel tank and wetherproof canopy				
2.1.1	Supply	ea	1		
2.1.2	Deliver & Install	ea	1		
2.2	3CR12 CHANGE OVER PANEL WITH CONTROLLER				
	The controller shall control the engine, alternator management and protection system, as well as the control logistics for the remote changeover switchgear. These functions shall be controlled by a micro-processor-based programmable control and it shall be equipped with a GSM cellphone-type modem for remote monitoring.				
2.2.1	Supply & Install	ea	1		
2.3	LUBRICATION, OIL AND DIESEL				
2.3.1	Supply and fill up to 100% all required lubrications to run generator including diesel. The internal fuel tank shall be capable of supplying the generator with fuel to run it for 24hrs at full load or 200L capacity.	item	1		
2.4	EXHAUST SILENCER - SOUND ATTENUATED				
	Design supply and install the stainless steel exhaust silencer for the mentioned generator, including lagging:				
2.4.1	Supply and install	ea	1		
CARRIED FORWARD					

SCHEDULE 2 - GENERATOR INSTALLATION: KWA-THEMA MAGISTRATE COURT

 Department Public Works and Infrastructure REPUBLIC OF SOUTH AFRICA					
GENERATOR INSTALLATION AT KWA-THEMA, HARDACH, FOCHVILLE AND DUNNOTAR MAGISTRATE COURTS ELECTRICAL ENGINEERING SERVICES					
TENDER NUMBER:					
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
BROUGHT FORWARD					
2.5	DOCUMENTATION				
	Compilation of Maintenance, operational and technical Manuals to the client satisfaction.				
2.5.1	Supply 2 copies of operating and maintenance manuals	sum	1		
2.6	SITE TESTING, COMMISSIONING & DOCUMENTATION				
	Test and Commission to deliver a fully operational generating set to the client and engineers satisfaction:				
2.6.1	At the suppliers premises, prior to delivery to site	Item	1		
2.6.2	On site after completion of the installation	Item	1		
2.6.3	On site after completion of the installation	Item	1		
2.7	1 YEAR MAINTENANCE				
	12 Month maintenance as per the specification.				
2.7.1	Quarterly (4) service of the plant as per the manufacturer's requirements	Item	4		
2.8	CONSTRUCTION DRAWINGS				
2.8.1	Contractor to provide printed A1/A0 colour of all drawings received from The Engineer for construction	ea	4		
2.8.2	Contractor to produce As-built drawings for the new electrical installations	ea	1		
2.9	CERTIFICATE OF COMPLIANCE				
2.9.1	Contractor to provide complete CoCs for all the DBs in accordance to SANS and OHS Regulations	item	4		
2.9.2	Supply and install A82 padlock and 3 x keys	ea	5		
2.9.3	Supply and install warning notices on the generator container per the specification.	ea	1		
CARRIED FORWARD TO SUMMARY					

SCHEDULE 3 - ELECTRICAL INSTALLATION: KWA-THEMA MAGISTRATE COURT



REPUBLIC OF SOUTH AFRICA
Department
Public Works and Infrastructure

GENERATOR INSTALLATION AT KWA-THEMA, HARDACH, FOCHVILLE AND DUNNOTAR MAGISTRATE COURTS
ELECTRICAL ENGINEERING SERVICES

TENDER NUMBER:

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
3.1	<u>LV CABLES AND TERMINATIONS</u>				
	Supply and install a 25mm ² 4C PVC SWA cable				
3.1.1	Supply	m	100		
3.1.2	Install	m	100		
	Supply and install a 16mm ² bare copper earth wire (BCEW)				
3.1.3	Supply	m	100		
3.1.4	Install	m	100		
	Termination of LV cables as specified including connection of conductors, cable lugs, captive glands, shrouds, etc. for the following cable sizes.				
3.1.5	25mm ² 4C cable	ea	4		
3.1.6	16mm ² BCEW	ea	2		
3.2	<u>EARTHING OF THE GENERATOR</u>				
	Supply and install the following as described in Clause 10.2.6 of the Specification:				
3.2.1	1.8m earth spike	ea	2		
3.2.3	Earth clamp	ea	2		
3.2.4	Earth Coupling	ea	2		
3.2.5	70mm anti-theft composite earth conductor with terminations	m	4		
CARRIED FORWARD					

SCHEDULE 3 - ELECTRICAL INSTALLATION: KWA-THEMA MAGISTRATE COURT

 REPUBLIC OF SOUTH AFRICA Department of Public Works and Infrastructure					
GENERATOR INSTALLATION AT KWA-THEMA, HARDACH, FOCHVILLE AND DUNNOTAR MAGISTRATE COURTS ELECTRICAL ENGINEERING SERVICES					
TENDER NUMBER:					
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
BROUGHT FORWARD					
3.3	<u>ELECTRICAL DISTRIBUTION BOARD/PANEL</u>				
3.3.1	Service the existitng distribution panel including replacing damaged or missing doors or cover plates, making good of existing wiring, replacing broken door locks, replacing obsolete circuit breakers, installing new labels, danger signs, updating legends, general cleaning, tightening of loose connections.	ea	4		
3.3.2	Spray paint existing distribution panels with white/grey metallic paint and with electrical red for all face plates. Re-install labelling and warning signs.	ea	4		
3.3.3	Supply and install type 1 4P surge protection devices	ea	1		
3.3.4	Supply and install a new 8 Way electrical kiosk complete with plinth, weatherproof and 250A MCCB, 3 Pole 415V, 25kA and 100A CB 3 pole, 415V, 6kA	sum	1		
3.4	<u>CIVIL WORKS</u>				
3.4.1	Contractor to appoint specialist to design a complete concrete plinth for the installation of the generator set. Prepare ground surface and cast concrete plinth complete with ducting, drain pipe and earthing pits, including all formwork, labour and materials in accordance with the specification.	m ²	16		
3.5	<u>CABLEWAYS</u>				
3.5.1	Trenching in soft soil, removal of paving, backfilling the cable trench and making good of the trenched area. Cable trench of 500mm wide and 700mm deep.	m	60		
3.5.2	Supply and install 110mm corrugated sleeves at cable entry points and paving or tar crossings.	m	50		
3.5.3	Supply and install PVC cable warning tape	m	100		
3.5.4	Making good of paving	m	40		
CARRIED FORWARD TO SUMMARY					

SCHEDULE 4 - GENERATOR INSTALLATION: HARDACH MAGISTRATE COURT

 Department Public Works and Infrastructure REPUBLIC OF SOUTH AFRICA GENERATOR INSTALLATION AT KWA-THEMA, HARDACH, FOCHVILLE AND DUNNOTAR MAGISTRATE COURTS ELECTRICAL ENGINEERING SERVICES					
TENDER NUMBER:					
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
4.1	EMERGENCY STANDBY GENERATOR UNIT				
	Supply, Deliver, install and commissioning of standby generator complete with sound attenuators as specified for the following sizes:				
	The Engine shall be a Diesel Fuelled, cold starting liquid cooled, compression ignition, direct injection industrial type as complying with SANS 8528. The cooling system shall be thermostatically controlled entirely self-contained and shall consist of a radiator, fan and Circulation pump as per DPWI specification.				
	The following form part of genset: Water jacket heater, fuel level indicator, fire fuse link shut off system, drip tray, battery charger, battery charger amp meter, fuel filling pump, Anti vibration mounts.				
	100kVA prime, 3 Phase silent-type Genset with integrated internal fuel tank and wetherproof canopy				
4.1.1	Supply	ea	1		
4.1.2	Deliver & Install	ea	1		
4.2	3CR12 CHANGE OVER PANEL WITH CONTROLLER				
	The controller shall control the engine, alternator management and protection system, as well as the control logistics for the remote changeover switchgear. These functions shall be controlled by a micro-processor-based programmable control and it shall be equipped with a GSM cellphone-type modem for remote monitoring.				
4.2.1	Supply & Install	ea	1		
4.3	LUBRICATION, OIL AND DIESEL				
4.3.1	Supply and fill up to 100% all required lubrications to run generator including diesel. The internal fuel tank shall be capable of supplying the generator with fuel to run it for 24hrs at full load or 300L capacity.	item	1		
4.4	EXHAUST SILENCER - SOUND ATTENUATED				
	Design supply and install the stainless steel exhaust silencer for the mentioned generator, including lagging:				
4.4.1	Supply and Install	ea	1		
CARRIED FORWARD					

SCHEDULE 4 - GENERATOR INSTALLATION: HARDACH MAGISTRATE COURT

 Department of Public Works and Infrastructure REPUBLIC OF SOUTH AFRICA					
GENERATOR INSTALLATION AT KWA-THEMA, HARDACH, FOCHVILLE AND DUNNOTAR MAGISTRATE COURTS ELECTRICAL ENGINEERING SERVICES					
TENDER NUMBER:					
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
BROUGHT FORWARD					
4.5	DOCUMENTATION				
	Compilation of Maintenance, operational and technical Manuals to the client satisfaction.				
4.5.1	Supply 2 copies of operating and maintenance manuals	sum	1		
4.6	SITE TESTING, COMMISSIONING & DOCUMENTATION				
	Test and Commission to deliver a fully operational generating set to the client and engineers satisfaction:				
4.6.1	At the suppliers premises, prior to delivery to site	Item	1		
4.6.2	On site after completion of the installation	Item	1		
4.6.3	On site after completion of the installation	Item	1		
4.7	1 YEAR MAINTENANCE				
	12 Month maintenance as per the specification.				
4.7.1	Quarterly (4) service of the plant as per the manufacturer's requirements	Item	4		
4.8	CONSTRUCTION DRAWINGS				
4.8.1	Contractor to provide printed A1/A0 colour of all drawings received from The Engineer for construction	ea	4		
4.8.2	Contractor to produce As-built drawings for the new electrical installations	ea	1		
4.9	CERTIFICATE OF COMPLIANCE				
4.9.1	Contractor to provide complete CoCs for all the DBs in accordance to SANS and OHS Regulations	item	10		
4.9.2	Supply and install A82 padlock and 3 x keys	ea	5		
4.9.3	Supply and install warning notices on the generator container per the specification.	ea	1		
CARRIED FORWARD TO SUMMARY					

SCHEDULE 5 - ELECTRICAL INSTALLATION: HARDACH MAGISTRATE COURT

 GENERATOR INSTALLATION AT KWA-THEMA, HARDACH, FOCHVILLE AND DUNNOTAR MAGISTRATE COURTS ELECTRICAL ENGINEERING SERVICES					
TENDER NUMBER:					
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
5.1	<u>LOW VOLTAGE SUPPLY CABLES</u>				
	Supply and install the following 600/1000V PVC/SWA/PVC cables with copper conductor to SABS 1507 laid vertically or horizontally in conduiting or ducting or clipped direct in accordance with the specifications and drawings, including fixing. (Termination elsewhere).				
	70mm ² x 4 core SWA/PVC				
5.1.1	Supply	m	200		
5.1.2	Install	m	200		
5.2	<u>CABLE TERMINATIONS</u>				
	Termination of LV cables as specified including connection of conductors, cable lugs, captive glands, shrouds, etc. for the following cable sizes.				
5.2.1	Supply and install terminations for a 70mm ² x 4 core cable	ea	4		
5.3	<u>BARE COPPER EARTH WIRES</u>				
	Supply and install 600/1000V conductors and bare stranded copper conductors on wire ways or trenching including terminations for earthing in accordance with the specifications and drawings				
	25mm ² BCEW				
5.3.1	Supply	m	200		
5.3.2	Install	m	200		
5.4	<u>EARTHING OF THE GENERATOR</u>				
	Supply and install the following as described in Clause 10.2.6 of the Specification:				
5.4.1	1.8m earth spike	ea	2		
5.4.2	Earth clamp	ea	2		
5.4.3	Earth Coupling	ea	2		
5.4.4	70mm anti-theft composite earth conductor with terminations	m	4		
5.4.5	All other earthing requirements required for the earthing system to comply with the regulations.	ea	1		
CARRIED FORWARD					

SCHEDULE 5 - ELECTRICAL INSTALLATION: HARDACH MAGISTRATE COURT

 Department of Public Works and Infrastructure REPUBLIC OF SOUTH AFRICA					
GENERATOR INSTALLATION AT KWA-THEMA, HARDACH, FOCHVILLE AND DUNNOTAR MAGISTRATE COURTS ELECTRICAL ENGINEERING SERVICES					
TENDER NUMBER:					
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
BROUGHT FORWARD					
5.5	<u>CABLEWAYS</u>				
5.5.1	Trenching in soft soil, removal of paving, backfilling the cable trench and making good of the trenched area. Cable trench of 500mm wide and 700mm deep.	m	60		
5.5.2	Making good of paving	m	40		
5.5.3	Supply and install 110mm corrugated sleeves at cable entry points and paving or tar crossings.	m	100		
5.5.4	Supply and install PVC cable warning tape	m	100		
5.6	<u>ELECTRICAL DISTRIBUTION BOARD/PANEL</u>				
5.6.1	Service the existing distribution panel including replacing damaged or missing doors or cover plates, making good of existing wiring, replacing broken door locks, replacing obsolete circuit breakers, installing new labels, danger signs, updating legends, general cleaning, tightening of loose connections.	ea	10		
5.6.2	Spray paint existing distribution panels with white/grey metallic paint and with electrical red for all face plates. Re-install labelling and warning signs.	ea	10		
5.6.3	Supply and install type 2 4P surge protection devices	ea	10		
5.6.5	Supply and install a new 8 Way DB complete 150A MCCB, 3 Pole 415V, 15kA	ea	1		
5.7	<u>CIVIL WORKS</u>				
5.7.1	Contractor to appoint specialist to design a complete concrete plinth for the installation of the generator set. Prepare ground surface and cast concrete plinth complete with ducting, drain pipe and earthing pits, including all formwork, labour and materials in accordance with the specification.	m ²	18		
CARRIED FORWARD TO SUMMARY					

SCHEDULE 6 - GENERATOR INSTALLATION: FOCHVILLE MAGISTRATE COURT

 Department of Public Works and Infrastructure REPUBLIC OF SOUTH AFRICA GENERATOR INSTALLATION AT KWA-THEMA, HARDACH, FOCHVILLE AND DUNNOTAR MAGISTRATE COURTS ELECTRICAL ENGINEERING SERVICES					
TENDER NUMBER:					
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
6.1	EMERGENCY STANDBY GENERATOR UNIT				
	Supply, Deliver, install and commissioning of standby generator complete with sound attenuators as specified for the following sizes:				
	The Engine shall be a Diesel Fuelled, cold starting liquid cooled, compression ignition, direct injection industrial type as complying with SANS 8528. The cooling system shall be thermostatically controlled entirely self-contained and shall consist of a radiator, fan and Circulation pump as per DPWI specification.				
	The following form part of genset: Water jacket heater, fuel level indicator, fire fuse link shut off system, drip tray, battery charger, battery charger amp meter, fuel filling pump, Anti vibration mounts.				
	100kVA prime, 3 Phase silent-type Genset with integrated internal fuel tank and wetherproof canopy				
6.1.1	Supply	ea	1		
6.1.2	Deliver & Install	ea	1		
6.2	3CR12 CHANGE OVER PANEL WITH CONTROLLER				
	The controller shall control the engine, alternator management and protection system, as well as the control logistics for the remote changeover switchgear. These functions shall be controlled by a micro-processor-based programmable control and it shall be equipped with a GSM cellphone-type modem for remote monitoring.				
6.2.1	Supply & Install	ea	1		
6.3	LUBRICATION, OIL AND DIESEL				
6.3.1	Supply and fill up to 100% all required lubrications to run generator including diesel. The internal fuel tank shall be capable of supplying the generator with fuel to run it for 24hrs at full load or 300L capacity.	item	1		
6.4	EXHAUST SILENCER - SOUND ATTENUATED				
	Design supply and install the stainless steel exhaust silencer for the mentioned generator, including lagging:				
6.4.1	Supply and Install	ea	1		
CARRIED FORWARD					

SCHEDULE 6 - GENERATOR INSTALLATION: FOCHVILLE MAGISTRATE COURT

 REPUBLIC OF SOUTH AFRICA Department of Public Works and Infrastructure TENDER NUMBER:					
GENERATOR INSTALLATION AT KWA-THEMA, HARDACH, FOCHVILLE AND DUNNOTAR MAGISTRATE COURTS ELECTRICAL ENGINEERING SERVICES					
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
BROUGHT FORWARD					
6.5	DOCUMENTATION				
	Compilation of Maintenance, operational and technical Manuals to the client satisfaction.				
6.5.1	Supply 2 copies of operating and maintenance manuals	sum	1		
6.6	SITE TESTING, COMMISSIONING & DOCUMENTATION				
	Test and Commission to deliver a fully operational generating set to the client and engineers satisfaction:				
6.6.1	At the suppliers premises, prior to delivery to site	Item	1		
6.6.2	On site after completion of the installation	Item	1		
6.7	1 YEAR MAINTENANCE				
	12 Month maintenance as per the specification.				
6.7.1	Quarterly (4) service of the plant as per the manufacturer's requirements	Item	4		
6.8	CONSTRUCTION DRAWINGS				
6.8.1	Contractor to provide printed A1/A0 colour of all drawings received from The Engineer for construction	ea	4		
6.8.2	Contractor to produce As-built drawings for the new electrical installations	ea	1		
6.9	CERTIFICATE OF COMPLIANCE				
6.9.1	Contractor to provide complete CoCs for all the DBs in accordance to SANS and OHS Regulations	item	10		
6.9.2	Supply and install A82 padlock and 3 x keys	ea	5		
6.9.3	Supply and install warning notices on the generator container per the specification.	ea	1		
CARRIED FORWARD TO SUMMARY					

SCHEDULE 7 - ELECTRICAL INSTALLATION: FOCHVILLE MAGISTRATE COURT

 Department of Justice and Constitutional Affairs REPUBLIC OF SOUTH AFRICA GENERATOR INSTALLATION AT KWA-THEMA, HARDACH, FOCHVILLE AND DUNNOTAR MAGISTRATE COURTS ELECTRICAL ENGINEERING SERVICES					
TENDER NUMBER:					
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
7.1	LOW VOLTAGE SUPPLY CABLES				
	Supply and install the following 600/1000V PVC/SWA/PVC cables with copper conductor to SABS 1507 laid vertically or horizontally in conduiting or ducting or clipped direct in accordance with the specifications and drawings, including fixing. (Termination elsewhere).				
	70mm ² x 4 core SWA/PVC				
7.1.1	Supply	m	200		
7.1.2	Install	m	200		
7.2	CABLE TERMINATIONS				
	Termination of LV cables as specified including connection of conductors, cable lugs, captive glands, shrouds, etc. for the following cable sizes.				
7.2.1	Supply and install terminations for a 70mm ² x 4 core cable	ea	4		
7.3	BARE COPPER EARTH WIRES				
	Supply and install 600/1000V conductors and bare stranded copper conductors on wire ways or trenching including terminations for earthing in accordance with the specifications and drawings				
	25mm ² BCEW				
7.3.1	Supply	m	200		
7.3.2	Install	m	200		
7.4	EARTHING OF THE GENERATOR				
	Supply and install the following as described in Clause 10.2.6 of the Specification:				
7.4.1	1.8m earth spike	ea	2		
7.4.2	Earth clamp	ea	2		
7.4.3	Earth Coupling	ea	2		
7.4.4	70mm anti-theft composite earth conductor with terminations	m	8		
7.4.5	All other earthing requirements required for the earthing system to comply with the regulations.	ea	1		
CARRIED FORWARD					

SCHEDULE 7 - ELECTRICAL INSTALLATION: FOCHVILLE MAGISTRATE COURT

 Department of Public Works and Infrastructure REPUBLIC OF SOUTH AFRICA					
GENERATOR INSTALLATION AT KWA-THEMA, HARDACH, FOCHVILLE AND DUNNOTAR MAGISTRATE COURTS ELECTRICAL ENGINEERING SERVICES					
TENDER NUMBER:					
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
BROUGHT FORWARD					
7.5	<u>CABLEWAYS</u>				
7.5.1	Trenching in soft soil, removal of paving, backfilling the cable trench and making good of the trenched area. Cable trench of 500mm wide and 700mm deep.	m	60		
7.5.2	Supply and install 110mm corrugated sleeves at cable entry points and paving or tar crossings.	m	40		
7.5.3	Supply and install PVC cable warning tape	m	60		
7.6	<u>ELECTRICAL DISTRIBUTION BOARD/PANEL</u>				
7.6.1	Service the existing distribution panels including replacing damaged or missing doors or cover plates, making good of existing wiring, replacing broken door locks, replacing obsolete circuit breakers, installing new labels, danger signs, updating legends, general cleaning, tightening of loose connections.	ea	10		
7.6.2	Spray paint existing distribution panels with white/grey metallic paint and with electrical red for all face plates. Re-install labelling and warning signs.	ea	10		
7.6.3	Supply and install type 2 4P surge protection devices	ea	10		
7.7.4	Supply and install a new 8 Way DB complete 150A MCCB, 3 Pole 415V, 15kA	ea	1		
7.7	<u>CIVIL WORKS</u>				
7.7.1	Contractor to appoint specialist to design a complete concrete plinth for the installation of the generator set. Prepare ground surface and cast concrete plinth complete with ducting, drain pipe and earthing pits, including all formwork, labour and materials in accordance with the specification.	m ²	18		
CARRIED FORWARD TO SUMMARY					

SCHEDULE 8 - GENERATOR INSTALLATION: DUNNOTAR MAGISTRATE COURT

 Department of Public Works and Infrastructure REPUBLIC OF SOUTH AFRICA GENERATOR INSTALLATION AT KWA-THEMA, HARDACH, FOCHVILLE AND DUNNOTAR MAGISTRATE COURTS ELECTRICAL ENGINEERING SERVICES					
TENDER NUMBER:					
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
8.1	EMERGENCY STANDBY GENERATOR UNIT				
	Supply, Deliver, install and commissioning of standby generator complete with sound attenuators as specified for the following sizes:				
	The Engine shall be a Diesel Fuelled, cold starting liquid cooled, compression ignition, direct injection industrial type as complying with SANS 8528. The cooling system shall be thermostatically controlled entirely self-contained and shall consist of a radiator, fan and Circulation pump as per DPWI specification.				
	The following form part of genset: Water jacket heater, fuel level indicator, fire fuse link shut off system, drip tray, battery charger, battery charger amp meter, fuel filling pump, Anti vibration mounts.				
	100kVA prime, 3 Phase silent-type Genset with integrated internal fuel tank and wetherproof canopy				
8.1.1	Supply	ea	1		
8.1.2	Deliver & Install	ea	1		
8.2	3CR12 CHANGE OVER PANEL WITH CONTROLLER				
	The controller shall control the engine, alternator management and protection system, as well as the control logistics for the remote changeover switchgear. These functions shall be controlled by a micro-processor-based programmable control and it shall be equipped with a GSM cellphone-type modem for remote monitoring.				
8.2.1	Supply & Install	ea	1		
8.3	LUBRICATION, OIL AND DIESEL				
8.3.1	Supply and fill up to 100% all required lubrications to run generator including diesel. The internal fuel tank shall be capable of supplying the generator with fuel to run it for 24hrs at full load or 300L capacity.	item	1		
8.4	EXHAUST SILENCER - SOUND ATTENUATED				
	Design supply and install the stainless steel exhaust silencer for the mentioned generator, including lagging:				
8.4.1	Supply and Install	ea	1		
CARRIED FORWARD					

SCHEDULE 8 - GENERATOR INSTALLATION: DUNNOTAR MAGISTRATE COURT

 Department of Public Works and Infrastructure REPUBLIC OF SOUTH AFRICA GENERATOR INSTALLATION AT KWA-THEMA, HARDACH, FOCHVILLE AND DUNNOTAR MAGISTRATE COURTS ELECTRICAL ENGINEERING SERVICES					
TENDER NUMBER:					
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
BROUGHT FORWARD					
8.5	DOCUMENTATION				
	Compilation of Maintenance, operational and technical Manuals to the client satisfaction.				
8.5.1	Supply 2 copies of operating and maintenance manuals	sum	1		
8.6	SITE TESTING, COMMISSIONING & DOCUMENTATION				
	Test and Commission to deliver a fully operational generating set to the client and engineers satisfaction:				
8.6.1	At the suppliers premises, prior to delivery to site	Item	1		
8.6.2	On site after completion of the installation	Item	1		
8.7	1 YEAR MAINTENANCE				
	12 Month maintenance as per the specification.				
8.7.1	Quarterly (4) service of the plant as per the manufacturer's requirements	Item	4		
8.8	CONSTRUCTION DRAWINGS				
8.8.1	Contractor to provide printed A1/A0 colour of all drawings received from The Engineer for construction	ea	4		
8.8.2	Contractor to produce As-built drawings for the new electrical installations	ea	1		
8.9	CERTIFICATE OF COMPLIANCE				
8.9.1	Contractor to provide complete CoCs for all the DBs in accordance to SANS and OHS Regulations	item	10		
8.9.2	Supply and install A82 padlock and 3 x keys	ea	5		
8.9.3	Supply and install warning notices on the generator container per the specification.	ea	1		
CARRIED FORWARD TO SUMMARY					

SCHEDULE 9 - ELECTRICAL INSTALLATION: DUNNOTAR MAGISTRATE COURT

 Department of Police Services REPUBLIC OF SOUTH AFRICA					
GENERATOR INSTALLATION AT KWA-THEMA, HARDACH, FOCHVILLE AND DUNNOTAR MAGISTRATE COURTS ELECTRICAL ENGINEERING SERVICES					
TENDER NUMBER:					
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
9.1	LOW VOLTAGE SUPPLY CABLES				
	Supply and install the following 600/1000V PVC/SWA/PVC cables with copper conductor to SABS 1507 laid vertically or horizontally in conduiting or ducting or clipped direct in accordance with the specifications and drawings, including fixing. (Termination elsewhere).				
	70mm ² x 4 core SWA/PVC				
9.1.1	Supply	m	100		
9.1.2	Install	m	100		
9.2	CABLE TERMINATIONS				
	Termination of LV cables as specified including connection of conductors, cable lugs, captive glands, shrouds, etc. for the following cable sizes.				
9.2.1	Supply and install terminations for a 70mm ² x 4 core cable	ea	4		
9.3	BARE COPPER EARTH WIRES				
	Supply and install 600/1000V conductors and bare stranded copper conductors on wire ways or trenching including terminations for earthing in accordance with the specifications and drawings				
	25mm ² BCEW				
9.3.1	Supply	m	100		
9.3.2	Install	m	100		
9.4	EARTHING OF THE GENERATOR				
	Supply and install the following as described in Clause 10.2.6 of the Specification:				
9.4.1	1.8m earth spike	ea	2		
9.4.2	Earth clamp	ea	2		
9.4.3	Earth Coupling	ea	2		
9.4.4	70mm anti-theft composite earth conductor with terminations	m	8		
9.4.5	All other earthing requirements required for the earthing system to comply with the regulations.	ea	1		
CARRIED FORWARD					

SCHEDULE 9 - ELECTRICAL INSTALLATION: DUNNOTAR MAGISTRATE COURT

 GENERATOR INSTALLATION AT KWA-THEMA, HARDACH, FOCHVILLE AND DUNNOTAR MAGISTRATE COURTS ELECTRICAL ENGINEERING SERVICES					
TENDER NUMBER:					
ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
BROUGHT FORWARD					
9.5	<u>CABLEWAYS</u>				
9.5.1	Trenching in soft soil, removal of paving, backfilling the cable trench and making good of the trenched area. Cable trench of 500mm wide and 700mm deep.	m	60		
9.5.2	Supply and install 110mm corrugated sleeves at cable entry points and paving or tar crossings.	m	45		
9.5.3	Supply and install PVC cable warning tape	m	60		
9.6	<u>ELECTRICAL DISTRIBUTION BOARD/PANEL</u>				
9.6.1	Service the existing distribution panels including replacing damaged or missing doors or cover plates, making good of existing wiring, replacing broken door locks, replacing obsolete circuit breakers, installing new labels, danger signs, updating legends, general cleaning, tightening of loose connections.	ea	6		
9.6.2	Spray paint existing distribution panels with white/grey metallic paint and with electrical red for all face plates. Re-install labelling and warning signs.	ea	6		
9.6.3	Supply and install type 2 4P surge protection devices	ea	5		
9.6.4	Supply and install a new 8 Way DB complete with three 150A MCCB, 3 Pole 415V, 15kA	ea	1		
9.6.5	Trace and reroute cables supplying holding cells, detectives and court building DB to ensure they connected to the generator supply.	ea	1		
9.6.6	Decommission the existing generator and transport it to DPW storage site.	km	60		
9.7	<u>CIVIL WORKS</u>				
9.7.1	Contractor to appoint specialist to design a complete concrete plinth for the installation of the generator set. Prepare ground surface and cast concrete plinth complete with ducting, drain pipe and earthing pits, including all formwork, labour and materials in accordance with the specification.	m ²	18		
CARRIED FORWARD TO SUMMARY					

SUMMARY

 UNITED REPUBLIC OF SOUTH AFRICA Department of Public Works and Infrastructure REPUBLIC OF SOUTH AFRICA GENERATOR INSTALLATION LENASIA, MEADOWLANDS AND JEPPE MAGISTRATE COURTS ELECTRICAL ENGINEERING SERVICES		
TENDER NUMBER:		
SUMMARY		
SCHEDULE		AMOUNT
1	PRELIMINARIES AND GENERAL	
2	GENERATOR INSTALLATION - KWATHEMA MAGISTRATE COURT	
3	ELECTRICAL INSTALATION - KWATHEMA MAGISTRATE COURT	
4	GENERATOR INSTALLATION - HARDACH MAGISTRATE COURT	
5	ELECTRICAL INSTALATION - HARDACH MAGISTRATE COURT	
6	GENERATOR INSTALLATION - FOCHVILLE MAGISTRATE COURT	
7	ELECTRICAL INSTALATION - FOCHVILLE MAGISTRATE COURT	
8	GENERATOR INSTALLATION - DUNNOTAR MAGISTRATE COURT	
9	ELECTRICAL INSTALATION - DUNNOTAR MAGISTRATE COURT	
	TOTAL EXCLUDING VAT	
	VAT @ 15%	
	TOTAL	



public works
& infrastructure

Department:
Public Works and Infrastructure
REPUBLIC OF SOUTH AFRICA

NATIONAL DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

ELECTRICAL ENGINEERING SERVICES

SPECIFICATION FOR THE SUPPLY, INSTALLATION AND COMMISSIONING OF AN OUTDOOR EMERGENCY GENERATOR SET

MAGISTRATE COURTS

Date: NOVEMBER 2023

Engineering Services Chief Directorate
Electrical Engineering Directorate
Electrical Engineering Standards & Specifications Committee
256 Madiba Street
Pretoria
0001

Table of Contents

1.	SECTION 1 – GENERAL	2
1.1.	Intent of Specification	2
1.2.	Standards and Codes	2
1.3.	Compliance with Regulations	2
1.4.	Scope of Work	2
1.5.	Co-ordinating	3
1.6.	Tests Certificates and Inspections	3
1.7.	Operating and Maintenance Manuals	3
1.8.	Guarantee	3
1.9.	Materials and Workmanship	4
1.10.	Brochures	4
2.	SECTION 2 – EQUIPMENT REQUIREMENTS	6
2.1.	Engine	6
2.1.1.	General	6
2.1.2.	Rating	6
2.1.3.	De-Rating	6
2.1.4.	Starting and Stopping	6
2.1.5.	Starter Battery	6
2.1.6.	Cooling	7
2.1.7.	Lubrication	7
2.1.8.	Fuel Pump	7
2.1.9.	Fuel Tank	7
2.1.10.	Governor	8
2.1.11.	Flywheel	8
2.1.12.	Exhaust Silencer	8
2.1.13.	Accessories	8
2.1.14.	Exhaust emissions	8
2.2.	Alternator	9
2.2.1.	General	9
2.2.2.	Regulation	9
2.2.3.	Performance	9
2.2.4.	Coupling	9
2.3.	Switchboard	9
2.3.1.	General	9
2.3.2.	Construction	9
2.3.3.	Protection and Alarm Devices	10
2.3.4.	Modular Generator Set controller	11
2.3.5.	Manual Starting	14
2.3.6.	Battery Charging Equipment	14
2.3.7.	Switchboard Instruments	15
2.3.8.	Marking	15
2.3.9.	Earthing	15
2.3.10.	Operation Selector Switch	15
2.3.11.	Automatic Change-over System	15
2.3.12.	By-pass Switch and Main Isolator	16
2.3.13.	Start Delay	16
2.3.14.	Stop Delay	16
2.4.	Installation	16
2.5.	Warning Notices	16
2.6.	Construction	17
2.7.	Operation	17
3.	SECTION 3 – TECHNICAL SPECIFICATION	19
3.1.	General	19
3.2.	Site Information and Conditions	19
3.2.1.	Location	19

3.2.2.	Site Conditions.....	19
3.3.	Output and Voltage.....	19
3.4.	Switchboard/Control Panel Unit.....	20
3.5.	Cables.....	20
3.6.	Engine.....	20
3.7.	Alternator	20
3.8.	Load Acceptance	20
3.9.	Enclosure.....	20
3.10.	Alarms.....	22
3.11.	Remote Control Generator Switch.....	22
3.12.	Fuel Drip Tray.....	22
3.13.	Completion Time.....	23
3.14.	Inform	23
3.15.	Fuel Supply Tank.....	23
4.	SECTION 4 – SCHEDULES OF TECHNICAL INFORMATION	25
4.1.	Engine.....	25
4.2.	Alternator	27
4.3.	Switchboard	28
4.4.	Battery	29
4.5.	Dimensions	29
4.6.	Deviation from the Specification as an Alternative (State Briefly)	29
4.7.	Spare Parts and Maintenance Facilities	29
5.	SECTION 5 – PRICE SCHEDULES	31
5.1.	General	31
5.2.	Schedule	31
5.3.	Summary of Schedules of Quantities	36

SECTION 1 – GENERAL

TABLE OF CONTENTS

1.1.	Intent of Specification	2
1.2.	Standards and Codes	2
1.3.	Compliance with Regulations	2
1.4.	Scope of Work	2
1.5.	Co-ordinating	3
1.6.	Tests Certificates and Inspections.....	3
1.7.	Operating and Maintenance Manuals.....	3
1.8.	Guarantee	3
1.9.	Materials and Workmanship	4
1.10.	Brochures	4

1. SECTION 1 – GENERAL

1.1. Intent of Specification

The specification is intended to cover the complete installation and commissioning of the generator plant. The minimum equipment requirements are outlined, but do not cover all the details of design and construction. Such details are recognised as being the exclusive responsibility of the contractor.

For the purposes of this document the following applies:

- Generator Contractor shall be referred to as the Generator Contractor or simply Contractor;
- The masculine includes the feminine;
- The singular includes the plural.

1.2. Standards and Codes

All standards referenced shall be the latest editions.

SANS 10142-1	the wiring of premises: Low Voltage Installations
SANS 8528	Reciprocating internal combustion engine driven alternating current generating sets.
SANS 60034	Rotating electrical Machines
SANS IEC 60947	Low Voltage Switchgear
OHSACT	Occupational Health and Safety Act.
Department of Public Works	Quality Specification Parts A, B and C.
Local municipality	by-laws for generator installations. (To be obtained from local municipality)

1.3. Compliance with Regulations

The installation shall be erected and tested in accordance with the following Acts and regulations:

- a) The Occupational Health and Safety Act, 1993 (Act 85 of 1993) as amended,
- b) The Local Government Ordinance 1939 (Ordinance 17 of 1939) as amended and the municipal by-laws and any special requirements of the local supply authority,
- c) The Fire Brigade services Act 1987 (Act 99 of 1987) as amended,
- d) The National Building Regulations and Building Standards Act 1977 (Act 103 of 1977) as amended,
- e) The Electricity Act 1984 (Act 41 of 1984) as amended.
- f) The environmental Act and regulations

1.4. Scope of Work

Included in this Outdoor Generator Specification

Supply, delivery, installation and commissioning of the complete outdoor emergency generator inside an IP65 canopy/container set on a concrete plinth as specified in this document.

The successful tenderer shall supply, deliver and install a complete single enclosed diesel driven standby generator set in a position that will be determined on site. The machine shall be totally enclosed in a 3CR12 stainless steel housing powder coated or within 50km from the coast with grade 316 steel housing powder coated. The exhaust shall be manufactured from stainless steel.

The housing is to be provided on galvanized 3CR12 stainless steel skids so that the generator set can be transported to site and placed in position on a concrete plinth, casted by the successful tenderer. The skids must be of sufficient height to allow for the passage of storm water under the set.

1.5. Co-ordinating

The Contractor shall familiarise himself with the requirements of the other professional disciplines and shall examine the plans and specifications covering each of these sections.

The generator space, noise and vibration requirements shall be carefully checked with other professional disciplines to ensure that the equipment can be installed in the proper sequence in the space allotted.

1.6. Tests Certificates and Inspections

The following tests are to be carried out:

- a) At the supplier's premises, before the generating set will be delivered to site Representatives of the Department must be present during the test to satisfy themselves that the generating set complies with the specification and delivers the specified output. The test must be carried out in accordance with SANS 8528. The Representative/Agent must be timeously advised of the date for the test.
- b) After completion of the works and before practical completion is taken, 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 installation will be inspected and the contractor shall make good, to the satisfaction of the Representative/Agent, any defects which may arise.
- c) The Contractor shall provide all instruments and equipment required for testing and any water, power and fuel required for the commissioning and testing of the installation at completion.
- d) Test reports of both tests as specified under (a) and (b) are to be submitted to the Representative/Agent.

The total costs for these test shall be included in the tendered amount.

In the event of the plant, equipment or installation not passing the test, the Representative/Agent shall be at liberty to deduct from the Contract amount all reasonable expenses incurred by the Employer and/or the Representative/Agent attending the test.

1.7. Operating and Maintenance Manuals

The Contractor shall be responsible for the compilation of a complete set of Operating and Maintenance manuals.

This shall be done in accordance with Section 4 – Operating and Maintenance manuals.

All information shall be recorded and reproduced in electronic format as well as supplying the Representative/Agent with three sets of hard copies.

Approval of the final Operating and Maintenance Manuals shall be a prerequisite for issuing of a Certificate of Practical Completion of the installation.

1.8. Guarantee

After works completion of the installation have been achieved, there will follow a 12-month free maintenance period.

During this period the generator contractor shall maintain the generator installation as per the requirements of the Occupational Health and Safety Act. This maintenance shall include systematic examinations, adjustments and lubrication of all generator equipment. Electrical and mechanical parts shall be repaired or replaced whenever it is required to maintain optimum performance without additional cost to the Department, unless the condition was caused by misuse or vandalism of the generator equipment or natural hazards/force majeure.

The work under this section shall be performed by competent, qualified accredited personnel under the supervision and in the direct employment of the Generator Contractor and shall not be transferred to any non-affiliated agent. Contract maintenance and repair work shall be done during normal working hours and shall further provide emergency call-back service twenty-four (24) hours a day, seven (7) days a week.

During the guarantee/maintenance period the Department will invite tenders for the comprehensive maintenance of the generator, which will commence after the final completion has taken place, i.e. after the twelfth month guarantee period is over and all defects are corrected.

1.9. Materials and Workmanship

- a) The work throughout shall be executed to the highest standards and to the entire satisfaction of the Representative/Agent who shall interpret the meaning of the Contract Document and shall have the authority to reject any work and materials, which, in his judgement, are not in full accordance therewith. All condemned material and workmanship shall be replaced or rectified as directed and approved by the Representative/Agent.
- b) All work shall be executed in a first-class manner by qualified accredited tradesman.
- c) The Contractor shall be fully responsible for his work and shall replace any of the work which may be damaged, lost or stolen. The Contractor shall protect the building and its contents against damage by him, his employees or sub-contractors and shall make good any damage thereto.
- d) The Contractor shall indemnify the Employer of all liability for damages arising from injuries or disabilities to persons or damage to property occasioned by any act or omission of the Contractor or any of his sub-contractors, including any and all expenses, legal or otherwise, which may be incurred by the Employer or Representative/Agent in the defence of any claim, action or suit.
- e) The Contractor shall warrant that the materials and workmanship shall be of the highest grade, that the equipment shall be installed in a practical and first-class manner in accordance with the best practices and ready and complete for full operation. It is specifically intended that all material or labour which is usually provided as part of such equipment as is called for and which is necessary for its proper completion and operation shall be provided without additional cost whether or not shown or described in the Contract Document.
- f) The Contractor shall thoroughly acquaint himself with the work involved and shall verify on site all measurements necessary for proper installation and commissioning work. The Contractor shall also be prepared to promptly furnish any information relating to his own work as may be necessary for the proper installation work and shall co-operate with and co-ordinate the work of others as may be applicable.
- g) The Contractor shall inspect and verify that the existing power feeder system is compatible with the equipment offered and any changes or upgrading of the electrical supply shall be brought to the attention of the Representative/Agent.
- h) Material and equipment damaged in transit shall be replaced with undamaged material without additional cost to the Department.
- i) All components and their respective adjustment, which do not form part of the equipment installation work, but influence the optimum and safe operation of the equipment shall be considered to form part of, and shall be included in the Contractor's scope of works.
- j) All control equipment and serviceable items shall be installed and positioned such that they will be accessible and maintainable.
- k) The Contractor shall make sure that all safety regulations and measures and environmental regulations are applied and enforced during the installation and guarantee period to ensure the safety of the public and the User Client.

1.10. Brochures

Detailed brochures of all equipment offered shall be presented together with the tender documents.

SECTION 2 – EQUIPMENT REQUIREMENTS

TABLE OF CONTENTS

2.1.	Engine.....	6
2.1.1.	General.....	6
2.1.2.	Rating.....	6
2.1.3.	De-Rating.....	6
2.1.4.	Starting and Stopping.....	6
2.1.5.	Starter Battery.....	6
2.1.6.	Cooling.....	7
2.1.7.	Lubrication.....	7
2.1.8.	Fuel Pump.....	7
2.1.9.	Fuel Tank.....	7
2.1.10.	Governor.....	8
2.1.11.	Flywheel.....	8
2.1.12.	Exhaust Silencer.....	8
2.1.13.	Accessories.....	8
2.1.14.	Exhaust emissions.....	8
2.2.	Alternator.....	9
2.2.1.	General.....	9
2.2.2.	Regulation.....	9
2.2.3.	Performance.....	9
2.2.4.	Coupling.....	9
2.3.	Switchboard.....	9
2.3.1.	General.....	9
2.3.2.	Construction.....	9
2.3.3.	Protection and Alarm Devices.....	10
2.3.4.	Modular Generator Set controller.....	11
2.3.5.	Manual Starting.....	14
2.3.6.	Battery Charging Equipment.....	14
2.3.7.	Switchboard Instruments.....	15
2.3.8.	Marking.....	15
2.3.9.	Earthing.....	15
2.3.10.	Operation Selector Switch.....	15
2.3.11.	Automatic Change-over System.....	15
2.3.12.	By-pass Switch and Main Isolator.....	16
2.3.13.	Start Delay.....	16
2.3.14.	Stop Delay.....	16
2.4.	Installation.....	16
2.5.	Warning Notices.....	16
2.6.	Construction.....	17
2.7.	Operation.....	17

2. SECTION 2 – EQUIPMENT REQUIREMENTS

2.1. Engine

2.1.1. General

The engine must comply with the requirements laid down in SANS 8528 and must be of the atomized injection, compression ignition type, running at a speed not exceeding 1500 r.p.m. The engine must be amply rated for the required electrical output of the set, when running under the site conditions. The starting period for either manual or automatic switching-on until the taking over by the generating set, in one step, of a load equal to the specified site electrical output, shall not exceed 15 seconds. This must be guaranteed by the Tenderer.

Turbo-charged engines will only be accepted if the Tenderer submits a written guarantee that the engine can deliver full load within the specified starting period.

Curves furnished by the engine makers, showing the output of the engine offered against the speed, for both intermittent and continuous operation as well as fuel consumption curves when the engine is used for electric generation, must be submitted with the Tender.

2.1.2. Rating

The set shall be capable of delivering the specified output continuously under the site Conditions, without overheating. The engine shall be capable of delivering an output of 110% of the specified output for one hour in any period of 12 hours consecutive running in accordance with SANS 8528.

2.1.3. De-Rating

The engine must be de-rated for the site conditions as set out in the Technical Specification, Section 3 of this document.

The de-rating of the engine for site conditions shall be strictly in accordance with SANS 8528 as amended to date. Any other methods of de-rating must have the approval of the Department and must be motivated in detail. Such de-rating must be guaranteed in writing and proved by the successful Tenderer at the site test.

2.1.4. Starting and Stopping

The engine shall be fitted with an electric starter motor and be easily started from cold, without the use of any special ignition devices under summer as well as winter conditions.

Tenderers must state what arrangements are provided to ensure easy starting in cold weather. Full details of this equipment must be submitted. In the case of water cooled engines, any electrical heaters shall be thermostatically controlled. The electrical circuit for such heaters shall be taken from the control panel, and must be protected by a suitable circuit breaker.

2.1.5. Starter Battery

The set must be supplied a fully charged lead-acid type or maintenance free type battery, complete with necessary electrolyte. The battery must have sufficient capacity to provide the starting torque stipulated by the engine manufacturer. The battery capacity shall not be less than 120 Ah and shall be capable of providing three consecutive start attempts from cold and thereafter a fourth attempt under manual control of not less than 20 seconds duration each. The battery must be of the heavy duty "low maintenance" type, housed in a suitable battery box.

2.1.6. Cooling

The engine may be either of the air or water cooled type. In the case of water-cooling, a built-on heavy duty, tropical type pressurised radiator must be fitted. Only stand-by sets that are water cooled shall have electric heaters.

For either method of cooling, protection must be provided against running at excessive temperatures. The operation of this protective device must give a visual and audible indication on the switchboard. Water-cooled engines shall in addition be fitted with a low water cut-out switch, installed in the radiator, to switch the set off in the event of a loss of coolant. The protection shall operate in the same way as the other cut-outs (e.g. low oil pressure). All air ducts for the cooling of the engine are to be allowed for. The air shall be supplied from the cooling fan cowling/radiator face to air outlet louvers in the enclosure.

2.1.7. Lubrication

Lubrication of the main bearings and other important moving parts shall be by forced feed system. An automatic low oil pressure cut-out must be fitted, operating the stop solenoid on the engine and giving a visible and audible indication on the switchboard.

2.1.8. Fuel Pump

The fuel injection equipment is suitable for operation with the commercial brands of diesel fuel normally available in South Africa.

2.1.9. Fuel Tank

The fuel tank shall be an integral part of the base frame of the generator set. The tank shall have sufficient capacity for standby sets to run the engine on full load for a period of 24 hours.

The diesel fuel storage system / tank which will be provided with the standby generator installation must be fitted with a fuel filtration and water separation system (filter & separator) which is entirely separate from the fuel supply line and line filter to the engine. This filtration and water separation system must be dedicated to purifying the content of the storage system / tank by way of the cleaning processes which are applied while circulating the fuel through the filter & separator unit.

The filtration system must be able to handle diesel fuel of "high" and of "low" sulphur content for an indefinite period. The suction line of the system must be connected to the lowest part of the storage system / tank. The return line must be connected in the top section of the storage system / tank in such a position and in such a way that the flow of fuel within the storage system / tank between the fuel return point and the fuel suction point will induce scouring of the bottom of the system / tank to effectively capture sediment and water in the to be filtered fuel.

The filtration unit must filter the diesel fuel, removing suspended particles of effective diameters down to 5 micron. In addition, it must separate all water from the fuel and the fuel storage system and automatically dispose of / dump such water into an open, removable receptacle for disposal at the installation or in a suitable position outside the building. Separation of the fuel and water must be sufficiently effective that the discharged water will meet the standard required for it to be disposed of into a municipal drain and sewer system.

The filter and water separator unit must draw its power from the DC batteries used to power the relevant generator set. The circulating pump shall be provided with a controller programmed to switch the pump through not more than three complete on and off cycles of equal time (i.e. 50% on; 50% off) , per hour, with a deviation of not more than 10 % $\pm$. The pump must be capable of a duty cycle of not less than 60% running time. The flow rate through the circulating pump must be between 1 L/min and 1.25 L /min.

The filter cartridge of the filter and water separator unit must be replaceable, and, in normal operational conditions, not require replacement within periods shorter than three months. The replacement units must be readily available.

The filtration & separator system may be mounted against the wall of the plant room or on the inside of a container, which may house the installation as may be specified elsewhere in this document.

The tank shall be fitted with a suitable filter, a full height gauge glass, "low fuel level" alarm, giving an audible and visible signal on the switchboard as well as a low-low fuel level cut-out.

An electrically operated pump with sufficient length of oil resistant hose to reach 2m beyond the door of the canopy/container, shall be supplied, for each set for filling the fuel tank/s from 200 litre drums.

The interconnection fuel piping shall consist of copper tubes and the connection to vibrating components shall be in flexible tubing with armoured covering.

The contractor shall allow for the supply and installation of a fuel shut off fusible link in the container. The fusible link shall shut off the fuel at a temperature of 130 degrees in an event of a fire in the self-contain enclosure. The fusible link shall be mounted above the engine and coupled to the shut off valve by means of a 2mm stainless steel cable. The cable shall be installed to the shut off valve without any possibility of kinking the cable which may cause malfunctioning of the protection device.

2.1.10. Governor

The speed of the engine shall be controlled by a governor in accordance with ECM of SANS 8528 if not otherwise specified in the Detailed Specification.

The permanent speed variation between no load and full load shall not exceed 4.5% of the nominal engine speed and the temporary speed variation shall not exceed 10%. External facilities must be provided on the engine, to adjust the nominal speed setting by $\pm 5\%$ at all loads between zero and rated load.

2.1.11. Flywheel

A suitable flywheel must be fitted, so that lights fed from the set will be free from any visible flicker.

The cyclic irregularity of the set must be within the limit laid down in SANS 8528.

2.1.12. Exhaust Silencer

It is essential to keep the noise level as low as possible. An effective exhaust silencing system of the residential type must be provided and shall be capable of providing 20 to 30 decibels of suppression.

The exhaust system shall consist of 3CR12 steel for inland areas (greater than 50km from the coast) or Grade 304 stainless steel in coastal areas.

The exhaust pipe shall be installed in such a way that the expelled exhaust fumes will not cause discomfort to the public. The exhaust pipe must be flexibly connected to the engine to take up vibrations transmitted from the engine, which may cause breakage. The exhaust piping and silencer shall be lagged and then cladded in stainless steel sheet to reduce the heat and noise transmission in the generator enclosure and shall be protected against the ingress of driving rain at 45° to the horizontal. The exhaust pipe must extend 0,5m above the canopy.

2.1.13. Accessories

The engine must be supplied complete with all accessories, air and oil filters, 3 instruction manuals, spare parts lists, the first fill of all lubricating oils, fuel, etc.

2.1.14. Exhaust emissions

The exhaust emissions shall comply with US Tier III/EU stage III standards.

2.2. Alternator

2.2.1. General

The alternator shall be of the self-excited brushless type, with enclosed ventilated drip-proof housing and must be capable of supplying the specified output continuously with a temperature rise not exceeding the limits laid down in SANS 60034-1 for rotor and stator windings.

The alternator shall be capable of delivering an output of 110% of the specified output, for one hour in any period of 12 hours consecutive running.

Both windings must be fully impregnated for tropical climate and must have an oil resisting finishing varnish.

2.2.2. Regulation

The alternator must preferably be self-regulated without the utilisation of solid state elements. The inherent voltage regulation must not exceed plus or minus 5% of the nominal voltage specified, at all loads with the power factor between unity and 0,9 lagging and within the driving speed variations of 4,5% between no-load and full load.

2.2.3. Performance

The excitation system shall be designed to promote rapid voltage recovery following the sudden application of the load. The voltage shall recover to within 5% of the steady state within 300 milliseconds following the application of full load and the transient voltage dip shall not exceed 18%.

2.2.4. Coupling

The engine and alternator must be directly coupled by means of a high quality flexible coupling, ISO 9001:2000 approved and must be designed and manufactured to this quality system.

2.3. Switchboard

2.3.1. General

A switchboard must be supplied and installed to incorporate the equipment for the control and protection of the generating set and battery charging.

The switchboard must conform the specification as set out in the following paragraphs.

2.3.2. Construction

The switchboard shall be enclosed in the steel enclosure.

All equipment, connections and terminals shall be easily accessible from the front. The front panels may be either hinged or removable and fixed with studs and chromium-plated cap nuts. Self-tapping screws shall not be used in the construction of the board.

All pushbuttons, pilot lights, control switches, instrument and control fuses, shall be mounted on hinged panels with the control wires in flexible looms.

The steelwork of the boards must be thoroughly de-rusted, primed with zinc chromate and finished with two coats of signal red quality enamel, or a baked powder epoxy coating.

Suitably rated terminals must be provided for all main circuits and the control and protection circuits. Where cable lugs are used, these shall be crimped onto the cable strands. Screw terminals shall be of the type to prevent spreading of cable strands. All terminals shall be clearly marked.

For the control wiring, each wire shall be fitted with a cable or wire marker of approved type, and numbering of these markers must be shown on the wiring diagram on the switchboard. Control wiring shall be run in PVC trunking. The trunking shall be properly fixed to the switchboard steelwork. Adhesives shall not be acceptable for the fixing of trunking or looms.

The modular generator set controller and protection equipment shall be mounted on a separate easily replaceable panel.

All equipment on the switchboard, such as contactors, isolators, busbars, etc., shall have ample current carrying capacity to handle at least 110% of the alternator full load current.

Access to the cubicle will be such that all components can be conveniently reached for testing and maintenance purposes.

The necessary bushes and a screen over the terminals will be provided where the power feeds enter and leave the cubicle.

The cubicle will be so constructed that the ac and dc components are screened from one another.

2.3.3. Protection and Alarm Devices

All switchboards shall be equipped with protection and alarm devices as described below.

A circuit breaker and an adjustable current limiting protection relay must be installed for protection of the alternator. The protection relay shall be of the type with inverse time characteristics. The relay shall cause contactor to isolate the alternator and stop the engine.

Protection must be provided for overload, high engine temperature, low lubricating oil pressure, over speed, start-failure, and low water level.

Reset push buttons are required on the modular generator set controller and a visible signal are required and the engine must stop when any of the protective devices operate. In the case of manual operation of standby sets, it shall not be possible to restart the engine.

The indication on the modular generator set controller must be in ENGLISH.

"OVERLOAD"
"TEMPERATURE HIGH"
"OIL PRESSURE LOW"
"OVERSPEED"
"START FAILURE"
"LOW WATER LEVEL"

In addition an audible and visible flashing signal shall be provided, when:

- a) The fuel level in the service tank is low. The indication on the modular generator set controller shall be "FUEL LOW".
- b) The battery charger failed. The indication on the modular generator set controller shall be "CHARGER FAIL"

A low-low level sensor must be provided. At this level the engine must stop to prevent air entering the fuel system.

This is also applicable to the engine driven generator/alternator.

All alarm conditions must operate an alarm hooter. A pushbutton must be installed in the hooter circuit to stop the audible signal, but the fault indicating light on the control panel must remain lit until the fault has been rectified.

An on/off switch is not acceptable. After the hooter has been stopped, it must be re-set automatically, ready for a further alarm.

The hooter must be of the continuous duty and low consumption type. Both hooter and protection circuits must operate from the battery.

Potential free contacts from the alarm relay must be brought down to terminals for remote indication of alarm conditions.

A test pushbutton must be provided to test all indicators lamps.

2.3.4. Modular Generator Set controller

The modular generator set controller shall be an electronic unit to match those of the other modular generator set controllers and of a high quality i.e. Levato, Deep Sea Electronics, Circom. It must be provided with IO and communication facilities.

The modular generator set controller will be supplied with all its functions and shall be mounted on a separate easily replaceable panel with plug in termination blocks for easy installation and replacement.

The modular generator set controller interface will be implemented with relays, contactors etc.

The modular generator set controller will have a mimic display of the alternator/mains/ change over contactors configuration with LED's showing the status of the mains, alternator and change over contactors.

Configuration software shall be supplied with the system. The software will be capable of the following:

- Fault management (event log)
- Configuration management (software upgrades and function changes)
- Account management (energy management)
- Performance management (generator set point changes)
- Security management (passwords)

The modular generator set controller will have a standard RS 232/485 or Ethernet interface suitable for TCP I/P transport medium. All communication including configuration management will be done through this port. Equipment connected at each end of the RS 232 or Ethernet cable shall be adequately protected against transient over-voltages, lightning effects (particularly if the set and remote alarms are in separate buildings), switching surges, power system surges or mains and alternator borne noise/interference.

The controller will incorporate the following functions:

- Mains sensing
- Alternator output-voltage sensing
- Alternator over- frequency sensing
- Control of processor unit (self-diagnostics)
- Alarm/ Status indications
- Control selector and operation
- Phase rotation monitor

A 4- position control selector on the controller will be provided to facilitate the following modes of operation:

- OFF: Diesel/ alternator generator set switched off
- MANUAL: Mains bypassed: Diesel/ alternator will not take load

- AUTO: Diesel /alternator takes load on mains failure
- TEST: Diesel /alternator takes load on mains failure
- A standby failure alarm (SF) will be given on the controller and to the output alarms when "Not in Auto" is selected.

The modular generator set controller must monitor the following

When the voltage of the incoming mains varies by more than a pre-program value (default $\pm 10\%$) from the normal voltage on any phase, the controller will signal that the incoming mains will be disconnected and the engine-starting sequence initiated.

When the frequency of the incoming mains varies by more than pre- program value (default $\pm 5\%$) from the normal frequency, the controller will signal that the incoming mains will be disconnected and the engine-starting sequence initiated.

Upon restoration of the incoming mains to the pre-program value (default $\pm 10\%$) of the normal voltage on all phases, the monitor will signal that the load will be disconnected from the alternator and reconnected to the incoming mains.

If the alternator has been disconnected from the load and the incoming mains within the voltage limits of $\pm 10\%$ on all phases, the controller will signal that the load will be reconnected to the incoming mains.

Should the incoming mains fail or not in the specified limits while the engine is running under control of the cooling-off timer, the control for the cooling –off timer in the controller will be cancelled and the load connected to the alternator.

When the output voltage of the alternator varies by more than the pre-program value (default value $\pm 10\%$) on ANY phase, the controller will signal that the load will be disconnected from the alternator and the engine stopped.

A software over and under-frequency monitor will be provided in the controller if the frequency exceeds or drop below pre-programmed values. It will meet the requirements of class G2 governing. The monitor will not be influenced by harmonics.

Note: Software monitors will include adjustable overshoot and undershoot timers to be fully compatible with Class G2 governing.

All timers will be implemented in software.

Incoming supply failure timer

It is essential that incoming supply failures, occurring at short intervals, do not cause a series of starts and stops.

A timer adjustable from 1 s to 10 s required

The timer default value will be generator set to 3 s

The signal generated by the mains voltage monitor will start the timer. If the duration of the signal is less than the generator setting on the timer, the signal is suppressed so that the switching and starting sequence is initiated. However, if the duration of the signal is more than the generator setting on the timer, the signal will be transmitted to initiate the switching and starting sequence.

Incoming supply restoration timer

It is essential that incoming supply failures, occurring at short intervals, do not cause a series of starts and stops.

A timer adjustable from 1 s to 10 s required.

The timer default value will be generator set to 3 s.

The signal generated by the mains voltage monitor will start the timer. If the duration of the signal is less than 150 sec, the signal is suppressed and the timer is regenerated. However, if the duration of the signal is more than 150 sec, the signal will be transmitted to initiate the switching sequence.

Alternator supply/ incoming supply change-over timer

It is essential that the supply be disconnected from the load before the incoming supply is reconnected to the load. This will be software generator settable in the controller with a minimum of 5 seconds and maximum of 20 seconds.

On receipt of the switching signal, the alternator supply will be disconnected from the load and timer started. After 5 sec, the incoming supply will be reconnected to the load.

Engine cooling-off timer

After the load has been transferred to the incoming supply the engine will run without load for a period to cool off and then stop.

A timer, software adjustable in the controller from 5 to 10 min is required.

Repeat- start control

A repeat- start control is required in the controller software adjustable so that in the event of the engine failing to start on the first start attempt, the starter motor will be released and repeat the start attempt.

The repeat-start attempt will be repeated 3 times.

The duration of each start attempt will be 6 sec with a period of 15 sec between successive start attempts.

Should the engine fail to start after the third start attempt, the controller will transmit a signal for alarm purposes.

In addition to the requirement for the switchboard instruments listed elsewhere in this document metering will also form part of the modular generator set controller and must be accessible on the software.

The modular generator set controller shall display the following alarm/status indications:

- High engine temperature.
- Low Oil pressure
- High/low alternator output voltage
- Over and under speed (frequency)
- Low water level
- Emergency stop activated
- Mains fail
- Battery charger fail
- Dummy load in operation (When provided)
- Unit not in Auto
- Engine running
- Low fuel alarm
- Engine start failure

Conditions one to six above will stop the engine.

The Contractor shall provide a remote alarm mimic panel and the associated control wiring for the set. The panel shall be installed in the duty/security room at the entrance to the building approximately 70m from the generator set position.

The mimic panels must fit into furniture and blend with the design. Before manufacture, the Contractor shall submit and obtain the approval, from the Engineer, for the mimic panel.

The remote alarm must have potential free relay contacts which shall indicate the following on each set:

- 1) Mains on/off
- 2) Alternator running
- 3) Common fault alarm
- 4) Buzzer which can only be reset at the generator panel
- 5) Fuel low

The cable between the remote alarms is to be a signal cable with a screen and this option must be able to operate from a 12 / 24 V dc supply so that it can be powered from the generator set batteries.

A facility to originate a fault message should a warning or shutdown fault occur.

A facility to allow the mode of the control system to be changed to any of the four modes to allow the set to be run from a remote location.

A facility to originate a call to the control cellular and to transfer a fault message should a warning or shutdown fault occur. The alarm conditions above from the controller will be extended to four relays with a make and break contact and terminal strip to allow for remote monitoring of the following alarms:

- Mains fail
- Standby run
- Standby fail
- Low Fuel

A remote start facility must be supplied, software controllable in the controller.

All events relating to the status of the generator set shall be logged with date and time in a non-volatile memory (which can retain information for a period of 6 months in the absence of power to the controller) and the user shall be able to contain a hard copy on site.

The modular generator set controller system must be able to operate with a minimum DC supply voltage of 4 volts (without making use of either an internal or an external auxiliary battery) to allow cranking and starting under conditions of low battery capacity. Control cables between the set and the control panel shall be fitted with sockets for ease of undoing in the event the modular generator set controller has to be removed.

2.3.5. Manual Starting

Each switchboard shall be equipped with two pushbuttons marked "START" and "STOP" for manual starting and stopping of the set.

2.3.6. Battery Charging Equipment

Each switchboard shall be equipped with battery charging equipment.

The charger shall operate automatically in accordance with the state of the battery and shall generally consist of an air-cooled transformer, a full wave solid state rectifier, and the necessary automatic control equipment of the constant voltage system.

The charger must be fed from the mains. An engine driven alternator must be provided for charging the battery while the set is operational. Failure of this alternator must also activate the battery charger failure circuit.

The starter battery voltage will be software monitored by the modular generator set controller. The voltage will be digitally displayed.

2.3.7. Switchboard Instruments

Each generating set shall have a switchboard equipped as follows:

- a) One flush square dial voltmeter, reading the alternator voltage, scaled as follows:
 - (i) 0-300V for single phase generators.
 - (ii) 0-500V for three phase generator. In this case a six position and off selector switch must be installed for reading all phase and phase to neutral voltages.
- b) A flush square dial combination maximum demand and instantaneous ampere meter for each phase, with resettable pointer suitably scaled 20% higher than the alternator rating. A red arc stripe above scale markings from 0-20A and a red radial line through the scale at full-load current, shall be provided. This instruments shall be supplied complete with the necessary current transformer.
- c) One flush square dial vibrating type frequency meter, indicating the alternator frequency.
- d) A six digit running hour meter with digital counter, reading the number of hours the plant has been operating. The smallest figure on this meter must read 1/10 hour.
- e) Fuses or m.c.b.'s for the potential voltage circuits of the meters.
- f) One flush square dial ampere meter suitably scaled for the battery charging current.
- g) One flush square dial voltmeter with a spring loaded pushbutton or switch for the battery voltage.

2.3.8. Marking

All labels, markings or instructions on the switchgear shall be in English.

2.3.9. Earthing

An earth bar must be fitted in the switchboard, to which all non-current carrying metal parts shall be bonded.

The neutral point of the alternator must be solidly connected this bar by means of a removable link labelled "EARTH". Suitable terminals must be provided on the earth bar for connection of up to three earth conductors, which will be supplied and installed by others.

2.3.10. Operation Selector Switch

A four position selector switch must be provided on the switchboard marked "AUTO", "MANUAL", "and TEST" and "OFF".

With the selector on "AUTO", the set shall automatically start and stop, according to the mains supply being available or not.

With the selector on "TEST", it shall only be possible to start and stop the set with the pushbuttons, but the running set shall not be switched to the load.

With the selector on "MANUAL", the set must take the load when started with the pushbutton, but it must not be possible to switch the set on to the mains, or the mains onto the running set.

With the selector on "OFF", the set shall be completely disconnected from the automatic controls, for cleaning and maintenance of the engine.

2.3.11. Automatic Change-over System

A fully automatic change-over system must be provided to isolate the mains supply and connect the standby set to the outgoing feeder in case of a mains failure and reverse this procedure on return of the mains.

The contactors for this system must be electrically and mechanically interlocked.

2.3.12. By-pass Switch and Main Isolator

The switchboard shall be equipped with an on-load isolator to isolate the mains and a manually operated on-load 4 pole 4 position by-pass switch, which shall switch the connected loads as follows:

NORMAL: will allow for the normal connection i.e. connects the incoming mains to the Automatic control gear or directly to the outgoing feeder.

In the GEN BY-PASS position the switch will disconnect the automatic changeover control gear, and will connect the municipal mains directly to the essential supply busbar which will allow for the maintenance of either or both the generator and the automatic changeover equipment.

MAINS BY-PASS switching position would allow the generator to be connected directly to the essential supply busbar. This is when there is a problem with the automatic changeover equipment and there is no municipal power available.

The final position is an OFF position which will remove all power downstream of this switch.

It is required that this by-pass switch and mains isolator be mounted away from the automatic control gear, in a separate compartment, either on the side or in the lower portion of the switchboard cubicle, and that the switches are operated from the front of the compartment.

Contractor to note: The by-pass and mains isolator switch shall also break the main neutral.

2.3.13. Start Delay

Starting shall be automatic in event of a mains failure. A 0-15 second adjustable start delay timer shall be provided to prevent start-up on power trips or very short interruptions.

2.3.14. Stop Delay

A stop delay with timer is required for the set, to keep the set on load for an adjustable period of one to sixty seconds after the return of the mains supply, before changing back to the supply. An additional timer shall keep the set running for a further adjustable cooling period of 5 to 10 minutes at no-load before stopping.

2.4. Installation

Except for the supply of the incoming mains cable and outgoing feeder cables, the tenderer must include for the complete installation and wiring of the plant in running order, including the connection of the incoming cable and outgoing feeder cables.

The connecting of the cable and control cabling to the generator and the control terminals in the LV board remains the responsibility of the tenderer.

2.5. Warning Notices

Notices, in English, must be installed on the outside of the steel enclosure.

The successful tenderer must consult the Occupational Health and Safety Act 83 of 1993 and get approval of the wording from the Department's representative, prior to ordering the notices.

The notice shall be made of a non-corrodible and non-deteriorating material, preferable plastic, and must read as follows:

DANGER: This engine will start without notice. Turn selector switch on control board to "OFF" before working on the plant.

An engraved label shall be installed next to the fuel cap that indicates the following:

- Base Tank Capacity
- Bulk Tank Capacity (if provided)
- Full load litres per hour consumption

2.6. Construction

The engine and alternator of the set shall be built together on a common frame, which must be mounted on a skid base on anti-vibration mountings. The set must be placed inside an IP65 canopy/container. A drip tray must be fitted under the engine. The tray must be large enough to catch a drip from any part of the engine.

The frame must be of the 'DUPLEX' type.

2.7. Operation

The set is required to supply the lighting and power requirements in the case of a mains power failure.

The set shall be fully automatic i.e. it shall start when any one phase of the main supply fails or get switched and shall shut down when the normal supply is re-established. In addition it shall be possible to manually start and stop the set by means of pushbuttons on the switchboard.

The automatic control shall make provision for three consecutive starting attempts. Thereafter the set must be switched off, and the start failure relay on the switchboard must give a visible and audible indication of the fault.

To prevent the alternator being electrically connected to the mains supply when the mains supply is on and vice versa, a safe and fail proof system of suitably interlocked contactors shall be supplied and fitted to the changeover switchboard.

**SECTION 3 – TECHNICAL SPECIFICATION
(TO BE COMPLETED BY CONSULTING ENGINEER)**

TABLE OF CONTENTS

3.1.	General	19
3.2.	Site Information and Conditions	19
3.2.1.	Location	19
3.2.2.	Site Conditions.....	19
3.3.	Output and Voltage	19
3.4.	Switchboard/Control Panel Unit.....	20
3.5.	Cables.....	20
3.6.	Engine.....	20
3.7.	Alternator	20
3.8.	Load Acceptance	20
3.9.	Enclosure	20
3.10.	Alarms.....	22
3.11.	Remote Control Generator Switch.....	22
3.12.	Fuel Drip Tray.....	22
3.13.	Completion Time.....	23
3.14.	Inform	23
3.15.	Fuel Supply Tank.....	23

3. SECTION 3 – TECHNICAL SPECIFICATION

3.1. General

Supply, deliver, install, commission, test and maintain an emergency generating set at Kwa-Thema Magistrate Court, Springs, South Africa.

This installation must comply fully with all the sections and drawings of this document. This technical specification is supplementary to the Equipment Requirements, Section 2, and must be read together where they are at variance the Technical Specification shall apply.

Supply, delivery, installation and commissioning of the complete outdoor emergency generator set inside an IP65 canopy/container on a concrete plinth as specified in this document and indicated on the drawings.

Concrete plinth to be provided as per drawing _____

The surface of the concrete plinth shall be 50mm higher than the existing ground level. The thickness and strength of the plinth shall be designed by the consulting engineer and are detailed on the drawings.

A tap to be provided to drain all the water that accumulates inside the bund wall. Final position of the tap will be determined on site. It is the engineer's responsibility to ensure plinth design complies with generator dimensions and weights. The bund wall shall contain 110% of the fuel, oil and water capacity of the generator. The bund wall shall not constrain the canopy doors from opening completely.

The contractor shall install an earthing system in the concrete plinth. The contractor shall install two (2) earth studs 1.8 meters long on opposite corners of the concrete plinth into the ground. The earth studs shall be connected by means of a 70mm² bare copper earth wire to the main earth bar in the control panel. The earth conductor shall be connected to the earth bar, canopy, base, skid and earth bar by means of suitably crimping lugs and brass bolts.

3.2. Site Information and Conditions

3.2.1. Location

The site is at Kwathema Magistrate Court, Tornado st, KwaThema, Springs, 1575.

3.2.2. Site Conditions

The following site conditions will be applicable and equipment shall be suitably rated to develop their assigned rating and duty at these conditions.

- | | | |
|---|---|-------------------|
| a) Height above sea level | : | <u>1631</u> Meter |
| b) Maximum ambient temperature | : | °C |
| c) Maximum ambient humidity at lowest temperature | : | % |

3.3. Output and Voltage

After the de-rating factors for the engine and generator due to site conditions have been taken into account, the set must have a site output and voltage as follows: -

No load voltage	:	400/230 Volt
Rating	:	66kVA
Power at 0.9 power factor	:	52,8kW

Frequency : 50Hz
Fault Level : 6kA

The generating set is required to feed the following electrical load:

Discharge lighting
Fluorescent lighting
Heaters & plugs
Computers & radios
Petrol Pump

3.4. Switchboard/Control Panel Unit

All switch- and control gear shall be rated for a fault current level of 6kA.

The switchboard/control panel unit shall be enclosed in the IP65 canopy/container.

3.5. Cables

The contractor will be responsible for all electrical cable connections associated with the complete generating set installation.

The following cables will be supplied, installed and terminated at the Switchboard by others.
Adequate provision shall be made for the termination of these cables at the Switchboard:

	PVC/SWA/PVC Cable 4 core	BCEW
Kiosk – ATS Panel	25mm ²	16mm ²
ATS Panel – Kiosk	25 mm ²	16mm ²

3.6. Engine

A sump drainpipe must be fitted with a shut-off valve placed in a convenient position outside the base frame to facilitate drainage.

Recommended oil types must be indicated on the engine, or base frames, by means of suitable labels.

All engine instruments shall have clear markings on the faceplates, indicating the normal operating zone(s), maximum and minimum allowable values/limits and danger zone(s).

The flywheel shall be covered by approved hoods.

3.7. Alternator

The Alternator shall be of the low harmonic type.

3.8. Load Acceptance

The generator set shall be capable of accepting 75% of the specified site electrical output 10 seconds after the starter motor is energised and the remaining 25%, 5 seconds thereafter, i.e. 100% load acceptance shall not exceed 15 seconds.

3.9. Enclosure

The standby set is a free standing unit and shall be mounted in an enclosure as detailed below:-

3.9.1 General

The enclosure, shall be completely vermin-proof, powder coated and shall be constructed of 3CR12 stainless steel or within 50km from the coast with grade 316 steel housing of a minimum thickness of ± 1.5 mm.

The enclosure shall allow easy access to the engine, alternator, radiator filler cap and control cubicle for maintenance purposes.

The door shall be flush with the rest of the canopy and of the side opening type. A minimum of four doors are required i.e. two on either side.

The door hinges and locking bars shall be of a heavy duty type and be manufactured of 3CR12 stainless steel or within 50km from the coast with grade 316 steel and shall be fitted with a grease nipple.

The doors and panels shall be suitably braced and stiffened to ensure rigidity and to prevent bending and warping.

Suitable door restraints shall be fitted to all the doors, enclosure including the control panel to prevent wind damage. The restraint shall consist of a steel rod in a steel groove or slide with a spring loaded catch, which is to be manually reset to close the door.

No flexible restraints will be accepted.

The diesel fuel level indicator and alternator rating plate shall be clearly visible with the doors open.

Unless specified the silencers shall be mounted within the enclosure.

Perforated sheeting shall be fitted over all the insulating material inside the canopy of all soundproof sets.

Rubber seals on doors shall be equal to or similar to rubber pinch weld, wind lace.

9.2 Design

The enclosure shall be designed to be weather-proof and sound-proofing as specified. Rivets or self-tapping screws will under no circumstances be allowed for fixing the various sections of the enclosure. Only cadmium coated nuts and bolts are acceptable.

9.3 Roof

The roof of the enclosure shall be constructed for proper drainage of water as per the drawing.

9.4 Lamp fitting

A lamp fitting and it's associated on/off door switch shall be provided inside the enclosure for illumination of the control panel. The power for the lamp shall be obtained from the starter battery.

9.5 Sound-proofing

The sound-proofing on canopy engine sets shall be such that the maximum noise level generated by the set under any load condition shall not exceed 65 dB measured in any direction at a distance of 5m from the centre of the set with the doors closed.

The supply and discharge air paths will require separate attenuators on soundproof sets.

9.6 Padlock and keys

The contractor shall supply padlocks and keys for all the doors of the enclosure. The padlock shall be off the "Viro A82 keyed alike with stainless steel shackles" type.

Suitable brass metal plates shall be installed behind each lock for the protection of the enclosure against scratching or damaging, where the locks are hanging.

3.10. Alarms

The successful tenderer must pay particular attention to the requirements of the alarms as described in the Equipment Requirements, Section 2.

One alarm hooter and red light shall be supplied and installed on the outside of the generator container in a position as indicated by the Department's Representative.

The hooter shall consist of an electronic unit similar and equal to a "Klaxon" - type SY2/725 hooter with a continuously rated output and 110 dB at a distance of 2 metres, and shall be IP55 weatherproof rated.

The warning light shall consist of a 40W flashing red light, which shall be mounted on a galvanised steel frame together with the hooter.

The hooter and light shall be switched on or off simultaneously after initiation or cancellation of an alarm condition. The supply and installation of the wiring between the control board and the alarm unit forms part of this contract.

The successful tenderer must ensure that the hooter control circuit resets automatically after cancellation due to a low fuel condition or battery charger failure, but the visible fault indication must remain, i.e. should the operator continue to run the set, the hooter must sound, should any other condition develop.

A remote alarm panel shall be supplied and installed by the contractor in the control room. This shall be of surface mounting, enamelled sheet metal (colour to approval), minimum depth construction, and shall incorporate a flashing red pilot alarm light, adjustable electronic sounder, and a silence push button. The silence button shall not switch off the pilot light - this shall only be switched off when the alarm is reset at the Generator Panel.

A 2,5mm² x 4-core PVC SWA PVC cable will be supplied, installed and terminated by others between the Generator Panel and the Charge Office. The Contractor shall connect this cable at both ends and shall supply and install all switch gear relays, etc. to ensure satisfactory operation of the Remote Alarm Panel.

3.11. Remote Control Generator Switch

A Remote Control Generator "ON/OFF/AUTO" switch will be supplied and installed by others in the control room, and a 2,5mm² x 4-core PVC SWA PVC cable will be supplied and installed by others between the control room and the Generator Panel.

The contractor shall connect this cable at both ends, and shall supply and install all switch gear, relays, etc. to ensure satisfactory operation of the remote control switch.

3.12. Fuel Drip Tray

A drip tray approximately 100mm deep shall be mounted below the generator and must be large enough to collect any fuel that drips from the generator fuel accessories. The drip tray shall be manufactured from black mild steel. The thickness of the drip tray sheet steel shall not be less than 2mm.

3.13. Completion Time

The Generator Set is required to be commissioned in conjunction with the building contract.

3.14. Inform

The successful tenderer shall inform the Engineer when the set is ready for installation.

3.15. Fuel Supply Tank

The fuel tank shall be an integral part of the base frame of the generator set. The tank shall have sufficient capacity to run the engine on full load for a period of 72 hours. The base tank shall be an open channel self-bund walled type that shall be of sufficient capacity to contain a spillage equivalent to 110% in volume of the base tank. The containment tank shall be manufactured from black mild steel with a thickness of not less than 2mm.

A float level alarm connected to the generator controller shall be incorporated into the bund area located such that the alarm will be activated when 50% of the volume of the bund area has been reached in the event of any diesel fuel leakage.

SECTION 4 – SCHEDULES OF TECHNICAL INFORMATION
(TO BE FULLY COMPLETED BY TENDERER)

TABLE OF CONTENTS

4.1.	Engine.....	25
4.2.	Alternator	27
4.3.	Switchboard	28
4.4.	Battery	29
4.5.	Dimensions	29
4.6.	Deviation from the Specification as an Alternative (State Briefly)	29
4.7.	Spare Parts and Maintenance Facilities	29

4. SECTION 4 – SCHEDULES OF TECHNICAL INFORMATION

4.1. Engine

NO	ITEM	REMARKS
1.	Manufacturer's Name	
2.	Country of Origin	
3.	Manufacturer's model No. and year of manufacture	
4.	Continuous sea level rating after allowing for ancillary equipment : a) In b.h.p. b) In kW	
5.	Percentage de-rating for site conditions, in accordance with SANS 8528 a) For altitude b) For temperature c) For humidity d) Total de-rating	
6.	Net output on site in kW	
7.	Nominal speed in r.p.m.	
8.	Number of cylinders	
9.	Strokes per working cycle	
10.	Stroke in mm	
11.	Cylinder bore in mm	
12.	Swept volume in cm ³	
13.	Mean piston speed in m/min	
14.	Compression ratio	
15.	Cyclic irregularity	
16.	Fuel consumption of the complete generating set on site in l/h of alternator output at : a) Full load b) $\frac{3}{4}$ load c) $\frac{1}{2}$ load NOTE : A tolerance of 5% shall be allowed above the stated value of fuel consumption.	
17.	Make of fuel injection system.	
18.	Capacity of fuel tank in litres	
19.	Is gauge glass fitted to tank?	

NO	ITEM	REMARKS
20.	Is electric pump for filling the fuel tank included?	
21.	Method of starting	
22.	Voltage of starting system	
23.	Method of cooling	
24.	Type of radiator if water-cooled	
25.	Type of heater for warming cylinder heads	
26.	Capacity of heater in kW	
27.	Method of protection against high temperature	
28.	Method of protection against low oil pressure	
29.	Type of governor	
30.	Speed variation in % a. Temporary b. Permanent	
31.	Minimum time required for as assumption of full load in seconds	
32.	Recommended interval in running hours for : a. Lubricating oil change b. Oil filter element change c. Decarbonising	
33.	Type of base	
34.	Can plant be placed on solid concrete floor?	
35.	Are all accessories and ducts included?	
36.	Is engine naturally aspirated?	
37.	Are performance curves attached?	
38.	Diameter of exhaust pipe	
39.	Noise level in plant room in dBA	N/A
40.	Noise level at tail of exhaust pipe in dBA	
41.	BMEP (4 stroke) at continuous rating (kPa)	
42.	% Load acceptance to SANS 8528, with 10% transient speed drop	

4.2. Alternator

NO	ITEM	REMARKS
1.	Maker's name and model no.	
2.	Country of Origin and year of manufacture	
3.	Type of enclosure	
4.	Nominal speed in r.p.m.	
5.	Number of bearings	
6.	Terminal voltage	
7.	Sea level rating kVA at 0,9 power factor	
8.	De-rating for site conditions	
9.	Input required in kW	
10.	Method of excitation	
11.	Efficiency at 0,9 power factor and : a) Full load b) $\frac{3}{4}$ load c) $\frac{1}{2}$ load	
12.	Maximum permanent voltage variation in %	
13.	Transient voltage dip on full load	
14.	Voltage recovery on full load application in milli-seconds	
15.	Is alternator brushless?	
16.	Class of insulation of windings	
17.	Is alternator tropicalised?	
18.	Symmetrical short circuit current at terminals n Ampere	
19.	Type of Coupling	

4.3. Switchboard

NO	ITEM	REMARKS
1.	Maker's Name	
2.	Country of Origin	
3.	Is board floor mounted?	
4.	Finish of board	
5.	Make of volt, amp, and frequency meters	
6.	Dial size of meters in mm	
7.	Scale range of voltmeter	
8.	Scale range of ammeters	
9.	Ratio of current transformers	
10.	Make of hour meter	
11.	Range of cyclometer counter	
12.	Smallest unit shown on counter (Item 11)	
13.	Make of circuit breaker	
14.	Type of circuit breaker	
15.	Rating of circuit breaker in Amp and fault level in kA	
16.	Setting range of overload trips	
17.	Setting range of instantaneous trips	
18.	Make of change-over equipment	
19.	Make of voltage relay	
20.	Is control and protection equipment mounted on a small removable panel?	
21.	Type of control equipment	
22.	Make of mains isolator	
23.	Type of indicators for protective devices	
24.	Make of rectifier	
25.	Type of rectifier	
26.	Is battery charging	
27.	Are volt- and ammeters provided for charging circuit?	
28.	Is the alarm hooter of the continuous duty type?	
29.	Rating in Amps of : a. Change-over equipment b. Mains on load isolator c. By-pass switch d. Circuit breaker to outgoing feed	
30.	Is manufacture of switchboard/control panel to be sub-let?	

NO	ITEM	REMARKS
31.	If yes, state name and address of specialist manufacturer	

4.4. Battery

NO	ITEM	REMARKS
1.	Maker's Name	
2.	Country of Origin	
3.	Type of battery	
4.	Voltage of battery	
5.	Number of cells	
6.	Capacity in cold crank amp	

4.5. Dimensions

NO	ITEM	REMARKS
1.	Overall dimensions of set in mm	
2.	Overall mass	
3.	Is the canopy/container adequate for the installation of the set, switch board and fuel tank	

4.6. Deviation from the Specification as an Alternative (State Briefly)

NO	DESCRIPTION

4.7. Spare Parts and Maintenance Facilities

NO	ITEM	REMARKS
1	Approximate value of spares carried in stock for this particular diesel engine and alternator	
2	Where are these spares held in stock	
3	What facilities exist for the servicing of the equipment offered	
4	Where are these facilities available	

3. SECTION 3 – TECHNICAL SPECIFICATION

3.1. General

Supply, deliver, install, commission, test and maintain an emergency generating set at Hardach Branch Court, Germiston, South Africa.

This installation must comply fully with all the sections and drawings of this document. This technical specification is supplementary to the Equipment Requirements, Section 2, and must be read together where they are at variance the Technical Specification shall apply.

Supply, delivery, installation and commissioning of the complete outdoor emergency generator set inside an IP65 canopy/container on a concrete plinth as specified in this document and indicated on the drawings.

Concrete plinth to be provided as per drawing _____

The surface of the concrete plinth shall be 50mm higher than the existing ground level. The thickness and strength of the plinth shall be designed by the consulting engineer and are detailed on the drawings.

A tap to be provided to drain all the water that accumulates inside the bund wall. Final position of the tap will be determined on site. It is the engineer's responsibility to ensure plinth design complies with generator dimensions and weights. The bund wall shall contain 110% of the fuel, oil and water capacity of the generator. The bund wall shall not constrain the canopy doors from opening completely.

The contractor shall install an earthing system in the concrete plinth. The contractor shall install two (2) earth studs 1.8 meters long on opposite corners of the concrete plinth into the ground. The earth studs shall be connected by means of a 70mm² bare copper earth wire to the main earth bar in the control panel. The earth conductor shall be connected to the earth bar, canopy, base, skid and earth bar by means of suitably crimping lugs and brass bolts.

3.2. Site Information and Conditions

3.2.1. Location

The site is at Hardach Branch Court, 2 Hardach st, North Germiston, 1401.

3.2.2. Site Conditions

The following site conditions will be applicable and equipment shall be suitably rated to develop their assigned rating and duty at these conditions.

- | | |
|---|--------------|
| a) Height above sea level | : 1678 Meter |
| b) Maximum ambient temperature | : °C |
| c) Maximum ambient humidity at lowest temperature | : % |

3.3. Output and Voltage

After the de-rating factors for the engine and generator due to site conditions have been taken into account, the set must have a site output and voltage as follows: -

No load voltage	:	400/230 Volt
Rating	:	100kVA
Power at 0.9 power factor	:	80kW

Frequency : 50Hz
Fault Level : 6kA

The generating set is required to feed the following electrical load:

Discharge lighting
Fluorescent lighting
Heaters & plugs
Computers & radios
Petrol Pump

3.4. Switchboard/Control Panel Unit

All switch- and control gear shall be rated for a fault current level of 6kA.

The switchboard/control panel unit shall be enclosed in the IP65 canopy/container.

3.5. Cables

The contractor will be responsible for all electrical cable connections associated with the complete generating set installation.

The following cables will be supplied, installed and terminated at the Switchboard by others.
Adequate provision shall be made for the termination of these cables at the Switchboard:

	PVC/SWA/PVC Cable 4 core	BCEW
Kiosk – ATS Panel	70mm ²	35mm ²
ATS Panel – Kiosk	70mm ²	35mm ²

3.6. Engine

A sump drainpipe must be fitted with a shut-off valve placed in a convenient position outside the base frame to facilitate drainage.

Recommended oil types must be indicated on the engine, or base frames, by means of suitable labels.

All engine instruments shall have clear markings on the faceplates, indicating the normal operating zone(s), maximum and minimum allowable values/limits and danger zone(s).

The flywheel shall be covered by approved hoods.

3.7. Alternator

The Alternator shall be of the low harmonic type.

3.8. Load Acceptance

The generator set shall be capable of accepting 75% of the specified site electrical output 10 seconds after the starter motor is energised and the remaining 25%, 5 seconds thereafter, i.e. 100% load acceptance shall not exceed 15 seconds.

3.9. Enclosure

The standby set is a free standing unit and shall be mounted in an enclosure as detailed below:-

3.9.1 General

The enclosure, shall be completely vermin-proof, powder coated and shall be constructed of 3CR12 stainless steel or within 50km from the coast with grade 316 steel housing of a minimum thickness of ± 1.5 mm.

The enclosure shall allow easy access to the engine, alternator, radiator filler cap and control cubicle for maintenance purposes.

The door shall be flush with the rest of the canopy and of the side opening type. A minimum of four doors are required i.e. two on either side.

The door hinges and locking bars shall be of a heavy duty type and be manufactured of 3CR12 stainless steel or within 50km from the coast with grade 316 steel and shall be fitted with a grease nipple.

The doors and panels shall be suitably braced and stiffened to ensure rigidity and to prevent bending and warping.

Suitable door restraints shall be fitted to all the doors, enclosure including the control panel to prevent wind damage. The restraint shall consist of a steel rod in a steel groove or slide with a spring loaded catch, which is to be manually reset to close the door.

No flexible restraints will be accepted.

The diesel fuel level indicator and alternator rating plate shall be clearly visible with the doors open.

Unless specified the silencers shall be mounted within the enclosure.

Perforated sheeting shall be fitted over all the insulating material inside the canopy of all soundproof sets.

Rubber seals on doors shall be equal to or similar to rubber pinch weld, wind lace.

9.2 Design

The enclosure shall be designed to be weather-proof and sound-proofing as specified. Rivets or self-tapping screws will under no circumstances be allowed for fixing the various sections of the enclosure. Only cadmium coated nuts and bolts are acceptable.

9.3 Roof

The roof of the enclosure shall be constructed for proper drainage of water as per the drawing.

9.4 Lamp fitting

A lamp fitting and it's associated on/off door switch shall be provided inside the enclosure for illumination of the control panel. The power for the lamp shall be obtained from the starter battery.

9.5 Sound-proofing

The sound-proofing on canopy engine sets shall be such that the maximum noise level generated by the set under any load condition shall not exceed 65 dB measured in any direction at a distance of 5m from the centre of the set with the doors closed.

The supply and discharge air paths will require separate attenuators on soundproof sets.

9.6 Padlock and keys

The contractor shall supply padlocks and keys for all the doors of the enclosure. The padlock shall be off the "Viro A82 keyed alike with stainless steel shackles" type.

Suitable brass metal plates shall be installed behind each lock for the protection of the enclosure against scratching or damaging, where the locks are hanging.

3.10. Alarms

The successful tenderer must pay particular attention to the requirements of the alarms as described in the Equipment Requirements, Section 2.

One alarm hooter and red light shall be supplied and installed on the outside of the generator container in a position as indicated by the Department's Representative.

The hooter shall consist of an electronic unit similar and equal to a "Klaxon" - type SY2/725 hooter with a continuously rated output and 110 dB at a distance of 2 metres, and shall be IP55 weatherproof rated.

The warning light shall consist of a 40W flashing red light, which shall be mounted on a galvanised steel frame together with the hooter.

The hooter and light shall be switched on or off simultaneously after initiation or cancellation of an alarm condition. The supply and installation of the wiring between the control board and the alarm unit forms part of this contract.

The successful tenderer must ensure that the hooter control circuit resets automatically after cancellation due to a low fuel condition or battery charger failure, but the visible fault indication must remain, i.e. should the operator continue to run the set, the hooter must sound, should any other condition develop.

A remote alarm panel shall be supplied and installed by the contractor in the control room. This shall be of surface mounting, enamelled sheet metal (colour to approval), minimum depth construction, and shall incorporate a flashing red pilot alarm light, adjustable electronic sounder, and a silence push button. The silence button shall not switch off the pilot light - this shall only be switched off when the alarm is reset at the Generator Panel.

A 2,5mm² x 4-core PVC SWA PVC cable will be supplied, installed and terminated by others between the Generator Panel and the Charge Office. The Contractor shall connect this cable at both ends and shall supply and install all switch gear relays, etc. to ensure satisfactory operation of the Remote Alarm Panel.

3.11. Remote Control Generator Switch

A Remote Control Generator "ON/OFF/AUTO" switch will be supplied and installed by others in the control room, and a 2,5mm² x 4-core PVC SWA PVC cable will be supplied and installed by others between the control room and the Generator Panel.

The contractor shall connect this cable at both ends, and shall supply and install all switch gear, relays, etc. to ensure satisfactory operation of the remote control switch.

3.12. Fuel Drip Tray

A drip tray approximately 100mm deep shall be mounted below the generator and must be large enough to collect any fuel that drips from the generator fuel accessories. The drip tray shall be manufactured from black mild steel. The thickness of the drip tray sheet steel shall not be less than 2mm.

3.13. Completion Time

The Generator Set is required to be commissioned in conjunction with the building contract.

3.14. Inform

The successful tenderer shall inform the Engineer when the set is ready for installation.

3.15. Fuel Supply Tank

The fuel tank shall be an integral part of the base frame of the generator set. The tank shall have sufficient capacity to run the engine on full load for a period of 72 hours. The base tank shall be an open channel self-bund walled type that shall be of sufficient capacity to contain a spillage equivalent to 110% in volume of the base tank. The containment tank shall be manufactured from black mild steel with a thickness of not less than 2mm.

A float level alarm connected to the generator controller shall be incorporated into the bund area located such that the alarm will be activated when 50% of the volume of the bund area has been reached in the event of any diesel fuel leakage.

SECTION 4 – SCHEDULES OF TECHNICAL INFORMATION
(TO BE FULLY COMPLETED BY TENDERER)

TABLE OF CONTENTS

4.1.	Engine.....	25
4.2.	Alternator	27
4.3.	Switchboard	28
4.4.	Battery	29
4.5.	Dimensions	29
4.6.	Deviation from the Specification as an Alternative (State Briefly)	29
4.7.	Spare Parts and Maintenance Facilities	29

4. SECTION 4 – SCHEDULES OF TECHNICAL INFORMATION

4.1. Engine

NO	ITEM	REMARKS
1.	Manufacturer's Name	
2.	Country of Origin	
3.	Manufacturer's model No. and year of manufacture	
4.	Continuous sea level rating after allowing for ancillary equipment : a) In b.h.p. b) In kW	
5.	Percentage de-rating for site conditions, in accordance with SANS 8528 a) For altitude b) For temperature c) For humidity d) Total de-rating	
6.	Net output on site in kW	
7.	Nominal speed in r.p.m.	
8.	Number of cylinders	
9.	Strokes per working cycle	
10.	Stroke in mm	
11.	Cylinder bore in mm	
12.	Swept volume in cm ³	
13.	Mean piston speed in m/min	
14.	Compression ratio	
15.	Cyclic irregularity	
16.	Fuel consumption of the complete generating set on site in l/h of alternator output at : a) Full load b) $\frac{3}{4}$ load c) $\frac{1}{2}$ load NOTE : A tolerance of 5% shall be allowed above the stated value of fuel consumption.	
17.	Make of fuel injection system.	
18.	Capacity of fuel tank in litres	
19.	Is gauge glass fitted to tank?	

NO	ITEM	REMARKS
20.	Is electric pump for filling the fuel tank included?	
21.	Method of starting	
22.	Voltage of starting system	
23.	Method of cooling	
24.	Type of radiator if water-cooled	
25.	Type of heater for warming cylinder heads	
26.	Capacity of heater in kW	
27.	Method of protection against high temperature	
28.	Method of protection against low oil pressure	
29.	Type of governor	
30.	Speed variation in % a. Temporary b. Permanent	
31.	Minimum time required for as assumption of full load in seconds	
32.	Recommended interval in running hours for : a. Lubricating oil change b. Oil filter element change c. Decarbonising	
33.	Type of base	
34.	Can plant be placed on solid concrete floor?	
35.	Are all accessories and ducts included?	
36.	Is engine naturally aspirated?	
37.	Are performance curves attached?	
38.	Diameter of exhaust pipe	
39.	Noise level in plant room in dBA	N/A
40.	Noise level at tail of exhaust pipe in dBA	
41.	BMEP (4 stroke) at continuous rating (kPa)	
42.	% Load acceptance to SANS 8528, with 10% transient speed drop	

4.2. Alternator

NO	ITEM	REMARKS
1.	Maker's name and model no.	
2.	Country of Origin and year of manufacture	
3.	Type of enclosure	
4.	Nominal speed in r.p.m.	
5.	Number of bearings	
6.	Terminal voltage	
7.	Sea level rating kVA at 0,9 power factor	
8.	De-rating for site conditions	
9.	Input required in kW	
10.	Method of excitation	
11.	Efficiency at 0,9 power factor and : a) Full load b) $\frac{3}{4}$ load c) $\frac{1}{2}$ load	
12.	Maximum permanent voltage variation in %	
13.	Transient voltage dip on full load	
14.	Voltage recovery on full load application in milli-seconds	
15.	Is alternator brushless?	
16.	Class of insulation of windings	
17.	Is alternator tropicalised?	
18.	Symmetrical short circuit current at terminals n Ampere	
19.	Type of Coupling	

4.3. Switchboard

NO	ITEM	REMARKS
1.	Maker's Name	
2.	Country of Origin	
3.	Is board floor mounted?	
4.	Finish of board	
5.	Make of volt, amp, and frequency meters	
6.	Dial size of meters in mm	
7.	Scale range of voltmeter	
8.	Scale range of ammeters	
9.	Ratio of current transformers	
10.	Make of hour meter	
11.	Range of cyclometer counter	
12.	Smallest unit shown on counter (Item 11)	
13.	Make of circuit breaker	
14.	Type of circuit breaker	
15.	Rating of circuit breaker in Amp and fault level in kA	
16.	Setting range of overload trips	
17.	Setting range of instantaneous trips	
18.	Make of change-over equipment	
19.	Make of voltage relay	
20.	Is control and protection equipment mounted on a small removable panel?	
21.	Type of control equipment	
22.	Make of mains isolator	
23.	Type of indicators for protective devices	
24.	Make of rectifier	
25.	Type of rectifier	
26.	Is battery charging	
27.	Are volt- and ammeters provided for charging circuit?	
28.	Is the alarm hooter of the continuous duty type?	
29.	Rating in Amps of : a. Change-over equipment b. Mains on load isolator c. By-pass switch d. Circuit breaker to outgoing feed	
30.	Is manufacture of switchboard/control panel to be sub-let?	

NO	ITEM	REMARKS
31.	If yes, state name and address of specialist manufacturer	

4.4. Battery

NO	ITEM	REMARKS
1.	Maker's Name	
2.	Country of Origin	
3.	Type of battery	
4.	Voltage of battery	
5.	Number of cells	
6.	Capacity in cold crank amp	

4.5. Dimensions

NO	ITEM	REMARKS
1.	Overall dimensions of set in mm	
2.	Overall mass	
3.	Is the canopy/container adequate for the installation of the set, switch board and fuel tank	

4.6. Deviation from the Specification as an Alternative (State Briefly)

NO	DESCRIPTION

4.7. Spare Parts and Maintenance Facilities

NO	ITEM	REMARKS
1	Approximate value of spares carried in stock for this particular diesel engine and alternator	
2	Where are these spares held in stock	
3	What facilities exist for the servicing of the equipment offered	
4	Where are these facilities available	

3. SECTION 3 – TECHNICAL SPECIFICATION

3.1. General

Supply, deliver, install, commission, test and maintain an emergency generating set at Fochville Magistrate Court, South Africa.

This installation must comply fully with all the sections and drawings of this document. This technical specification is supplementary to the Equipment Requirements, Section 2, and must be read together where they are at variance the Technical Specification shall apply.

Supply, delivery, installation and commissioning of the complete outdoor emergency generator set inside an IP65 canopy/container on a concrete plinth as specified in this document and indicated on the drawings.

Concrete plinth to be provided as per drawing _____

The surface of the concrete plinth shall be 50mm higher than the existing ground level. The thickness and strength of the plinth shall be designed by the consulting engineer and are detailed on the drawings.

A tap to be provided to drain all the water that accumulates inside the bund wall. Final position of the tap will be determined on site. It is the engineer's responsibility to ensure plinth design complies with generator dimensions and weights. The bund wall shall contain 110% of the fuel, oil and water capacity of the generator. The bund wall shall not constrain the canopy doors from opening completely.

The contractor shall install an earthing system in the concrete plinth. The contractor shall install two (2) earth studs 1.8 meters long on opposite corners of the concrete plinth into the ground. The earth studs shall be connected by means of a 70mm² bare copper earth wire to the main earth bar in the control panel. The earth conductor shall be connected to the earth bar, canopy, base, skid and earth bar by means of suitably crimping lugs and brass bolts.

3.2. Site Information and Conditions

3.2.1. Location

The site is at Fochville Magistrate Court, Kerk St, Fochville, 2515.

3.2.2. Site Conditions

The following site conditions will be applicable and equipment shall be suitably rated to develop their assigned rating and duty at these conditions.

- | | | |
|---|---|------------|
| a) Height above sea level | : | 1619 Meter |
| b) Maximum ambient temperature | : | °C |
| c) Maximum ambient humidity at lowest temperature | : | % |

3.3. Output and Voltage

After the de-rating factors for the engine and generator due to site conditions have been taken into account, the set must have a site output and voltage as follows: -

No load voltage	:	400/230 Volt
Rating	:	100kVA
Power at 0.9 power factor	:	80kW

Frequency : 50Hz
Fault Level : 6kA

The generating set is required to feed the following electrical load:

Discharge lighting
Fluorescent lighting
Heaters & plugs
Computers & radios
Petrol Pump

3.4. Switchboard/Control Panel Unit

All switch- and control gear shall be rated for a fault current level of 6kA.

The switchboard/control panel unit shall be enclosed in the IP65 canopy/container.

3.5. Cables

The contractor will be responsible for all electrical cable connections associated with the complete generating set installation.

The following cables will be supplied, installed and terminated at the Switchboard by others.
Adequate provision shall be made for the termination of these cables at the Switchboard:

	PVC/SWA/PVC Cable 4 core	BCEW
Kiosk – ATS Panel	70mm ²	35mm ²
ATS Panel – Kiosk	70 mm ²	35mm ²

3.6. Engine

A sump drainpipe must be fitted with a shut-off valve placed in a convenient position outside the base frame to facilitate drainage.

Recommended oil types must be indicated on the engine, or base frames, by means of suitable labels.

All engine instruments shall have clear markings on the faceplates, indicating the normal operating zone(s), maximum and minimum allowable values/limits and danger zone(s).

The flywheel shall be covered by approved hoods.

3.7. Alternator

The Alternator shall be of the low harmonic type.

3.8. Load Acceptance

The generator set shall be capable of accepting 75% of the specified site electrical output 10 seconds after the starter motor is energised and the remaining 25%, 5 seconds thereafter, i.e. 100% load acceptance shall not exceed 15 seconds.

3.9. Enclosure

The standby set is a free standing unit and shall be mounted in an enclosure as detailed below:-

3.9.1 General

The enclosure, shall be completely vermin-proof, powder coated and shall be constructed of 3CR12 stainless steel or within 50km from the coast with grade 316 steel housing of a minimum thickness of ± 1.5 mm.

The enclosure shall allow easy access to the engine, alternator, radiator filler cap and control cubicle for maintenance purposes.

The door shall be flush with the rest of the canopy and of the side opening type. A minimum of four doors are required i.e. two on either side.

The door hinges and locking bars shall be of a heavy duty type and be manufactured of 3CR12 stainless steel or within 50km from the coast with grade 316 steel and shall be fitted with a grease nipple.

The doors and panels shall be suitably braced and stiffened to ensure rigidity and to prevent bending and warping.

Suitable door restraints shall be fitted to all the doors, enclosure including the control panel to prevent wind damage. The restraint shall consist of a steel rod in a steel groove or slide with a spring loaded catch, which is to be manually reset to close the door.

No flexible restraints will be accepted.

The diesel fuel level indicator and alternator rating plate shall be clearly visible with the doors open.

Unless specified the silencers shall be mounted within the enclosure.

Perforated sheeting shall be fitted over all the insulating material inside the canopy of all soundproof sets.

Rubber seals on doors shall be equal to or similar to rubber pinch weld, wind lace.

9.2 Design

The enclosure shall be designed to be weather-proof and sound-proofing as specified. Rivets or self-tapping screws will under no circumstances be allowed for fixing the various sections of the enclosure. Only cadmium coated nuts and bolts are acceptable.

9.3 Roof

The roof of the enclosure shall be constructed for proper drainage of water as per the drawing.

9.4 Lamp fitting

A lamp fitting and it's associated on/off door switch shall be provided inside the enclosure for illumination of the control panel. The power for the lamp shall be obtained from the starter battery.

9.5 Sound-proofing

The sound-proofing on canopy engine sets shall be such that the maximum noise level generated by the set under any load condition shall not exceed 65 dB measured in any direction at a distance of 5m from the centre of the set with the doors closed.

The supply and discharge air paths will require separate attenuators on soundproof sets.

9.6 Padlock and keys

The contractor shall supply padlocks and keys for all the doors of the enclosure. The padlock shall be off the "Viro A82 keyed alike with stainless steel shackles" type.

Suitable brass metal plates shall be installed behind each lock for the protection of the enclosure against scratching or damaging, where the locks are hanging.

3.10. Alarms

The successful tenderer must pay particular attention to the requirements of the alarms as described in the Equipment Requirements, Section 2.

One alarm hooter and red light shall be supplied and installed on the outside of the generator container in a position as indicated by the Department's Representative.

The hooter shall consist of an electronic unit similar and equal to a "Klaxon" - type SY2/725 hooter with a continuously rated output and 110 dB at a distance of 2 metres, and shall be IP55 weatherproof rated.

The warning light shall consist of a 40W flashing red light, which shall be mounted on a galvanised steel frame together with the hooter.

The hooter and light shall be switched on or off simultaneously after initiation or cancellation of an alarm condition. The supply and installation of the wiring between the control board and the alarm unit forms part of this contract.

The successful tenderer must ensure that the hooter control circuit resets automatically after cancellation due to a low fuel condition or battery charger failure, but the visible fault indication must remain, i.e. should the operator continue to run the set, the hooter must sound, should any other condition develop.

A remote alarm panel shall be supplied and installed by the contractor in the control room. This shall be of surface mounting, enamelled sheet metal (colour to approval), minimum depth construction, and shall incorporate a flashing red pilot alarm light, adjustable electronic sounder, and a silence push button. The silence button shall not switch off the pilot light - this shall only be switched off when the alarm is reset at the Generator Panel.

A 2,5mm² x 4-core PVC SWA PVC cable will be supplied, installed and terminated by others between the Generator Panel and the Charge Office. The Contractor shall connect this cable at both ends and shall supply and install all switch gear relays, etc. to ensure satisfactory operation of the Remote Alarm Panel.

3.11. Remote Control Generator Switch

A Remote Control Generator "ON/OFF/AUTO" switch will be supplied and installed by others in the control room, and a 2,5mm² x 4-core PVC SWA PVC cable will be supplied and installed by others between the control room and the Generator Panel.

The contractor shall connect this cable at both ends, and shall supply and install all switch gear, relays, etc. to ensure satisfactory operation of the remote control switch.

3.12. Fuel Drip Tray

A drip tray approximately 100mm deep shall be mounted below the generator and must be large enough to collect any fuel that drips from the generator fuel accessories. The drip tray shall be manufactured from black mild steel. The thickness of the drip tray sheet steel shall not be less than 2mm.

3.13. Completion Time

The Generator Set is required to be commissioned in conjunction with the building contract.

3.14. Inform

The successful tenderer shall inform the Engineer when the set is ready for installation.

3.15. Fuel Supply Tank

The fuel tank shall be an integral part of the base frame of the generator set. The tank shall have sufficient capacity to run the engine on full load for a period of 72 hours. The base tank shall be an open channel self-bund walled type that shall be of sufficient capacity to contain a spillage equivalent to 110% in volume of the base tank. The containment tank shall be manufactured from black mild steel with a thickness of not less than 2mm.

A float level alarm connected to the generator controller shall be incorporated into the bund area located such that the alarm will be activated when 50% of the volume of the bund area has been reached in the event of any diesel fuel leakage.

**SECTION 4 – SCHEDULES OF TECHNICAL INFORMATION
(TO BE FULLY COMPLETED BY TENDERER)**

TABLE OF CONTENTS

4.1.	Engine	25
4.2.	Alternator	27
4.3.	Switchboard	28
4.4.	Battery	29
4.5.	Dimensions	29
4.6.	Deviation from the Specification as an Alternative (State Briefly)	29
4.7.	Spare Parts and Maintenance Facilities	29

4. SECTION 4 – SCHEDULES OF TECHNICAL INFORMATION

4.1. Engine

NO	ITEM	REMARKS
1.	Manufacturer's Name	
2.	Country of Origin	
3.	Manufacturer's model No. and year of manufacture	
4.	Continuous sea level rating after allowing for ancillary equipment : a) In b.h.p. b) In kW	
5.	Percentage de-rating for site conditions, in accordance with SANS 8528 a) For altitude b) For temperature c) For humidity d) Total de-rating	
6.	Net output on site in kW	
7.	Nominal speed in r.p.m.	
8.	Number of cylinders	
9.	Strokes per working cycle	
10.	Stroke in mm	
11.	Cylinder bore in mm	
12.	Swept volume in cm ³	
13.	Mean piston speed in m/min	
14.	Compression ratio	
15.	Cyclic irregularity	
16.	Fuel consumption of the complete generating set on site in l/h of alternator output at : a) Full load b) $\frac{3}{4}$ load c) $\frac{1}{2}$ load NOTE : A tolerance of 5% shall be allowed above the stated value of fuel consumption.	
17.	Make of fuel injection system.	
18.	Capacity of fuel tank in litres	
19.	Is gauge glass fitted to tank?	

NO	ITEM	REMARKS
20.	Is electric pump for filling the fuel tank included?	
21.	Method of starting	
22.	Voltage of starting system	
23.	Method of cooling	
24.	Type of radiator if water-cooled	
25.	Type of heater for warming cylinder heads	
26.	Capacity of heater in kW	
27.	Method of protection against high temperature	
28.	Method of protection against low oil pressure	
29.	Type of governor	
30.	Speed variation in % a. Temporary b. Permanent	
31.	Minimum time required for as assumption of full load in seconds	
32.	Recommended interval in running hours for : a. Lubricating oil change b. Oil filter element change c. Decarbonising	
33.	Type of base	
34.	Can plant be placed on solid concrete floor?	
35.	Are all accessories and ducts included?	
36.	Is engine naturally aspirated?	
37.	Are performance curves attached?	
38.	Diameter of exhaust pipe	
39.	Noise level in plant room in dBA	N/A
40.	Noise level at tail of exhaust pipe in dBA	
41.	BMEP (4 stroke) at continuous rating (kPa)	
42.	% Load acceptance to SANS 8528, with 10% transient speed drop	

4.2. Alternator

NO	ITEM	REMARKS
1.	Maker's name and model no.	
2.	Country of Origin and year of manufacture	
3.	Type of enclosure	
4.	Nominal speed in r.p.m.	
5.	Number of bearings	
6.	Terminal voltage	
7.	Sea level rating kVA at 0,9 power factor	
8.	De-rating for site conditions	
9.	Input required in kW	
10.	Method of excitation	
11.	Efficiency at 0,9 power factor and : a) Full load b) $\frac{3}{4}$ load c) $\frac{1}{2}$ load	
12.	Maximum permanent voltage variation in %	
13.	Transient voltage dip on full load	
14.	Voltage recovery on full load application in milli-seconds	
15.	Is alternator brushless?	
16.	Class of insulation of windings	
17.	Is alternator tropicalised?	
18.	Symmetrical short circuit current at terminals n Ampere	
19.	Type of Coupling	

4.3. Switchboard

NO	ITEM	REMARKS
1.	Maker's Name	
2.	Country of Origin	
3.	Is board floor mounted?	
4.	Finish of board	
5.	Make of volt, amp, and frequency meters	
6.	Dial size of meters in mm	
7.	Scale range of voltmeter	
8.	Scale range of ammeters	
9.	Ratio of current transformers	
10.	Make of hour meter	
11.	Range of cyclometer counter	
12.	Smallest unit shown on counter (Item 11)	
13.	Make of circuit breaker	
14.	Type of circuit breaker	
15.	Rating of circuit breaker in Amp and fault level in kA	
16.	Setting range of overload trips	
17.	Setting range of instantaneous trips	
18.	Make of change-over equipment	
19.	Make of voltage relay	
20.	Is control and protection equipment mounted on a small removable panel?	
21.	Type of control equipment	
22.	Make of mains isolator	
23.	Type of indicators for protective devices	
24.	Make of rectifier	
25.	Type of rectifier	
26.	Is battery charging	
27.	Are volt- and ammeters provided for charging circuit?	
28.	Is the alarm hooter of the continuous duty type?	
29.	Rating in Amps of : a. Change-over equipment b. Mains on load isolator c. By-pass switch d. Circuit breaker to outgoing feed	
30.	Is manufacture of switchboard/control panel to be sub-let?	

NO	ITEM	REMARKS
31.	If yes, state name and address of specialist manufacturer	

4.4. Battery

NO	ITEM	REMARKS
1.	Maker's Name	
2.	Country of Origin	
3.	Type of battery	
4.	Voltage of battery	
5.	Number of cells	
6.	Capacity in cold crank amp	

4.5. Dimensions

NO	ITEM	REMARKS
1.	Overall dimensions of set in mm	
2.	Overall mass	
3.	Is the canopy/container adequate for the installation of the set, switch board and fuel tank	

4.6. Deviation from the Specification as an Alternative (State Briefly)

NO	DESCRIPTION

4.7. Spare Parts and Maintenance Facilities

NO	ITEM	REMARKS
1	Approximate value of spares carried in stock for this particular diesel engine and alternator	
2	Where are these spares held in stock	
3	What facilities exist for the servicing of the equipment offered	
4	Where are these facilities available	

3. SECTION 3 – TECHNICAL SPECIFICATION

3.1. General

Supply, deliver, install, commission, test and maintain an emergency generating set at Dunnotar Magistrate Court, South Africa.

This installation must comply fully with all the sections and drawings of this document. This technical specification is supplementary to the Equipment Requirements, Section 2, and must be read together where they are at variance the Technical Specification shall apply.

Supply, delivery, installation and commissioning of the complete outdoor emergency generator set inside an IP65 canopy/container on a concrete plinth as specified in this document and indicated on the drawings.

Concrete plinth to be provided as per drawing _____

The surface of the concrete plinth shall be 50mm higher than the existing ground level. The thickness and strength of the plinth shall be designed by the consulting engineer and are detailed on the drawings.

A tap to be provided to drain all the water that accumulates inside the bund wall. Final position of the tap will be determined on site. It is the engineer's responsibility to ensure plinth design complies with generator dimensions and weights. The bund wall shall contain 110% of the fuel, oil and water capacity of the generator. The bund wall shall not constrain the canopy doors from opening completely.

The contractor shall install an earthing system in the concrete plinth. The contractor shall install two (2) earth studs 1.8 meters long on opposite corners of the concrete plinth into the ground. The earth studs shall be connected by means of a 70mm² bare copper earth wire to the main earth bar in the control panel. The earth conductor shall be connected to the earth bar, canopy, base, skid and earth bar by means of suitably crimping lugs and brass bolts.

3.2. Site Information and Conditions

3.2.1. Location

The site is at Dunnotar Magistrate Court, Dunnotar

3.2.2. Site Conditions

The following site conditions will be applicable and equipment shall be suitably rated to develop their assigned rating and duty at these conditions.

- | | | |
|---|---|-------------------|
| a) Height above sea level | : | <u>1619</u> Meter |
| b) Maximum ambient temperature | : | °C |
| c) Maximum ambient humidity at lowest temperature | : | % |

3.3. Output and Voltage

After the de-rating factors for the engine and generator due to site conditions have been taken into account, the set must have a site output and voltage as follows: -

No load voltage	:	400/230 Volt
Rating	:	100kVA
Power at 0.9 power factor	:	80kW

Frequency : 50Hz
Fault Level : 6kA

The generating set is required to feed the following electrical load:

Discharge lighting
Fluorescent lighting
Heaters & plugs
Computers & radios
Petrol Pump

3.4. Switchboard/Control Panel Unit

All switch- and control gear shall be rated for a fault current level of 6kA.

The switchboard/control panel unit shall be enclosed in the IP65 canopy/container.

3.5. Cables

The contractor will be responsible for all electrical cable connections associated with the complete generating set installation.

The following cables will be supplied, installed and terminated at the Switchboard by others.
Adequate provision shall be made for the termination of these cables at the Switchboard:

	PVC/SWA/PVC Cable 4 core	BCEW
Kiosk – ATS Panel	70mm ²	35mm ²
ATS Panel – Kiosk	70 mm ²	35mm ²

3.6. Engine

A sump drainpipe must be fitted with a shut-off valve placed in a convenient position outside the base frame to facilitate drainage.

Recommended oil types must be indicated on the engine, or base frames, by means of suitable labels.

All engine instruments shall have clear markings on the faceplates, indicating the normal operating zone(s), maximum and minimum allowable values/limits and danger zone(s).

The flywheel shall be covered by approved hoods.

3.7. Alternator

The Alternator shall be of the low harmonic type.

3.8. Load Acceptance

The generator set shall be capable of accepting 75% of the specified site electrical output 10 seconds after the starter motor is energised and the remaining 25%, 5 seconds thereafter, i.e. 100% load acceptance shall not exceed 15 seconds.

3.9. Enclosure

The standby set is a free standing unit and shall be mounted in an enclosure as detailed below:-

3.9.1 General

The enclosure, shall be completely vermin-proof, powder coated and shall be constructed of 3CR12 stainless steel or within 50km from the coast with grade 316 steel housing of a minimum thickness of ± 1.5 mm.

The enclosure shall allow easy access to the engine, alternator, radiator filler cap and control cubicle for maintenance purposes.

The door shall be flush with the rest of the canopy and of the side opening type. A minimum of four doors are required i.e. two on either side.

The door hinges and locking bars shall be of a heavy duty type and be manufactured of 3CR12 stainless steel or within 50km from the coast with grade 316 steel and shall be fitted with a grease nipple.

The doors and panels shall be suitably braced and stiffened to ensure rigidity and to prevent bending and warping.

Suitable door restraints shall be fitted to all the doors, enclosure including the control panel to prevent wind damage. The restraint shall consist of a steel rod in a steel groove or slide with a spring loaded catch, which is to be manually reset to close the door.

No flexible restraints will be accepted.

The diesel fuel level indicator and alternator rating plate shall be clearly visible with the doors open.

Unless specified the silencers shall be mounted within the enclosure.

Perforated sheeting shall be fitted over all the insulating material inside the canopy of all soundproof sets.

Rubber seals on doors shall be equal to or similar to rubber pinch weld, wind lace.

9.2 Design

The enclosure shall be designed to be weather-proof and sound-proofing as specified. Rivets or self-tapping screws will under no circumstances be allowed for fixing the various sections of the enclosure. Only cadmium coated nuts and bolts are acceptable.

9.3 Roof

The roof of the enclosure shall be constructed for proper drainage of water as per the drawing.

9.4 Lamp fitting

A lamp fitting and it's associated on/off door switch shall be provided inside the enclosure for illumination of the control panel. The power for the lamp shall be obtained from the starter battery.

9.5 Sound-proofing

The sound-proofing on canopy engine sets shall be such that the maximum noise level generated by the set under any load condition shall not exceed 65 dB measured in any direction at a distance of 5m from the centre of the set with the doors closed.

The supply and discharge air paths will require separate attenuators on soundproof sets.

9.6 Padlock and keys

The contractor shall supply padlocks and keys for all the doors of the enclosure. The padlock shall be off the "Viro A82 keyed alike with stainless steel shackles" type.

Suitable brass metal plates shall be installed behind each lock for the protection of the enclosure against scratching or damaging, where the locks are hanging.

3.10. Alarms

The successful tenderer must pay particular attention to the requirements of the alarms as described in the Equipment Requirements, Section 2.

One alarm hooter and red light shall be supplied and installed on the outside of the generator container in a position as indicated by the Department's Representative.

The hooter shall consist of an electronic unit similar and equal to a "Klaxon" - type SY2/725 hooter with a continuously rated output and 110 dB at a distance of 2 metres, and shall be IP55 weatherproof rated.

The warning light shall consist of a 40W flashing red light, which shall be mounted on a galvanised steel frame together with the hooter.

The hooter and light shall be switched on or off simultaneously after initiation or cancellation of an alarm condition. The supply and installation of the wiring between the control board and the alarm unit forms part of this contract.

The successful tenderer must ensure that the hooter control circuit resets automatically after cancellation due to a low fuel condition or battery charger failure, but the visible fault indication must remain, i.e. should the operator continue to run the set, the hooter must sound, should any other condition develop.

A remote alarm panel shall be supplied and installed by the contractor in the control room. This shall be of surface mounting, enamelled sheet metal (colour to approval), minimum depth construction, and shall incorporate a flashing red pilot alarm light, adjustable electronic sounder, and a silence push button. The silence button shall not switch off the pilot light - this shall only be switched off when the alarm is reset at the Generator Panel.

A 2,5mm² x 4-core PVC SWA PVC cable will be supplied, installed and terminated by others between the Generator Panel and the Charge Office. The Contractor shall connect this cable at both ends and shall supply and install all switch gear relays, etc. to ensure satisfactory operation of the Remote Alarm Panel.

3.11. Remote Control Generator Switch

A Remote Control Generator "ON/OFF/AUTO" switch will be supplied and installed by others in the control room, and a 2,5mm² x 4-core PVC SWA PVC cable will be supplied and installed by others between the control room and the Generator Panel.

The contractor shall connect this cable at both ends, and shall supply and install all switch gear, relays, etc. to ensure satisfactory operation of the remote control switch.

3.12. Fuel Drip Tray

A drip tray approximately 100mm deep shall be mounted below the generator and must be large enough to collect any fuel that drips from the generator fuel accessories. The drip tray shall be manufactured from black mild steel. The thickness of the drip tray sheet steel shall not be less than 2mm.

3.13. Completion Time

The Generator Set is required to be commissioned in conjunction with the building contract.

3.14. Inform

The successful tenderer shall inform the Engineer when the set is ready for installation.

3.15. Fuel Supply Tank

The fuel tank shall be an integral part of the base frame of the generator set. The tank shall have sufficient capacity to run the engine on full load for a period of 72 hours. The base tank shall be an open channel self-bund walled type that shall be of sufficient capacity to contain a spillage equivalent to 110% in volume of the base tank. The containment tank shall be manufactured from black mild steel with a thickness of not less than 2mm.

A float level alarm connected to the generator controller shall be incorporated into the bund area located such that the alarm will be activated when 50% of the volume of the bund area has been reached in the event of any diesel fuel leakage.

**SECTION 4 – SCHEDULES OF TECHNICAL INFORMATION
(TO BE FULLY COMPLETED BY TENDERER)**

TABLE OF CONTENTS

4.1.	Engine.....	25
4.2.	Alternator	27
4.3.	Switchboard	28
4.4.	Battery	29
4.5.	Dimensions	29
4.6.	Deviation from the Specification as an Alternative (State Briefly)	29
4.7.	Spare Parts and Maintenance Facilities	29

4. SECTION 4 – SCHEDULES OF TECHNICAL INFORMATION

4.1. Engine

NO	ITEM	REMARKS
1.	Manufacturer's Name	
2.	Country of Origin	
3.	Manufacturer's model No. and year of manufacture	
4.	Continuous sea level rating after allowing for ancillary equipment : a) In b.h.p. b) In kW	
5.	Percentage de-rating for site conditions, in accordance with SANS 8528 a) For altitude b) For temperature c) For humidity d) Total de-rating	
6.	Net output on site in kW	
7.	Nominal speed in r.p.m.	
8.	Number of cylinders	
9.	Strokes per working cycle	
10.	Stroke in mm	
11.	Cylinder bore in mm	
12.	Swept volume in cm ³	
13.	Mean piston speed in m/min	
14.	Compression ratio	
15.	Cyclic irregularity	
16.	Fuel consumption of the complete generating set on site in l/h of alternator output at : a) Full load b) $\frac{3}{4}$ load c) $\frac{1}{2}$ load NOTE : A tolerance of 5% shall be allowed above the stated value of fuel consumption.	
17.	Make of fuel injection system.	
18.	Capacity of fuel tank in litres	
19.	Is gauge glass fitted to tank?	

NO	ITEM	REMARKS
20.	Is electric pump for filling the fuel tank included?	
21.	Method of starting	
22.	Voltage of starting system	
23.	Method of cooling	
24.	Type of radiator if water-cooled	
25.	Type of heater for warming cylinder heads	
26.	Capacity of heater in kW	
27.	Method of protection against high temperature	
28.	Method of protection against low oil pressure	
29.	Type of governor	
30.	Speed variation in % a. Temporary b. Permanent	
31.	Minimum time required for as assumption of full load in seconds	
32.	Recommended interval in running hours for : a. Lubricating oil change b. Oil filter element change c. Decarbonising	
33.	Type of base	
34.	Can plant be placed on solid concrete floor?	
35.	Are all accessories and ducts included?	
36.	Is engine naturally aspirated?	
37.	Are performance curves attached?	
38.	Diameter of exhaust pipe	
39.	Noise level in plant room in dBA	N/A
40.	Noise level at tail of exhaust pipe in dBA	
41.	BMEP (4 stroke) at continuous rating (kPa)	
42.	% Load acceptance to SANS 8528, with 10% transient speed drop	

4.2. Alternator

NO	ITEM	REMARKS
1.	Maker's name and model no.	
2.	Country of Origin and year of manufacture	
3.	Type of enclosure	
4.	Nominal speed in r.p.m.	
5.	Number of bearings	
6.	Terminal voltage	
7.	Sea level rating kVA at 0,9 power factor	
8.	De-rating for site conditions	
9.	Input required in kW	
10.	Method of excitation	
11.	Efficiency at 0,9 power factor and : a) Full load b) $\frac{3}{4}$ load c) $\frac{1}{2}$ load	
12.	Maximum permanent voltage variation in %	
13.	Transient voltage dip on full load	
14.	Voltage recovery on full load application in milli-seconds	
15.	Is alternator brushless?	
16.	Class of insulation of windings	
17.	Is alternator tropicalised?	
18.	Symmetrical short circuit current at terminals n Ampere	
19.	Type of Coupling	

4.3. Switchboard

NO	ITEM	REMARKS
1.	Maker's Name	
2.	Country of Origin	
3.	Is board floor mounted?	
4.	Finish of board	
5.	Make of volt, amp, and frequency meters	
6.	Dial size of meters in mm	
7.	Scale range of voltmeter	
8.	Scale range of ammeters	
9.	Ratio of current transformers	
10.	Make of hour meter	
11.	Range of cyclometer counter	
12.	Smallest unit shown on counter (Item 11)	
13.	Make of circuit breaker	
14.	Type of circuit breaker	
15.	Rating of circuit breaker in Amp and fault level in kA	
16.	Setting range of overload trips	
17.	Setting range of instantaneous trips	
18.	Make of change-over equipment	
19.	Make of voltage relay	
20.	Is control and protection equipment mounted on a small removable panel?	
21.	Type of control equipment	
22.	Make of mains isolator	
23.	Type of indicators for protective devices	
24.	Make of rectifier	
25.	Type of rectifier	
26.	Is battery charging	
27.	Are volt- and ammeters provided for charging circuit?	
28.	Is the alarm hooter of the continuous duty type?	
29.	Rating in Amps of : a. Change-over equipment b. Mains on load isolator c. By-pass switch d. Circuit breaker to outgoing feed	
30.	Is manufacture of switchboard/control panel to be sub-let?	

NO	ITEM	REMARKS
31.	If yes, state name and address of specialist manufacturer	

4.4. Battery

NO	ITEM	REMARKS
1.	Maker's Name	
2.	Country of Origin	
3.	Type of battery	
4.	Voltage of battery	
5.	Number of cells	
6.	Capacity in cold crank amp	

4.5. Dimensions

NO	ITEM	REMARKS
1.	Overall dimensions of set in mm	
2.	Overall mass	
3.	Is the canopy/container adequate for the installation of the set, switch board and fuel tank	

4.6. Deviation from the Specification as an Alternative (State Briefly)

NO	DESCRIPTION

4.7. Spare Parts and Maintenance Facilities

NO	ITEM	REMARKS
1	Approximate value of spares carried in stock for this particular diesel engine and alternator	
2	Where are these spares held in stock	
3	What facilities exist for the servicing of the equipment offered	
4	Where are these facilities available	



public works

Department:
Public Works
REPUBLIC OF SOUTH AFRICA

SPECIFICATION

FOR THE

ELECTRICAL INSTALLATION

INDEX

PAGE NO.

SPECIFICATION FOR ELECTRICAL WORK	1
PART 1 - GENERAL	2
PART 2: INSTALLATION DETAILS	10
PART 3: QUALITY SPECIFICATION FOR MATERIALS AND EQUIPMENT OF ELECTRICAL INSTALLATIONS	17
PART 4: BILLS OF QUANTITIES	20
PART 5: ELECTRICAL WORK MATERIAL SCHEDULE	21
PARTICULARS OF ELECTRICAL CONTRACTOR	22
PART 6: DRAWINGS	22

SPECIFICATION FOR ELECTRICAL WORK

PART 1 - GENERAL

CONTENTS

1	TESTS.....	2
2	MAINTENANCE OF INSTALLATIONS	2
3	REGULATIONS.....	2
4	NOTICES AND FEES	2
5	SCHEDULE OF FITTINGS.....	2
6	QUALITY OF MATERIALS.....	2
7	CONDUIT AND ACCESSORIES.....	2
8	CONDUIT IN ROOF SPACES.....	3
9	SURFACE MOUNTED CONDUIT	4
10	CONDUIT IN CONCRETE SLABS.....	4
11	FLEXIBLE CONNECTIONS FOR CONNECTING UP OF STOVES, MACHINES, ETC. 5	
12	WIRING:.....	5
13	SWITCHES AND SOCKET OUTLETS	5
14	SWITCHGEAR.....	6
15	SWITCHBOARDS.....	6
16	WORKMANSHIP AND STAFF.....	6
17	VERIFICATION AND CERTIFICATION OF ELECTRICAL INSTALLATION (CERTIFICATE OF COMPLIANCE AND TEST REPORT	6
18	EARTHING OF INSTALLATION	6
19	MOUNTING AND POSITIONING OF LUMINAIRES	8

PART 1 - GENERAL

1 TESTS

After completion of the 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 Principle Agent/Electrical Engineer or the employer, any defects which may arise.

The Contractor shall 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.

2 MAINTENANCE OF INSTALLATIONS

With effect from the date of the Practical completion Certificate the Contractor shall at his own expense undertake the regular servicing of the installation during the maintenance period and shall make all adjustments necessary for the correct operation thereof.

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, he shall immediately upon being notified thereof take steps to remedy the defects and make any necessary adjustments.

Should such stoppages however be so frequent as to become troublesome, or should the installations otherwise prove unsatisfactory during the said period the Contractor shall, if called upon by the Principle Agent/Electrical Engineer or the Employer, at his own expense replace the whole of the installations or such parts thereof as the Principal Agent/Electrical Engineer or the Employer may deem necessary with apparatus specified by the Principal Agent/Electrical Engineer or the Employer.

3 REGULATIONS

The installation shall be erected and tested in accordance with the Acts and Regulations as indicated in the scope of works

4 NOTICES AND FEES

The Contractor shall give all notices required by and pay all necessary fees, including any inspection fees, which may be due to the local Supply Authority.

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.

5 SCHEDULE OF FITTINGS

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

6 QUALITY OF MATERIALS

Only materials of first class quality shall be used and all materials shall be subject to the approval of the Employer. Departmental specifications for various materials to be used on this Contract are attached to and form part of this specification.

Wherever applicable the material is to comply with the relevant South African Bureau of Standards, specifications, or to IEC Specifications, where no SANS Specifications exist.

Materials wherever possible, must be of South African manufacture.

7 CONDUIT AND ACCESSORIES

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 Part 2 of this specification.

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

The conduit and conduit accessories shall comply fully with the applicable SANS specifications 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.

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.

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.

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

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" for the specified number and size of conductors, unless otherwise directed in part 2 of this specification or indicated on the drawings.

Only one manufactured type of conduit and conduit accessories will be permitted throughout the installation.

Running joints in screwed conduit are to be avoided as far as possible 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.

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.

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 inspectorate staff, be completely removed and rectified and any wiring already drawn into such damaged conduits must be completely renewed at the Contractor's expense.

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.

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

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.

8 CONDUIT IN ROOF SPACES

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 saddles screwed to the roof timbers.

Nail or crampets will not be allowed.

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.

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.

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.

9 SURFACE MOUNTED CONDUIT

Wherever possible, the conduit installation is to be concealed in the building work; however, where unavoidable or otherwise specified under Part 2 of the specification, conduit installed on the surface must be plumbed or levelled and only straight lengths shall be used.

The use of inspection bends is to be avoided and instead the conduit shall be set uniformly and inspection coupling used where necessary.

No threads will be permitted to show when the conduit installation is complete, except where running couplings have been employed.

Running couplings are only to be used where unavoidable, and shall be fitted with a sliced couplings as a lock nut.

Conduit is to be run on approved spaced saddles rigidly secured to the walls.

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.

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.

Where several conduits are installed side by side, they shall be evenly spaced and grouped under one purpose-made saddle.

Distribution boards, draw-boxes, industrial switches and socket outlets etc., shall be neatly recessed into the surface to avoid double sets.

In situations where there are no ceilings the conduits are to be run along the wall plates and the beams.

Painting of surface conduit shall match the colour of the adjacent wall finishes.

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.

10 CONDUIT IN CONCRETE SLABS

In order not to delay building operations the Contractor must ensure that all conduits and other electrical equipment which are to be cast in the concrete columns and slabs are installed in good time.

The Contractor shall have a representative in attendance at all times when the casting of concrete takes place.

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.

Draw and/or inspection boxes shall be grouped under one common cover plate, and must preferably be installed in passages or male toilets.

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.

Before any concrete slabs are cast, all conduit droppers to switchboards shall be neatly spaced and rigidly fixed.

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

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.

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.

Aluminium and zinc alloy connectors will not be acceptable.

12 WIRING:

Except where otherwise specified in Part 2 of this specification, wiring shall be carried out in conduit throughout. Only one circuit per conduit will be permitted.

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.

Unless otherwise specified in Part 2 of this 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.

Wiring for lighting circuits is to be carried out with 1,5mm² conductors and a 1,5mm²-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 Part 2 of this 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".

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

The wiring shall be done in PVC insulated 600/1000 V grade cable to SANS 1507.

Where cable ends connect onto switches, luminaires etc., the end strands must be neatly and tightly twisted together and firmly secured. Cutting away of wire strands of any cable will not be allowed.

13 SWITCHES AND SOCKET OUTLETS

All switches and switch-socket outlet combination units shall conform to the Department Quality Specifications, which form part of this specification.

No other than 16 A 3 pin sockets are to be used, unless other special purpose types are distinctly specified or shown on the drawings.

All light switches shall be installed at 1,4m above finished floor level and all socket outlets as directed in the Schedule of Fittings which forms part of this specification or alternatively the height of socket outlets may be indicated on the drawings.

14 SWITCHGEAR

Switchgear, which includes circuit breakers, iron-clad switches, interlocked switch-socket outlet units, contactors, time switches, etc., is 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.

For uniform appearance of switchboards, only one approved make of each of the different classes of switchgear mentioned in the Quality Specifications shall be used throughout the installations.

15 SWITCHBOARDS

All boards shall be in accordance with the types as specified, be constructed according to the detail or type drawings and must be approved by the Employer before installation.

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.

Any construction or standard type aboard proposed, as an alternative to that specified must have the prior approval of the Employer.

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.

Clearly engraved labels are to be mounted on or below every switch. The working of the labels in English, is to be according to the lay-out drawings or as directed by the Electrical Engineer 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.

16 WORKMANSHIP AND STAFF

Except in the case of electrical installations supplied by a single-phase electricity supply at the point of supply, an accredited person shall exercise general control over all electrical installation work being carried out.

The workmanship shall be of the highest grade and to the satisfaction of the Employer.

All inferior work shall, on indication by the Employer's inspecting officers, immediately be removed and rectified by and at the expense of the Contractor.

17 VERIFICATION AND CERTIFICATION OF ELECTRICAL INSTALLATION (CERTIFICATE OF COMPLIANCE AND TEST REPORT

On completion of the service, a certificate of compliance must be issued to the Principal Agent/Electrical Engineer or Employer in terms of the Occupational Health and Safety Act, 1993 (Act 85 of 1993) in the format as set out in SANS 10142-1 & 2.

18 EARTHING OF INSTALLATION

Main earthing

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 Principal Agent/Electrical Engineer, who may require additional earthing to meet test standards.

Where required an earth mat shall be provided, the minimum size, unless otherwise specified, being 1,0m

x 1,0m and consisting of 4mm diameter hard-drawn bare copper wires at 250mm centres, brazed at all intersections.

Alternatively or additionally earth rods or trench earths may be required as specified or directed by the Electrical Engineer.

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.

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 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.

All other 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.

Roofs, gutters and down pipes

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.

Sub-distribution boards

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.

Sub-circuits

The earth conductors of fall sub-circuits shall be connected to the earth busbar in the supply board in accordance with SANS 10142.

Ring Mains

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 Engineer. 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.

Non-metallic Conduit

Where non-metallic conduit is specified or allowed, the installation shall comply with the Department's standard quality specification for "conduit and conduit accessories".

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.

Flexible Conduit

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.

Connection

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.

Unless earth conductors are connected to proper terminals, the end shall be tinned and lugged.

19 MOUNTING AND POSITIONING OF LUMINAIRES

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

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 representative.

Fluorescent luminaires installed against concrete ceilings shall be screwed to the outlet boxes and in addition 2 x 6mm expansion or other approved type fixing bolts are to be provided. The bolts are to be $\frac{3}{4}$ of the length of the luminaires apart.

Fluorescent luminaires to be mounted on board ceilings shall be secured by means of two 40mm x No. 10 round head screws and washers. The luminaires shall also be bonded to the circuit conduit by means of locknuts and brass bushes. The fixing screws are to be placed $\frac{3}{4}$ of the length of the fitting apart.

Earth conductors must be drawn in with the circuit wiring and connected to the earthing terminal of all fluorescent luminaires as well as other luminaires exposed to the weather in accordance with the "Wiring Code".

Incandescent luminaires are to be screwed directly to outlet boxes in concrete slabs. Against board ceilings the luminaires shall be secured to the bracing or joists by means of two 40mm x No. 8 round head screws.

PART 2: INSTALLATION DETAILS

[Omit which is not applicable. Clauses 1 to 10 of Part 2 are standard clauses (which should not be altered) and must be inserted in the document in the order as set out.

CONTENTS

1	CABLE SLEEVE PIPES	10
2	NOTICES	10
3	ELECTRICAL EQUIPMENT	10
4	DRAWINGS	10
5	BALANCING OF LOAD	10
6	SERVICE CONDITIONS	10
7	SWITCHES AND SOCKET OUTLETS	10
8	LIGHT FITTINGS AND LAMPS	10
9	EARTHING AND BONDING	10
10	MAINTENANCE OF ELECTRICAL SUPPLY	11
11	EXTENT OF WORK	11
12	SUPPLY AND CONNECTION	11
13	CONDUIT AND WIRING	11
14	POWER POINTS	12
15	CABLES	12
16	DISTRIBUTION BOARDS	15
17	SUBSTATION	16
18	SCHEDULE OF CABLES, CONDUIT AND WIRING	16
21	SCHEDULE OF DISTRIBUTION BOARDS	16
22	SUMMARY OF SWITCHGEAR AND CIRCUITS	16

PART 2: INSTALLATION DETAILS

1 CABLE SLEEVE PIPES

Where cables cross under roadways, other services and where cables enter buildings, the cables shall be installed in earthenware or high-density polyethylene pipes.

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 NOTICES

The Contractor shall issue all notices and make the necessary arrangements with Supply Authorities, the Postmaster-General, and S.A. Transport Services, Provincial or National Road Authorities and other authorities as may be required with respect to the installation.

3 ELECTRICAL EQUIPMENT

All equipment and fittings supplied must be in accordance with the attached quality specification (Part 3 of this document), suitable for the relevant supply voltage, and frequency and must be approved by the Employers Electrical Engineer.

4 DRAWINGS

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.

The position of power points, switches and light points that may be influenced by built-in furniture must be established on site, prior to these items being built in.

5 BALANCING OF LOAD

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

6 SERVICE CONDITIONS

All plant shall be designed for the climatic conditions appertaining to the service.

7 SWITCHES AND SOCKET OUTLETS

The installation of switches and socket outlets must conform to clause 13 of Part 1 of this specification.

8 LIGHT FITTINGS AND LAMPS

The installation and mounting of luminaires must conform to clause 19 of Part 1 of this specification.

All fittings to be supplied by the Contractor shall have the approval of the Employer.

The light fittings must be of the type specified in the Schedule of Light Fittings.

9 EARTHING AND BONDING

The Contractor will be responsible for all earthing and bonding of the building and installation. The earthing and bonding is to be carried out strictly as described in clause 18 of Part 1 of this specification and to the satisfaction of the Employer/s Electrical Engineer.

10 MAINTENANCE OF ELECTRICAL SUPPLY

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 and the Client and the Employer's Electrical Engineer.

11 EXTENT OF WORK

The work covered by this contract comprises the complete electrical installation, in working order, as shown on the drawings and as per this specification, including the supply and installation of all fittings and also the installation of such equipment supplied by the Employer.

12 SUPPLY AND CONNECTION

[The supply voltage, responsibility of the Supply Authority and the contractor must be specified]

EXAMPLE:

The supply will be at 400/230 Volt 50Hz.

Standby Plant

The 66kVA standby plant complete with automatic changeover control panel be supplied, installed and commissioned by others.

The Contractor will only be responsible for the supply and installation of the cable connections between the Supply Kiosk, the Charge- over Control Panel and the main DB,

The supply cables are listed in the Schedule of Cables and measured in the Bills of Quantities.

13 CONDUIT AND WIRING

Conduit and conduit accessories shall be black enameled/galvanized screwed conduit or black enameled/galvanized plain end conduit in accordance with SANS 61386.

All conduits, regardless of the system employed, shall be installed strictly as described in the applicable paragraphs of clauses 4 to 8 of Part 1 of the specification. Wiring of the installation shall be carried out as directed in clause 9 part 1 of this specification.

Where plain end conduit is offered all switches and light fittings must be supplied with a permanent earth terminal for the connection of the earth wire.

Lugs held by switch fixing screws or self tapping screws will not be acceptable.

13.1 Telephone Installation

The Contractor shall allow for the complete installation of all conduits, outlet boxes, the communication service provider Distribution boards, sleeve pipes, etc., required for the telephone system as shown on the drawings.

The sizes of all telephone conduits are indicated on the drawings and must be installed in the floor slab. Galvanized steel draw-wires shall be installed in all conduits.

End boxes must consist of a 50mm x 100 mm x 100mm outlet box fitted with suitable blank cover plates, flush mounted 0,4m above floor level.

The communication service provider Distribution Board must consist of a 150mm x 600mm x 600mm metal box and hinged door with a 20mm thick wooden backboard. The board must be flush mounted, 1,37m above the floor.

13.2 Intercom Installation

The supply and installation of the intercom system is not included in this Contract.

The Contractor shall allow for the complete supply and installation of all conduits and outlet boxes required for the intercom installation as shown on the drawings.

The size of all conduits, boxes and mounting heights of the end boxes are indicated on the drawings. Galvanized steel draw-wires shall be installed in all conduits and the boxes fitted with suitable blank cover plates.

13.3 Power Trunking

The Contractor shall be responsible for the supply and installation of all power trunking complete with corner pieces, end pieces, junction pieces, supply conduits, cover plates and power outlets as specified and indicated on the drawings.

The power trunking must comply with SANS 61084. The Contractor must ensure that the power trunking is installed to satisfaction of the Employer's Electrical Engineer before commencing with the wiring of the power trunking.

[The method of installing and wiring of the power trunking must be specified in detail.]

14 POWER POINTS

Allow for the installation of power points and equipment as listed in the schedule, indicated on the drawings and described below:

- 14.1 ELECTRIC STOVE
- 14.2 ELECTRIC COOKING TOP
- 14.3 WATER HEATERS, ETC.

[The power points required for the service must be specified in detail with reference to supplier of the equipment, method of installation and final connection. The size of the conduit/the conductors and cable must be listed in the Schedule of Power Points.]

Example: Water Heaters

The Contractor must electrically connect all water heaters as specified and listed in the Schedule of Power Points.

NOTE: The hot water installation must be approved by the Employers Electrical Engineer. Detail with regard to the size and type of water heaters that must be provided must be obtained from the Architect.

15 CABLES

The Contractor shall supply and completely install all distribution cables as indicated on the drawings, and listed in the Schedule of Cables.

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.

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.

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.

In the trenches the cables shall be laid on a 75mm thick bed of earth and be covered with a 150-mm layer of earth before the trench is filled in.

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.

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.

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.

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.

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.

15.1 LAYING, JOINTING AND MAKING OFF OF ELECTRICAL CABLES

[The requirements specified hereafter, are aimed essentially at high tension cable but are also valid for low tension cable, where applicable.]

1. The use of the term "Inspector", includes the engineer or inspector of the Department or an empowered person of the concerned supervising consulting engineer's firm.
2. 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 inspector.
3. 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.
4. 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.
5. 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:

- 5.1 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. The length of the jointing lugs must be at least six times the diameter of the conductor,
- 5.2 That the joint pit is dry and that all loose stones and material are removed,
- 5.3 That the walls and banks of the joint pit are reasonable firm and free from loose material which can fall into the pit,
- 5.4 That the necessary coffer-dams or retaining walls are made to stop the flow of water into the joint pit,
- 5.5 That the joint pit is provided with suitable groundsheets so that the jointing work is carried out in clean conditions,
- 5.6 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,
- 5.7 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,
- 5.8 That the cables and other materials are dry, undamaged and in all respects are suitable for the joint work or making off,
- 5.9 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)

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.

(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).

6. 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 $130 \pm 5^{\circ}\text{C}$.

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.

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.
8. The joint or making off of paper insulated cables must not be commenced during rainy weather.
9. Once a joint is in progress the jointer must proceed with the joint until it is complete and before he leaves the site.
10. The jointer must ensure that the material and his tools are dry at all times, reasonably clean and absolutely free from soil.
11. Relating to the jointing of the cable the following requirements apply:
 - 11.1 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.

- 11.2 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.
- 11.3 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.
- 11.4 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.

Use resin only as a flux. The slot opening in the ferrule must be completely filled, including all depressions.

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 aluminum oxide tape after it has cooled down to ensure that there are not any sharp points or edges.

NB: 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.

- 11.5 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.
- 11.6 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.
- 11.7 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.
- 11.8 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.
- 11.9 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.
- 11.10 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.
12. As far as cable end boxes are concerned the requirements as set out above are valid where applicable.

16. DISTRIBUTION BOARDS

In addition to clause 14 and clause 15 of Part 1 of this specification the following shall also be applicable to switchboards required for this service.

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 comply with the quality specification in Part 3 of this specification, and be approved by the Employer's Electrical Engineer.

The following types of distribution boards are required for the service:

[All buildings and the types of boards required for the service must be listed.]

The latest Departmental Quality Specification Section for Distribution Boards must be included in Part 3 of the specification.]

17. SUBSTATION

17.1 GENERAL SUB-STATION WORK

17.2 SUB-STATION EARTHING

17.3 CONTRACTOR'S RESPONSIBILITY

18. SCHEDULE OF CABLES, CONDUIT AND WIRING

Supply, install and connect the following cable, conduit and wiring:

FROM	TO	SIZE AND TYPE	Breaker
Kiosk	ATS	150mm ² 4-core PVCA cable and 25mm ² earth wire	250A
ATS	Main DB	150mm ² 4-core PVCA cable and 25mm ² earth wire	250A

21. SCHEDULE OF DISTRIBUTION BOARDS

The front panels of normal supply, standby power and no-break supply sections shall be painted in distinctive colours as follows:

Normal supply : Light Orange, colour B26 of SANS 1091.
 Standby power : Signal Red, colour A11 of SANS 1091.
 No-break supply: Dark Violet, colour F06 or Olive Green,
 Colour H05 of SANS 1091.

Indicated is the probable fault level rating (kA) of the busbars. Refer to the Summary of Switchgear and Circuits for the minimum fault level rating of specified equipment.

BOARD	LOCATION	TYPE	PANEL	FAULT LEVEL	Breaker
New Kiosk	Outside	free-standing, powder coated, UV resistant and weatherproof	Normal/Standby power	5kA	250A
Main DB	Court Building	Surface Mounted, with door.	Normal/Standby power	5kA	250A

22. SUMMARY OF SWITCHGEAR AND CIRCUITS

The indicated fault current rating (kA) is the minimum value that the switchgear must comply with for connecting to the busbars of the respective panels-distribution boards.

KIOSK : 250A

MAIN DISTRIBUTION BOARD : 250A

BACK-UP POWER

Main switch : 250A three pole 6kA circuit breaker.

[Socket outlets circuits (P) must be controlled by 63A two pole 30mA single phase earth leakage relay and 20A single pole 5kA circuit breakers. With a maximum of 5 circuits (10 plugs) per earth leakage relay.]

PART 3: QUALITY SPECIFICATION FOR MATERIALS AND EQUIPMENT OF ELECTRICAL INSTALLATIONS

"Part 3: Quality specification for materials and equipment" manual of the Department of Public Works is applicable for this Contract and the manual can be obtained from the Department of Public Works.

[ONLY ITEMS OF MATERIAL applicable to the Contract must be included in Part 3]

CONTENTS

<u>CLAUSE</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
1. C1	Conduit And Conduit Accessories	1
2. C2	Wiring Channels, Underfloor Ducting And Power Skirting	3
3. C4	Pvc-Insulated Cables 600/1 000 V Grade	7
4. C6	Cable Terminations And Joints	9
5. C9	Wiring Terminals	13
7. C17	Switchboards (Up To 1 Kv)	20

ADDITIONAL REQUIREMENTS OR SPECIFICATIONS NOT COVERED IN QUALITY SPECIFICATIONS ABOVE

LED LIGHTS

All Light fittings installed for this project is to be of the LED type, unless otherwise stated.

The following international standard specifications and South-African Bureau of Standards shall apply to the LED luminaire specification:

SANS 475	Luminaires for interior lighting, street lighting and floodlighting – Performance and requirements
SANS 10114-1	Interior lighting part 1: Artificial lighting of interiors
SANS 10114-2	Interior lighting part 2: Emergency lighting
SANS 60598-1	Luminaires part 1: General requirements and tests
SANS 60598-2.1	Luminaires part 2: Particular requirements section 1 – Fixed general purpose luminaires.
SANS 60598-2.2	Luminaires part 2: Particular requirements section 2 – Recessed luminaires.
SANS 60598-2.3	Luminaires part 2: Particular requirements section 3 – Luminaires for road and street lighting.

SANS 60598-2.5	Luminaires part 2: Particular requirements section 5 – Flood lighting.
SANS 61347-1 to 13	Lamp control gear
SANS 62031	LED modules for general lighting – Safety specifications
SANS 62384	DC or AC supplied electronic control gear for LED modules – Performance requirements.
SANS 62560	Self-ballasted LED lamps for general lighting services with supply voltages > 50V – Safety specification.
SANS 62612	Self-ballasted LED lamps for general lighting services with supply voltages > 50V – Performance requirements
EN 55015	Limits and methods of measurement of radio disturbance of electrical lighting or equipment.
EN 61000-3.2	Electromagnetic compatibility (EMC) limits for harmonic current emissions.
EN 61000-3.3	Electromagnetic compatibility (EMC) limits – Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems.
EN 61547	Equipment for general lighting purposes: EMC immunity requirements.
IEC-EN 62471	Photo biological safety of lamps and lamp systems for LEDs
IES LM-79-08	Approved method: Electrical and photometric measurement of solid-state lighting products.
IES LM-80	Approved method: Measuring lumen maintenance of LED light sources.

General requirements:

The luminaire shall be suitable for operation with mid-power LEDs. **Note that no LED tubes are allowed to be used.**

The luminaire shall be suitable for operation on a 230V single phase 50Hz mains supply.

Power factor capacitors shall be supplied to correct the power factor to at least 0.95 or higher.

The luminaire shall be marked with identification labels stating the brand name and model and shall bear the SANS approval mark.

The driver shall comply with IEC 61347-1 and IEC 61347-2B as applicable and shall be suitable for operation on 230V $\pm$ 10%, 50Hz single phase system and it must be insured that harmonics filter is provided as per SANS 61000-3-2. The drivers and LED circuitry shall be protected against lighting and power surges. Suitable surge arrestors with a 10kA rating shall be provided for indoor installations and 20kA for outdoor installations.

Colour rendering (Ra) shall be not less than 80 and lumen depreciation of not more than 30% L70 at 50 000 hours @ Tq 25°C. Colour temperature of the LED lamp shall be 4000K, unless otherwise stated.

Thermal requirements:

The luminaire must be able to withstand an ambient temperature of 35°C. Storage temperature of this luminaire should be able to handle -40°C < T < 60°C.

To this end internal electrical and mechanical components shall not be allowed to exceed their maximum temperature ratings of 75°C. Test reports from an independent authorised testing facility proving this requirement shall be made available on request.

Noise requirements:

The noise level emitted from the luminaire shall be kept as low as possible. Drivers/electronic components shall therefore fully comply with the latest edition of SANS 55015.

= END OF SPECIFICATION =

GENERAL NOTES & DISCLAIMER

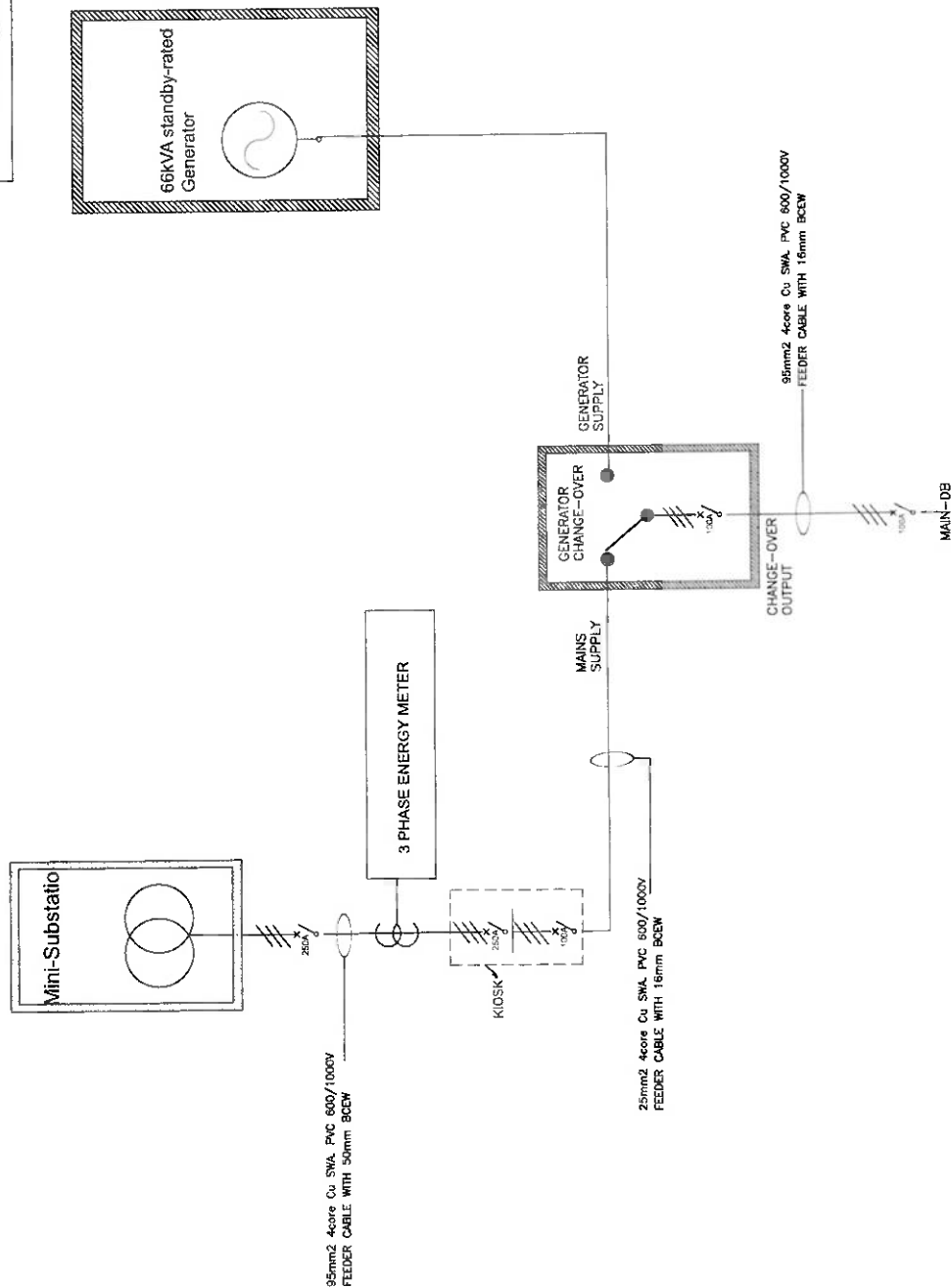
1. CONTRACTORS TO VERIFY ALL LEVELS, HEIGHTS, AND DIMENSIONS ON SITE AND TO CHECK SAME AGAINST DRAWINGS BEFORE PUTTING ANY WORK IN HAND. ANY DISCREPANCIES TO BE REPORTED TO THE PROJECT ENGINEER IMMEDIATELY FOR CLARIFICATION.
2. ALL WORK TO BE CARRIED OUT IN STRICT ACCORDANCE WITH THE NATIONAL ELECTRICAL INSTALLATION REGULATIONS AND RELEVANT STANDARDS.
3. CONTRACTORS ARE TO LOCATE AND IDENTIFY EXISTING SERVICES AND UTILITIES TO PROTECT THEM FROM DAMAGE THROUGHOUT THE DURATION OF THE WORKS.
4. ANY ERRORS OR DISCREPANCIES, QUERIES OR OMISSIONS NOTED BY THE CONTRACTOR MUST BE REPORTED IMMEDIATELY FOR CLARIFICATION PRIOR TO THE COMMENCEMENT OF ANY WORK.
5. THIS DRAWING SHALL NOT BE SCALED. ONLY FIGURED DIMENSIONS SHALL BE FOLLOWED.

LEGEND

SYM	DESCRIPTION
	TRANSFORMER
	CIRCUIT BREAKER
	EARTH LEAKAGE UNIT
	CABLE LEGEND
	SUPPLY
	THREE PHASE
	SINGLE PHASE
	SURGE ARRESTOR
	THREE PHASE ENERGY METER
	NEW INSTALLATION

NOTES FOR MAIN DB

1. ALLOW 30% SPARE FOR FUTURE EXPANSION
2. BOTTOM ENTRY, TOP EXIT CABLE ACCESS
3. COLOR FRAME - ORANGE
NORMAL SECTION - ORANGE
EMERGENCY SECTION - N/A
4. SPD = TYPE 1&2
5. CASCADING TO LOCAL SECTIONS
6. AS LEGEND CARD
7. ENGRAVED LABELING



GENERAL NOTES & DISCLAIMER

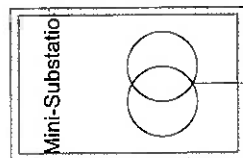
1. CONTRACTORS TO VERIFY ALL LEVELS, HEIGHTS AND DIMENSIONS ON SITE AND TO CHECK SAME AGAINST DRAWINGS BEFORE PUTTING ANY WORK IN HAND. ANY DISCREPANCIES TO BE REPORTED TO THE SUPERVISOR OF WORK IMMEDIATELY FOR CLARIFICATION.
2. ALL WORK TO BE CARRIED OUT IN STRICT ACCORDANCE WITH LOCAL AUTHORITIES REGULATIONS AND ALL APPLICABLE STANDARDS AND RELEVANT STANDARDS.
3. CONTRACTORS ARE TO LOCATE AND IDENTIFY EXISTING SERVICES AND UTILITIES PRIOR TO COMMENCEMENT OF WORK THROUGHOUT THE DURATION OF THE WORKS.
4. ANY ERRORS, DISCREPANCIES, QUERIES OR OMISSIONS IN THE DRAWINGS ARE TO BE REPORTED TO THE SUPERVISOR IMMEDIATELY FOR CLARIFICATION PRIOR TO THE COMMENCEMENT OF ANY WORK.
5. THE DRAWING SHALL NOT TO BE SCALED ONLY FIGURED DIMENSIONS SHALL BE FOLLOWED.

LEGEND

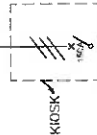
SYM	DESCRIPTION
	TRANSFORMER
	CIRCUIT BREAKER
	EARTH LEAKAGE UNIT
	CABLE LEGEND
	SUPPLY
	THREE PHASE
	SINGLE PHASE
	SURGE ARRESTOR
	THREE PHASE ENERGY METER
	NEW INSTALLATION

NOTES FOR MAIN DB

1. ALLOW 30% SPARE FOR FUTURE EXPANSION
2. BOTTOM ENTRY, TOP EXIT CABLE ACCESS
3. COLOR: FRAME - ORANGE
NORMAL SECTION - ORANGE
EMERGENCY SECTION - N/A
4. SPD = TYPE 1&2
5. CASCADING TO LOCAL SECTIONS
6. AS LEGEND CARD
7. ENGRAVED LABELING

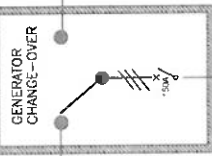


70mm² 4-core Cu SWA, PVC 600/1000V
FEEDER CABLE WITH 35mm BGEW



70mm² 4-core Cu SWA, PVC 600/1000V
FEEDER CABLE WITH 35mm BGEW

MAINS
SUPPLY

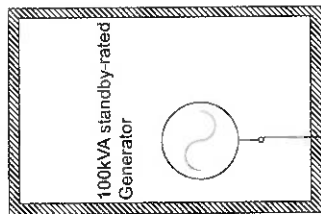


GENERATOR
SUPPLY

70mm² 4-core Cu SWA, PVC 600/1000V
FEEDER CABLE WITH 35mm BGEW

CHANGE-OVER
OUTPUT

MAIN-DB



NO.	REV.	DATE	BY

PROJECT NAME	PROPOSED GENERATOR INSTALLATION
CLIENT	HARDACH - DOJ - E-CL-01
DESIGNER	
CHECKED	
DATE	

SCALE	1:1
PROJECT NO.	
DATE OF ISSUE	
ISSUED BY	
ISSUED FOR	

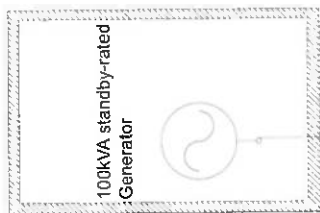
PROJECT NO.	
DATE OF ISSUE	
ISSUED BY	
ISSUED FOR	

PROJECT NO.	
DATE OF ISSUE	
ISSUED BY	
ISSUED FOR	

GENERAL NOTES & DISCLAIMER

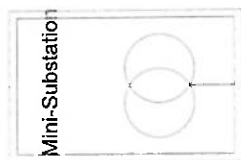
1. CONTRACTORS TO VERIFY ALL LEVELS, HEIGHTS AND DIMENSIONS BEFORE PUTTING ANY WORK IN HAND. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY FOR CLARIFICATION.
2. ALL WORK TO BE CARRIED OUT IN STRICT ACCORDANCE WITH LOCAL AUTHORITIES REQUIREMENTS, NATIONAL BUILDING REGULATIONS AND RELEVANT SUBSIDIARY STANDARDS.
3. CONTRACTORS ARE TO LOCATE AND IDENTIFY EXISTING SERVICES ON SITE AND TO PROTECT THESE FROM DAMAGE THROUGHOUT THE DURATION OF THE WORKS.
4. ANY ERRORS, DISCREPANCIES, OMISSIONS OR OUBTS ARE TO BE REPORTED TO THE ENGINEER IMMEDIATELY FOR CLARIFICATION PRIOR TO THE COMMENCEMENT OF ANY WORK.
5. THIS DRAWING SHALL NOT BE SCALED. ONLY FIGURED DIMENSIONS SHALL BE FOLLOWED.

SYM	DESCRIPTION
(C)	TRANSFORMER
1	CIRCUIT BREAKER
2	EARTH LEAKAGE UNIT
3	TABLE MOUNT
4	SUPPLY
5	TRIP UNIT
6	SMALL FUSE
7	SMALL FUSE
8	TRIP UNIT
9	SMALL FUSE
10	SMALL FUSE



NOTES FOR MAIN DB

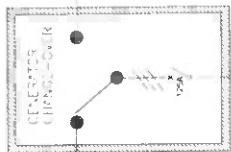
1. ALLOW 30% SPARE FOR FUTURE EXPANSION
2. BOTTOM ENTRY, TOP EXIT CABLE ACCESS
3. COLOR: FRAME - ORANGE
NORMAL SECTION - ORANGE
EMERGENCY SECTION - N/A
4. SPD = TYPE 1B2
5. CASCADING TO LOCAL SECTIONS
6. AS LEGEND CARD
7. ENGRAVED LABELING



100mm² 4-core Cu SWA PVC 630/1000V
FEEDER CABLE WITH 80mm² EPCW



100mm² 4-core Cu SWA PVC 630/1000V
FEEDER CABLE WITH 80mm² EPCW



GENERATOR SUPPLY

100mm² 4-core Cu SWA PVC 630/1000V
FEEDER CABLE WITH 80mm² EPCW

GENERATOR OUTPUT

100mm² 4-core Cu SWA PVC 630/1000V
FEEDER CABLE WITH 80mm² EPCW

PROJECT NO. 123456

DATE: 15/05/2024

SCALE: 1:100

PROJECT NAME: ELECTRICAL INSTALLATION

CLIENT: ABC COMPANY

LOCATION: 123 MAIN STREET, LONDON, UK

DESIGNED BY: J. SMITH

CHECKED BY: M. JONES

APPROVED BY: P. BROWN

PROJECT NO. 123456

DATE: 15/05/2024

SCALE: 1:100

PROJECT NAME: ELECTRICAL INSTALLATION

CLIENT: ABC COMPANY

LOCATION: 123 MAIN STREET, LONDON, UK

DESIGNED BY: J. SMITH

CHECKED BY: M. JONES

APPROVED BY: P. BROWN

T2.2 Returnable Documents required for Tender Evaluation Purposes

PA-11: BIDDER'S DISCLOSURE

1. PURPOSE OF THE FORM

Any person (natural or juristic) may make an offer or offers in terms of this invitation to bid. In line with the principles of transparency, accountability, impartiality, and ethics as enshrined in the Constitution of the Republic of South Africa and further expressed in various pieces of legislation, it is required for the bidder to make this declaration in respect of the details required hereunder.

Where a person/s are listed in the Register for Tender Defaulters and / or the List of Restricted Suppliers, that person will automatically be disqualified from the bid process.

2. Bidder's declaration

- 2.1 Is the bidder, or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest (1) in the enterprise, employed by the state?

YES / NO

- 2.1.1 If so, furnish particulars of the names, individual identity numbers, and, if applicable, state employee numbers of sole proprietor/ directors / trustees / shareholders / members/ partners or any person having a controlling interest in the enterprise, in table below.

Full Name	Identity Number	Name of State institution

(1) the power, by one person or a group of persons holding the majority of the equity of an enterprise, alternatively, the person/s having the deciding vote or power to influence or to direct the course and decisions of the enterprise.

- 2.2 Do you, or any person connected with the bidder, have a relationship with any person who is employed by the procuring institution?

YES / NO

- 2.2.1 If so, furnish particulars:

.....
.....

- 2.3 Does the bidder or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest in the enterprise have any interest in any other related enterprise whether or not they are bidding for this contract?

YES / NO

- 2.3.1 If so, furnish particulars:

.....
.....

3 DECLARATION

I, the undersigned, (name).....
in submitting the accompanying bid, do hereby make the following statements that I certify to be true and complete in every respect:

- 3.1 I have read and I understand the contents of this disclosure;
- 3.2 I understand that the accompanying bid will be disqualified if this disclosure is found not to be true and complete in every respect;
- 3.3 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium² will not be construed as collusive bidding.
- 3.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications, prices, including methods, factors or formulas used to calculate prices, market allocation, the intention or decision to submit or not to submit the bid, bidding with the intention not to win the bid and conditions or delivery particulars of the products or services to which this bid invitation relates.
- 3.5 The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
- 3.6 There have been no consultations, communications, agreements or arrangements made by the bidder with any official of the procuring institution in relation to this procurement process prior to and during the bidding process except to provide clarification on the bid submitted where so required by the institution; and the bidder was not involved in the drafting of the specifications or terms of reference for this bid.

² Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

- 3.7 I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

I CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 1, 2 and 3 ABOVE IS CORRECT.

I ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME IN TERMS OF PARAGRAPH 6 OF PFMA SCM INSTRUCTION 03 OF 2021/22 ON PREVENTING AND COMBATING ABUSE IN THE SUPPLY CHAIN MANAGEMENT SYSTEM SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....
Signature

.....
Date

.....
Position

.....
Name of bidder

This form has been aligned with SBD4

PA-15.1: RESOLUTION OF BOARD OF DIRECTORS

RESOLUTION of a meeting of the Board of *Directors / Members / Partners of:

(Legally correct full name and registration number, if applicable, of the Enterprise)

Held at _____ (place)

on _____ (date)

RESOLVED that:

1. The Enterprise submits a Bid / Tender to the Department of Public Works in respect of the following project:

(Project description as per Bid / Tender Document)

Bid / Tender Number: _____ (Bid / Tender Number as per Bid / Tender Document)

2. *Mr/Mrs/Ms: _____

in *his/her Capacity as: _____ (Position in the Enterprise)

and who will sign as follows: _____

be, and is hereby, authorised to sign the Bid / Tender, and any and all other documents and/or correspondence in connection with and relating to the Bid / Tender, as well as to sign any Contract, and any and all documentation, resulting from the award of the Bid / Tender to the Enterprise mentioned above.

	Name	Capacity	Signature
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			

PA-15.1: Resolution of Board of Directors

17			
18			
19			
20			

The bidding enterprise hereby absolves the Department of Public Works from any liability whatsoever that may arise as a result of this document being signed.

Note:

- * Delete which is not applicable.
- NB:** This resolution must, where possible, be signed by all the Directors / Members / Partners of the Bidding Enterprise.
- In the event that paragraph 2 cannot be complied with, the resolution must be signed by Directors / Members / Partners holding a majority of the shares / ownership of the Bidding Enterprise (attach proof of shareholding / ownership hereto).
- Directors / Members / Partners of the Bidding Enterprise may alternatively appoint a person to sign this document on behalf of the Bidding Enterprise, which person must be so authorized by way of a duly completed power of attorney, signed by the Directors / Members / Partners holding a majority of the shares / ownership of the Bidding Enterprise (proof of shareholding / ownership and power of attorney are to be attached hereto).
- Should the number of Directors / Members / Partners exceed the space available above, additional names and signatures must be supplied on a separate page.

ENTERPRISE STAMP

PA-15.2: RESOLUTION OF BOARD OF DIRECTORS TO ENTER INTO CONSORTIA OR JOINT VENTURES

RESOLUTION of a meeting of the Board of *Directors / Members / Partners of:

(Legally correct full name and registration number, if applicable, of the Enterprise)

Held at _____ (place)

on _____ (date)

RESOLVED that:

1. The Enterprise submits a Bid /Tender, in consortium/Joint Venture with the following Enterprises:

(List all the legally correct full names and registration numbers, if applicable, of the Enterprises forming the Consortium/Joint Venture)

to the Department of Public Works in respect of the following project:

(Project description as per Bid /Tender Document)

Bid / Tender Number: _____ (Bid / Tender Number as per Bid / Tender Document)

2. *Mr/Mrs/Ms: _____

in *his/her Capacity as: _____ (Position in the Enterprise)

and who will sign as follows: _____

be, and is hereby, authorised to sign a consortium/joint venture agreement with the parties listed under item 1 above, and any and all other documents and/or correspondence in connection with and relating to the consortium/joint venture, in respect of the project described under item 1 above.

3. The Enterprise accepts joint and several liability with the parties listed under item 1 above for the due fulfilment of the obligations of the joint venture deriving from, and in any way connected with, the Contract to be entered into with the Department in respect of the project described under item 1 above.
4. The Enterprise chooses as its *domicilium citandi et executandi* for all purposes arising from this joint venture agreement and the Contract with the Department in respect of the project under item 1 above:

Physical address: _____

_____ (code)

Postal Address: _____

_____ (code)

Telephone number: _____

Fax number: _____

	Name	Capacity	Signature
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

The bidding enterprise hereby absolves the Department of Public Works from any liability whatsoever that may arise as a result of this document being signed

Note:

- * Delete which is not applicable.
- NB:** This resolution must, where possible, be signed by all the Directors / Members / Partners of the Bidding Enterprise.
- In the event that paragraph 2 cannot be complied with, the resolution must be signed by Directors / Members / Partners holding a majority of the shares / ownership of the Bidding Enterprise (attach proof of shareholding / ownership hereto).
- Directors / Members / Partners of the Bidding Enterprise may alternatively appoint a person to sign this document on behalf of the Bidding Enterprise, which person must be so authorized by way of a duly completed power of attorney, signed by the Directors / Members / Partners holding a majority of the shares / ownership of the Bidding Enterprise (proof of shareholding / ownership and power of attorney are to be attached hereto).
- Should the number of Directors / Members / Partners exceed the space available above, additional names and signatures must be supplied on a separate page.

ENTERPRISE STAMP

PA-15.3: SPECIAL RESOLUTION OF CONSORTIA OR JOINT VENTURES

RESOLUTION of a meeting of the duly authorised representatives of the following legal entities who have entered into a consortium/joint venture to jointly bid for the project mentioned below: *(legally correct full names and registration numbers, if applicable, of the Enterprises forming a Consortium/Joint Venture)*

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

Held at _____ (place)

on _____ (date)

RESOLVED that:

RESOLVED that:

- A. The above-mentioned Enterprises submit a Bid in Consortium/Joint Venture to the Department of Public Works in respect of the following project:

(Project description as per Bid /Tender Document)

Bid / Tender Number: _____ *(Bid / Tender Number as per Bid /Tender Document)*

PA-15.3: Special Resolution of Consortia or Joint Ventures

B. *Mr/Mrs/Ms: _____

in *his/her Capacity as: _____ (Position in the Enterprise)

and who will sign as follows: _____

be, and is hereby, authorised to sign the Bid, and any and all other documents and/or correspondence in connection with and relating to the Bid, as well as to sign any Contract, and any and all documentation, resulting from the award of the Bid to the Enterprises in Consortium/Joint Venture mentioned above.

C. The Enterprises constituting the Consortium/Joint Venture, notwithstanding its composition, shall conduct all business under the name and style of:

D. The Enterprises to the Consortium/Joint Venture accept joint and several liability for the due fulfilment of the obligations of the Consortium/Joint Venture deriving from, and in any way connected with, the Contract entered into with the Department in respect of the project described under item A above.

E. Any of the Enterprises to the Consortium/Joint Venture intending to terminate the consortium/joint venture agreement, for whatever reason, shall give the Department 30 days written notice of such intention. Notwithstanding such decision to terminate, the Enterprises shall remain jointly and severally liable to the Department for the due fulfilment of the obligations of the Consortium/Joint Venture as mentioned under item D above.

F. No Enterprise to the Consortium/Joint Venture shall, without the prior written consent of the other Enterprises to the Consortium/Joint Venture and of the Department, cede any of its rights or assign any of its obligations under the consortium/joint venture agreement in relation to the Contract with the Department referred to herein.

G. The Enterprises choose as the *domicilium citandi et executandi* of the Consortium/Joint Venture for all purposes arising from the consortium/joint venture agreement and the Contract with the Department in respect of the project under item A above:

Physical address: _____

_____ (Postal code) _____

Postal Address: _____

_____ (Postal code) _____

Telephone number: _____

Fax number: _____

PA-15.3: Special Resolution of Consortia or Joint Ventures

	Name	Capacity	Signature
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

The bidding enterprise hereby absolves the Department of Public Works & Infrastructure from any liability whatsoever that may arise as a result of this document being signed.

Note:

1. * Delete which is not applicable.
2. **NB:** This resolution must be signed by all the Duly Authorised Representatives of the Legal Entities to the consortium/joint venture submitting this tender, as named in item 2 of Resolution PA-15.2.
3. Should the number of the Duly Authorised Representatives of the Legal Entities joining forces in this tender exceed the space available above, additional names, capacity and signatures must be supplied on a separate page.
4. Resolution PA-15.2, duly completed and signed, from the separate Enterprises who participate in this consortium/joint venture, must be attached to this Special Resolution (PA-15.3).



DPW-16 (EC): SITE INSPECTION MEETING CERTIFICATE

Project title:	VARIOUS MAGISTRATE'S OFFICE: HARDACH, KWA THEMA, DUNNOTTAR AND FOCHVILLE INSTALLATION OF BACKUP GENERATORS		
Tender / Quotation no:	JHB 26/03	Reference no:	
Closing date:	16 September 2026		

This is to certify that I, _____ representing

_____ in the capacity of

_____ visited the site on: **insert date**

I have made myself familiar with all local conditions likely to influence the work and the cost thereof. I further certify that I am satisfied with the description of the work and explanations given at the site inspection meeting and that I understand perfectly the work to be done, as specified and implied, in the execution of this contract.

Name of Tenderer	Signature	Date

Name of DPW Representative	Signature	Date

PA-16: PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022

This preference form must form part of all tenders invited. It contains general information and serves as a claim form for preference points for specific goals.

NB: BEFORE COMPLETING THIS FORM, TENDERERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF THE TENDER AND PREFERENTIAL PROCUREMENT REGULATIONS, 2022

1. GENERAL CONDITIONS

1.1 The following preference point systems are applicable to invitations to tender:

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

1.2 Preference Points System to be applied

(tick whichever is applicable).

- ☒ The applicable preference point system for this tender is the **80/20** preference point system.
- ☐ The applicable preference point system for this tender is the **90/10** preference point system.
- ☐ Either the **90/10** or **80/20** preference point system will be applicable in this tender. The lowest/ highest acceptable tender will be used to determine the accurate system once tenders are received.

1.3 Points for this tender shall be awarded for:

1.3.1 Price; and

1.3.2 Specific Goals

1.4 The maximum points for this tender are allocated as follows:

CHOOSE APPLICABLE PREFERENCE POINT SCORING SYSTEM	☒ 80/20	☐ 90/10
PRICE	80	90
SPECIFIC GOALS	20	10
Total points for Price and Specific Goals	100	100

1.5 Breakdown Allocation of Specific Goals Points



1.5.1. For procurement transaction with rand value greater than R2 000, 00 and up to R1 Million (Inclusive of all applicable taxes) the specific goals listed in table 1 below are applicable.

Table 1

Serial No	Specific Goals	Preference Points Allocated out of 20	Documentation to be submitted by bidders to validate their claim
1.	An EME or QSE which is at least 51% owned by black people (Mandatory)	10	SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable.
2.	Located in a specific Local Municipality or District Municipality or Metro or Province area for work to be done or services to be rendered in that area (Mandatory)	2	- Official Municipal Rates Statement which is in the name of the bidder. Or - Any account or statement which is in the name of the bidder. Or - Permission to Occupy from local chief in case of rural areas (PTO) which is in the name of the bidder. Or - Lease Agreement which is in the name of the bidder.
3.	An EME or QSE which is at least 51% owned by black women (Mandatory)	4	SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable.
4.	An EME or QSE which is at least 51% owned by black people with disability (Mandatory)	2	SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable.

			and • Medical Certificate indicating that the disability is permanent. Or • South African Social Security Agency (SASSA) Registration indicating that the disability is permanent. Or • National Council for Persons with Physical Disability in South Africa registration (NCPDPSA).
5.	An EME or QSE which is at least 51% owned by black youth (Mandatory)	2	• ID Copy and SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable.



1.5.2. For procurement transaction with rand value greater than R1 Million and up to R50 Million (Inclusive of all applicable taxes) the specific goals listed in table 2 below are applicable.

Table 2

Serial No	Specific Goals	Preference Points Allocated out of 20	Documentation to be submitted by bidders to validate their claim
1.	An EME or QSE or any entity which is at least 51% owned by black people (Mandatory)	10	• SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable.
2.	Located in a specific Local Municipality or District Municipality or Metro or Province area for work to be done or services to be rendered in that area (Mandatory)	2	• Official Municipal Rates Statement which is in the name of the bidder. Or

			- Any account or statement which is in the name of the bidder. Or - Permission to Occupy from local chief in case of rural areas (PTO) which is in the name of the bidder. Or - Lease Agreement which is in the name of the bidder.
3.	An EME or QSE or any entity which is at least 51% owned by black women (Mandatory)	4	SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable.
4.	An EME or QSE or any entity which is at least 51% owned by black people with disability (Mandatory)	2	- SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable. and - Medical Certificate indicating that the disability is permanent. Or - South African Social Security Agency (SASSA) Registration indicating that the disability is permanent. Or National Council for Persons with Physical Disability in South Africa registration (NCPDOSA).

5.	An EME or QSE or any entity which is at least 51% owned by black youth (Mandatory)	2	ID Copy and SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable.
----	--	---	---

1.5.3. For procurement transaction with rand value greater than R50 Million (Inclusive of all applicable taxes) the specific goals listed in table 3 below are applicable.

NB. The use of one of goal numbers' 4 or 5 is mandatory. The BSC must select either one of the two, but not both.

Table 3

Serial No	Specific Goals	Preference Points Allocated out of 10	Documentation to be submitted by bidders to validate their claim
1.	An EME or QSE or any entity which is at least 51% owned by black people (Mandatory)	4	SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable.
2.	Located in a specific Local Municipality or District Municipality or Metro or Province area for work to be done or services to be rendered in that area (Mandatory)	2	- Official Municipal Rates Statement which is in the name of the bidder. Or - Any account or statement which is in the name of the bidder. Or - Permission to Occupy from local chief in case of rural areas (PTO) which is in the name of the bidder. Or - Lease Agreement which is in the name of the bidder.
3.	An EME or QSE or any entity which is at least 51%	2	SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable.

		owned by black women (mandatory)		
	4. ☐	An EME or QSE or any entity which is at least 51% owned by black people with disability (Mandatory)	2	• SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable. and • Medical Certificate indicating that the disability is permanent. Or • South African Social Security Agency (SASSA) Registration indicating that the disability is permanent. Or National Council for Persons with Physical Disability in South Africa registration (NCPDPSA).
	OR			
	5. ☐	An EME or QSE or any entity which is at least 51% owned by black youth (Mandatory)	2	• ID Copy and SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable

Black people mean Africans, Coloureds and Indians, who - (a) are citizens of the Republic of South Africa by birth or descent; or (b) became citizens of the Republic of South Africa by naturalisation - (i) before 27 April 1994; or (ii) on or after 27 April 1994 and who would have been entitled to acquire citizenship by naturalisation prior to that date. (BROAD-BASED BLACK ECONOMIC EMPOWERMENT ACT No 25899. 2003 of 9 JANUARY 2004)

- 1.6 Failure on the part of the tenderer to submit proof or documentation required in terms of this tender to claim points for specific goals, if the service provider/ tenderer did not submit proof or documentation required to claim for specific goals will be interpreted to mean that preference points for specific goals are not claimed.
- 1.7 The organ of state reserves the right to require of a service provider/tenderer, either before a tender is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the organ of state.

2. DEFINITIONS

- (a) **“tender”** means a written offer in the form determined by an organ of state in response to an invitation to provide goods or services through price quotations,

competitive tendering process or any other method envisaged in legislation;

- (b) “**price**” means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts;
- (c) “**rand value**” means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;
- (d) “**tender for income-generating contracts**” means a written offer in the form determined by an organ of state in response to an invitation for the origination of income-generating contracts through any method envisaged in legislation that will result in a legal agreement between the organ of state and a third party that produces revenue for the organ of state, and includes, but is not limited to, leasing and disposal of assets and concession contracts, excluding direct sales and disposal of assets through public auctions; and
- (e) “**the Act**” means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000).

3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

3.1. POINTS AWARDED FOR PRICE

3.1.1. THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS

A maximum of 80 or 90 points is allocated for price on the following basis:

$$\begin{array}{ccc} \mathbf{80/20} & \mathbf{or} & \mathbf{90/10} \\ \\ \mathbf{Ps = 80 \left(1 - \frac{Pt - P_{min}}{P_{min}} \right)} & \mathbf{or} & \mathbf{Ps = 90 \left(1 - \frac{Pt - P_{min}}{P_{min}} \right)} \end{array}$$

Where

- Ps = Points scored for price of tender under consideration
- Pt = Price of tender under consideration
- Pmin = Price of lowest acceptable tender

3.2. FORMULAE FOR DISPOSAL OR LEASING OF STATE ASSETS AND INCOME GENERATING PROCUREMENT

3.2.1. POINTS AWARDED FOR PRICE

A maximum of 80 or 90 points is allocated for price on the following basis:

$$\begin{array}{ccc} \mathbf{80/20} & \mathbf{or} & \mathbf{90/10} \\ \\ \mathbf{Ps = 80 \left(1 + \frac{Pt - P_{max}}{P_{max}} \right)} & \mathbf{or} & \mathbf{Ps = 90 \left(1 + \frac{Pt - P_{max}}{P_{max}} \right)} \end{array}$$

Where

- Ps = Points scored for price of tender under consideration
- Pt = Price of tender under consideration
- Pmax = Price of highest acceptable tender

4. POINTS AWARDED FOR SPECIFIC GOALS

- 4.1. In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in table 1,2 and 3 above as may be supported by proof/ documentation stated in the conditions of this tender:
- 4.2. In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that, if it is unclear whether the 80/20 or 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of—
- (a) an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system; or
 - (b) any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system,
- then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.

Table 4: Specific goals for the tender and points claimed are indicated per the table below.

(Note to organs of state: Where either the 90/10 or 80/20 preference point system is applicable, corresponding points must also be indicated as such.)

Note to tenderers: The tenderer must indicate how they claim points for each preference point system.)

The specific goals allocated points in terms of this tender	Number of points allocated (90/10 system) (To be completed by the organ of state)	Number of points allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (90/10 system) (To be completed by the tenderer)	Number of points claimed (80/20 system) (To be completed by the tenderer)
1. An EME or QSE (or any entity for procurement transaction with rand value greater than R1 Million) which is at least 51% owned by black people	4	10		
2. Located in a specific Local Municipality or District Municipality or Metro or	2	2		

The specific goals allocated points in terms of this tender	Number of points allocated (90/10 system) (To be completed by the organ of state)	Number of points allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (90/10 system) (To be completed by the tenderer)	Number of points claimed (80/20 system) (To be completed by the tenderer)
Province area for work to be done or services to be rendered in that area				
3. An EME or QSE (or any entity for procurement transaction with rand value greater than R1 Million) which is at least 51% owned by black women	2	4		
4. An EME or QSE (or any entity for procurement transaction with rand value greater than R1 Million) which is at least 51% owned by black people with disability	2	2		
5. An EME or QSE (or any entity for procurement transaction with rand value greater than R1 Million) which is at least 51% owned by black youth.*	2	2		

DECLARATION WITH REGARD TO COMPANY/FIRM

4.3. Name of company/firm.....

4.4. Company registration number:

4.5. TYPE OF COMPANY/ FIRM

- ☐ Partnership/Joint Venture / Consortium
- ☐ One-person business/sole propriety
- ☐ Close corporation
- ☐ Public Company
- ☐ Personal Liability Company
- ☐ (Pty) Limited
- ☐ Non-Profit Company

☐ State Owned Company
[TICK APPLICABLE BOX]

4.6. I, the undersigned, who is duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the specific goals as advised in the tender, qualifies the company/ firm for the preference(s) shown and I acknowledge that:

- i) The information furnished is true and correct;
- ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;
- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 4.2, the contractor may be required to furnish documentary proof to the satisfaction of the organ of state that the claims are correct;
- iv) If the specific goals have been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the organ of state may, in addition to any other remedy it may have –
 - (a) disqualify the person from the tendering process;
 - (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
 - (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
 - (d) recommend that the tenderer or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and
 - (e) forward the matter for criminal prosecution, if deemed necessary.

.....	
SIGNATURE(S) OF TENDERER(S)	
SURNAME AND NAME:	
DATE:	
ADDRESS:	
	
	
	

DPW-09 (EC): PARTICULARS OF TENDERER'S PROJECTS

Project title:	<i>Various Magistrate's Office: Hardach, Kwa Thema, Dunnoitar and Fochville: Installation of Backup Generators</i>		
Tender / quotation no:	JHB 26/03	Closing date:	16/09/2026
Advertising date:	21/08/2026	Validity period:	84 days

1. PARTICULARS OF THE TENDERER'S CURRENT AND PREVIOUS COMMITMENTS

1.1. Current projects

Projects currently engaged in	Name of Employer or Representative of Employer	Contact tel. no.	Contract sum	Contractual commencement date	Contractual completion date	Current percentage progress
1						
2						
3						
4						
5						
6						
7						

Name of Tenderer	Signature	Date

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" .
 For Internal & External Use Effective date 21 September 2021

PA- 40: DECLARATION OF DESIGNATED GROUPS

Tender no: **JHB 26/03**

Name of Tenderer ☐ EME¹ ☐ QSE² ☐ Non EME/QSE (tick applicable box)

1. LIST ALL PROPRIETORS, MEMBERS OR SHAREHOLDERS BY NAME, IDENTITY NUMBER, CITIZENSHIP AND DESIGNATED GROUPS.

Name and Surname #	Identity/ Passport number and Citizenship##	Percentage owned	Black	Indicate if youth	Indicate if woman	Indicate if person with disability	Indicate if living in Rural (R) / Under Developed Area (UD) / Township (T) / Urban (U).	Indicate if military veteran
1.			☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ R ☐ UD ☐ T ☐ U	☐ Yes ☐ No
2.			☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ R ☐ UD ☐ T ☐ U	☐ Yes ☐ No
3.			☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ R ☐ UD ☐ T ☐ U	☐ Yes ☐ No
4.			☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ R ☐ UD ☐ T ☐ U	☐ Yes ☐ No
5.			☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ R ☐ UD ☐ T ☐ U	☐ Yes ☐ No
6.			☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ R ☐ UD ☐ T ☐ U	☐ Yes ☐ No
7.			☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ R ☐ UD ☐ T ☐ U	☐ Yes ☐ No
8.			☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ R ☐ UD ☐ T ☐ U	☐ Yes ☐ No
9.			☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ R ☐ UD ☐ T ☐ U	☐ Yes ☐ No
10.			☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ R ☐ UD ☐ T ☐ U	☐ Yes ☐ No
11.			☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ R ☐ UD ☐ T ☐ U	☐ Yes ☐ No
12.			☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ R ☐ UD ☐ T ☐ U	☐ Yes ☐ No

Where Owners are themselves a Company, Close Corporation, Partnership etc, identify the ownership of the Holding Company, together with Registration number
State date of South African citizenship obtained (not applicable to persons born in South Africa)

¹ EME: Exempted Micro Enterprise
² QSE: Qualifying Small Business Enterprise

PA- 40: DECLARATION OF DESIGNATED GROUPS

Tender no: **JHB 26/03**

2. DECLARATION:

The undersigned, who warrants that he/she is duly authorized to do so on behalf of the Tenderer, hereby confirms that:

- 1 The information and particulars contained in this Affidavit are true and correct in all respects;
- 2 The Broad-based Black Economic Empowerment Act, 2003 (Act 53 of 2003), Preferential Procurement Policy Framework Act, 2000 (Act 5 of 2000), National Small Business Act 102 of 1996 as amended and all documents pertaining to this Tender were studied and understood and that the above form was completed according to the definitions and information contained in said documents;
- 3 The Tenderer understands that any intentional misrepresentation or fraudulent information provided herein shall disqualify the Tenderer's offer herein, as well as any other tender offer(s) of the Tenderer simultaneously being evaluated, or will entitle the Employer to cancel any Contract resulting from the Tenderer's offer herein;
- 4 The Tenderer accepts that the Employer may exercise any other remedy it may have in law and in the Contract, including a claim for damages for having to accept a less favourable tender as a result of any such disqualification due to misrepresentation or fraudulent information provided herein;
- 5 Any further documentary proof required by the Employer regarding the information provided herein, will be submitted to the Employer within the time period as may be set by the latter;

Signed by the Tenderer

Name of representative	Signature	Date

T2.2 Returnable Documents that will be incorporated into the Contract

DPW-21 (EC): RECORD OF ADDENDA TO TENDER DOCUMENTS

Project title:	VARIOUS MAGISTRATE'S OFFICE: HARDACH, KWA THEMA, DUNNOTTAR AND FOCHVILLE INSTALLATION OF BACKUP GENERATORS		
Tender no:	JHB 26/03	Reference no:	

1. I / We confirm that the following communications received from the Department of Public Works and Infrastructure before the submission of this tender offer, amending the tender documents, have been taken into account in this tender offer: *(Attach additional pages if more space is required)*

	Date	Title or Details
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		

Name of Tenderer	Signature	Date

2. I / We confirm that no communications were received from the Department of Public Works and Infrastructure before the submission of this tender offer, amending the tender documents.

Name of Tenderer	Signature	Date

documents

DPW-21 (EC): Record of addenda to tender

DPW-15 (EC): SCHEDULE OF PROPOSED SUBCONTRACTORS

Project title:	<i>Various Magistrate's Office: Installation of backup generators: Hardach, Kwa Thema, Dunnottar and Fochville</i>		
Tender no:	<i>JHB 26/03</i>	Reference no:	

We notify you that it is our intention to employ the following Subcontractors for work in this contract.

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

	Name and address of proposed Subcontractor	Nature and extent of work	Previous experience with Subcontractor
1			
2			
3			
4			
5			

Name of representative	Signature	Capacity	Date

Name of organisation:	
------------------------------	--

DPW-22 (EC): PARTICULARS OF ELECTRICAL CONTRACTOR

Project title:	Various Magistrate's Office: Installation of backup generators: Hardach, Kwa Thema, Dunnottar and Fochville		
Tender no:	JHB 26/03	Reference no:	

Name of Electrical Contractor:	
Address:	
Electrical Contractor registration number at the Department of Labour	

Name of Tenderer	Signature	Date

DPW-23 (EC): SCHEDULE FOR IMPORTED MATERIALS AND EQUIPMENT

Project title:	<i>Various Magistrate's Office: Installation of backup generators: Hardach, Kwa Thema, Dunnottar and Fochville</i>		
Tender no:	<i>JHB 26/03</i>	Reference no:	

This schedule should be completed by the tenderer. *(Attach additional pages if more space is required)*

Item	Material / Equipment	Rand (R) (Excluding VAT)
1.		R
2.		R
3.		R
4.		R
5.		R
6.		R

Provide additional list if space provided is insufficient.

The Contractor shall list imported items, materials and/or equipment which shall be excluded from the Contract Price Adjustment Provisions (if applicable) and shall be adjusted in terms of currency fluctuations only. Copies of the supplier's quotations for the items, materials or equipment (provided that such costs shall not be higher than the relevant contract rate as listed above) should be lodged with the Principal Agent / Engineer of the Department of Public Works and Infrastructure within 60 (sixty) days from the date of acceptance of the tender. No adjustment of the local VAT amount, nor the contractor's profit, discount, mark-up, handling costs, etc. shall be allowed.

These net amounts will be adjusted as follows:

FORMULA:

The net amount to be added to or deducted from the contract sum:

$$A = V \left(\frac{Z}{Y} - 1 \right)$$

A = the amount (R) of adjustment

V = the net amount (supplier's quotation) (R) of the imported item

Y = exchange rate at the closing date of tender submission

Z = exchange rate on the date of payment.

Name of Tenderer	Signature	Date

T2.2 Returnable Documents: Other Documents that will be incorporated into the Contract

VOLUME 3: CONTRACT

PART C1: Agreement and Contract Data

C1.2 Contract Data

DPW-05: (EC) CONTRACT DATA - GCC 2015: 3RD EDITION

Project title:	Various Magistrate's Office: Hardach, Kwa Thema, Dunnottar and Fochville: Installation Of Backup Generators			
Tender no:	JHB 26/03	WCS no:	056808	Reference no:

	The Conditions of Contract applicable to this Contract are clauses 1 to 10 and contract price adjustment schedule of the GENERAL CONDITIONS OF CONTRACT FOR CONSTRUCTION WORKS, THIRD EDITION (2015) prepared by The South African Institution of Civil Engineering Private Bag X200, Halfway House, 1685. Contractors are cautioned to read the GCC Third Edition (2015) and Contract Data [DPW-05 (EC)] together as some clauses in the GCC Third Edition (2015) have been amended in the Contract Data [DPW-05 (EC)] Specific data, which together with these General Conditions of Contract, collectively describe the risks, liabilities and obligations of the contracting Parties and the procedures for the administration of the Contract. Clauses as amended in the Contract Data amends or replaces the corresponding clauses in the GCC Third Edition (2015). Copies of these conditions of contract may be obtained through www.saice.org.za.
--	--

	CONTRACT VARIABLES THE SCHEDULE (Contract Data [1.1.1.8]) The schedule is the listed variables in this agreement and contains all variables referred to in this document including specific changes made to GCC Third Edition (2015) documentation. It is divided into part 1: contract data completed by the employer and part 2: contract data completed by the contractor. 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' 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. Key cross reference clauses are italicised in [] brackets
--	--

PART 1: CONTRACT DATA COMPLETED BY THE EMPLOYER:

A PROJECT INFORMATION

A 1.0 Works [1.1.1.35]

Works description	Refer to document PG01.1 (EC) – Scope of Works for detailed description
Installation of backup generators at Hardach, Kwa Thema, Dunnottar and Fochville Magistrate's Offices. The scope mainly entails supply and installation of standby generators.	

Tender / Quotation no: JHB 26/03

A 2.0 Site [1.1.1.29]

Erf / stand number	Hardach - 57 Kwa Thema - 128 Dunnottar - 419 to 435 Fochville - 331
Site address	Hardach - 2 Hardach Street, North Germiston, Germiston, 1401 Kwa Thema - 1 Habede St, Kwa-Thema, Springs, 1575 Dunnottar - 23 Porter Rd, Dunnottar, Nigel, 1590 Fochville - Kerk St, Fochville, 2515
Township / Suburb	Hardach - North Germiston Kwa Thema - Kwa-Thema Dunnottar - Dunnottar Fochville - Fochville
City / Town	Hardach - Germiston Kwa Thema - Springs Dunnottar - Nigel Fochville - Fochville
Province	Gauteng
Local authority	Hardach - City of Ekurhuleni Kwa Thema - City of Ekurhuleni Dunnottar - City of Ekurhuleni Fochville - Merafong City Local Municipality
GPS Coordinates	

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	Nothemba.Djalivani@dpw.gov.za	Telephone	073 194 4475
Postal address	Private Bag X3 Braamfontein Johannesburg 2017		
Physical address	78 De Korte Braamfontein Johannesburg 2017		

A 3.2 Employer's Representative:

Name	Nothemba Djalivani	Telephone number	
E-mail	Nothemba.Djalivani@dpw.gov.za	Mobile number	073 194 4475

Postal address	Private Bag X3 Braamfontein Johannesburg 2017
Physical address	78 De Korte Braamfontein Johannesburg 2017

Tender / Quotation no: JHB 26/03

A 4.0	Employers Agent/s		
A 4.1	Principal Agent [1.1.1.16]	Discipline	Project Manager

Name	Nothemba Djalivani		
Legal entity of above	NDPWI	Contact person	Nothemba Djalivani
Practice number	N/A	Telephone number	
Country	RSA	Mobile number	073 194 4475
E-mail	Nothemba.Djalivani@dpw.gov.za		
Postal address	Private Bag X3 Braamfontein Johannesburg 2017		
Physical address	78 De Korte Braamfontein Johannesburg 2017		

A 4.2	Agent [1.1.1.16]	Discipline	Electrical Engineer
--------------	-------------------------	-------------------	---------------------

Name	Lindokuhle Phungula		
Legal entity of above	NDPWI	Contact person	
Practice number	N/A	Telephone number	
Country	RSA	Mobile number	
E-mail	Lindokuhle.Phungula@dpw.gov.za		
Postal address	Private Bag X3 Braamfontein Johannesburg 2017		
Physical address	78 De Korte Braamfontein Johannesburg 2017		

A 4.3	Agent [1.1.1.16]	Discipline	
--------------	-------------------------	-------------------	--

Name		Contact person	
Legal entity of above		Telephone number	
Practice number		Mobile number	
Country			

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

Tender / Quotation no: JHB 26/03

A 4.4	Agent [1.1.1.16]	Discipline	
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 4.5	Agent [1.1.1.16]	Discipline	
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 4.6	Agent [1.1.1.16]	Discipline	
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

Tender / Quotation no: JHB 26/03

A 4.7	Agent [1.1.1.16]	Discipline	
--------------	-------------------------	-------------------	--

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 4.8	Agent [1.1.1.16]	Discipline	
--------------	-------------------------	-------------------	--

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 4.9	Agent [1.1.1.16]	Discipline	
--------------	-------------------------	-------------------	--

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

Tender / Quotation no: JHB 26/03

B CONTRACT INFORMATION

B 1.0 Definitions [1.1.1.2]

Bills of quantities: System / Method of measurement	SANS 1200
---	-----------

B 2.0 Law, regulations and notices [1.3.2]

Law applicable to the works [1.3.2]	Law of the Republic of South Africa
-------------------------------------	-------------------------------------

B 3.0 Offer and acceptance [1.1.1.20]

Currency applicable to this agreement [1.1.1.20]	South African Rand
--	--------------------

B 4.0 Documents [1.1.1.7]

The original signed agreement is to be held by the principal agent [1.1.1.7], if not, indicate by whom	Employer
Number of copies of construction information issued to the contractor at no cost. (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
GCC GENERAL CONDITIONS OF CONTRACT FOR CONSTRUCTION WORKS, THIRD EDITION (2015)	
DPW-05: (EC): GCC 2015: 3RD EDITION	1 to 30
The GCC General Preliminaries for use with the GCC 2015: 3RD EDITION	
Contract participation goal documentation as further defined in clause 1.1.1.37 [CD] and B16 [CD]	
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



Tender / Quotation no: JHB 26/03

B 5.0 Employer's agents [3.0]

Authority is delegated to the following agents to issue contract instructions and perform duties for specific aspects of the works [3.0] [3.2.3 [CD]]

Principal Agent

Principal agent's and agents' interest or involvement in the works other than a professional interest

B 6.0 Insurances [8.6]

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.

	The Contract Price [8.6.1.1.1] New Works With a deductible not exceeding 5% of each and every claim [8.6.2]	Contract sum plus 10%	Applicable
Or	The Contract Price [8.6.1.1.1] Works with alterations and additions (reinstatement value of existing structures / works without or including new works) with a deductible not exceeding 5% of each and every claim [8.6.2]	Contract sum plus 10%	Not Applicable
Or	The Contract Price [8.6.1.1.1] Works with practical completion in sections with a deductible not exceeding 5% of each and every claim [8.6.2]	Contract sum plus 10%	Not Applicable
	Plant and materials supplied by the Employer [8.6.1.1.2]	R Eng / PQS to determine value	Not Applicable



Professional fees not included in the Contract Price, payable in respect of the repair or reinstatement of damage to the Works or said movables, plus Escalation thereon (if not included above). Minimum R1m unless other amount indicated. [8.6.1.1.3]	R Eng / PQS to determine value	Not Applicable
Direct contractors [8.6.1.1.2] where applicable, to be included in the contract works insurance	R Eng / PQS to determine value	Not Applicable
Special Risks Insurance issued by Sasria [8.6.1.2]	R Eng / PQS to determine value	Not Applicable

Tender / Quotation no: JHB 26/03

Public liability insurance [8.6.1.3]	R 5 000 000	Applicable
Ground support insurance [8.6.1.4]	R Eng / PQS to determine value	Not Applicable
Subcontractors insurance [8.6.3] where applicable, if not included in works insurance nor by sub-Contractors	R Eng / PQS to determine value	Not Applicable
Other insurances [8.6.1.5]		
Free issue where applicable, to be included in the contract works insurance	R Eng / PQS to determine value	Not Applicable
Hi Risk Insurance when the project is being executed in a geological area classified as a "High Risk Area" [8.6.8[CD]]	R Eng / PQS to determine value	Not Applicable
Other insurances: If applicable, description 1:	R Eng / PQS to determine value	Not Applicable
Other insurances; If applicable, description 2:	R Eng / PQS to determine value	Not Applicable

B 7.0 Obligations of the employer

Existing premises will be in use and occupied [5.4.1 & 5.4.2]	Applicable
If applicable, description:	
Restriction of working hours [5.8]	Applicable
If applicable, description:	



Natural features and known services to be preserved by the contractor [4.7]	Not Applicable
If applicable, description:	
Restrictions to the site or areas that the contractor may not occupy [5.4.1 & 5.4.2]	Applicable
If applicable, description:	

Tender / Quotation no: JHB 26/03

Supply of free issue of material and goods [8.6.1.1.2]	Amount	R	Not Applicable
If applicable, description:			

B 8.0 Subcontractors [4.4]

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

B 9.0 Description of different portions of the works, if applicable [5.14.7, B10.3 [CD]]

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

B 10.0 Contract period [B18: 1.2], Construction period [B18: 1.1], Possession of site [5.4.1], Practical Completion [1.1.1.14, 5.14.1], Completion (Final Approval Certificate) [5.16.1] and Penalties [5.13]

B 10.1 Contract Period

Contract period: Period in **months** as indicated, include the time from the date of award (commencement date [5.2.1]) 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

Tender / Quotation no: JHB 26/03

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	14 Working days
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 from date of Access to and Possession of the Site up to and including Practical Completion , as indicated below [1.1.1.14, 5.4.1, 5.14.1]	6 Months
Period to achieve Completion [5.14.4]	20 Working days
Defect liability period up to and including issuing Final Approval Certificate in months [5.16.1]	3
Total Contract Period	9 Months

B10.2 Construction Period for completion of the Works as a whole

Construction period [B18: 1.2] and Practical Completion for the Works as a whole [5.14.1] The time for achieving Practical Completion of the whole of the Works is measured from the date of Access to and Possession of the site (5.4.1) 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 Access to and Possession of the site by the contractor inclusive of all special non-working days and builders' holiday shut down periods [1.1.1.14, 5.4.1, 5.14.1]	6 Months
Notification period for inspection in working days by the principal agent.	5 Working days
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. [5.13]	R 220.00
Penalty amount per calendar day for late Practical Completion , excluding VAT. [5.13].	R 2,180.00



Penalty amount per calendar day for late Completion [5.14.4, 5.13]: Thirty percent (30%) of penalty amount per calendar day for late Practical Completion, excluding VAT.	R 660.00
Penalty amount per calendar day for late Final Completion (Issuing of Final Approval Certificate) [5.16, 5.13]: Fifteen percent (15%) of penalty amount per calendar day for late Practical Completion, excluding VAT.	R 330.00

Tender / Quotation no: JHB 26/03

B10.3 Construction Period for completion of the Works in portions

Construction period and Practical completion for portions of the Works [5.14.7]					NA	
Portions of the Works in sections:	1	2	3	4	5	6
Notification period for inspection by the principal agent in working days .						
The date for practical completion shall be the period in months as indicated from the date of access and possession of the site by the contractor [1.1.1.14, 5.4.1, 5.14.1]						
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 Access to and Possession of the Site by the contractor inclusive of all public holidays, special non-working days and builders' holiday shut down periods [5.4.1, 12.2.7; 24.1]					6 months	
Penalty for late Practical Completion, if completion in sections is required , excluding VAT [5.13]						
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 submission of contractual obligatory documents: To be calculated at Ten percent (10%) of penalty / calendar day to complete the whole of the Works as indicated above, excluding VAT.						
Penalty amount per calendar day for late Completion [5.14.4, 5.13]: To be calculated at Thirty percent (30%) of penalty / calendar day to complete Select , excluding VAT						

Penalty amount per calendar day for **late Final Completion** (Issuing of Final Approval Certificate) [5.16, 5.13]: To be calculated at Fifteen percent (15%) of penalty / calendar day to complete **Select** , excluding VAT

B 11.0 Criteria to achieve Practical Completion [1.1.1.14, 5.14.1]

Criteria to achieve Practical Completion not covered in the definition of practical completion	
13.1	Obtain Occupation Certificate from the relevant authority prior to issuing the Practical Completion certificate
13.2	All relevant CoCs
13.3	All guarantees

Tender / Quotation no: JHB 26/03

13.4	Training on electrical, security and mechanical installations if contractually required
13.5	Maintenance / operating manuals
13.6	CPG and cidb BUILD programme achievement certificates submitted with substantiating documentation
13.7	
13.8	
13.9	
13.10	

B 12.0 Defects liability period [5.16]

Defects liability period: Refer B10.1

NA	If applicable, description of applicable elements
14.1	All civil works (e.g. roads, storm water system, paving, sewer and water lines, etc.)
14.2	Mechanical equipment (e.g. pumps including switchgear, etc.)
14.3	Landscaping including automated systems (irrigation)
14.4	Electrical equipment (e.g. emergency generators, electronic switchgear, etc.)
14.5	Security system/s (e.g. Access control, Intruder alarm, etc.)



14.6	Air conditioning system and plant
14.7	
14.8	
14.9	
14.10	

Tender / Quotation no: JHB 26/03

B 13.0 Payment [6.10]

Date of month for issue of regular payment certificates Refer [6.10.1]	Monthly
Contract price adjustment / cost fluctuations [6.8.2]	Select
If yes, method to calculate [6.8.2 [CD]]	Contract price adjustment factor
Employer shall pay the contractor within: Refer [6.10.4 [CD]]	Thirty (30) calendar days

B 14.0 Dispute resolution [10.5 [CD]]

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

Tender / Quotation no: JHB 26/03

B 15.0 SPECIFIC CHANGES MADE TO GCC 2015: 3RD EDITION

CONTRACT SPECIFIC DATA	
The following contract specific data, referring to the General Conditions of Contract for Construction Works, Third Edition (2015) are applicable to this Contract:	
CLAUSES	COMPULSORY DATA
1.1.1.8	Amend Clause 1.1.1.8 to include the word "rights" to read as follows: "Contract Data" means the specific data which, together with these General Conditions of Contract, collectively describe the rights, risks, liabilities and obligations of the contracting parties and the procedures for the administration of the Contract.
1.1.1.9	Add to Clause 1.1.1.9 the following: "If the Contractor constitutes under the Law of the Republic of South Africa (B2.0) a joint venture, consortium or other unincorporated grouping of two or more persons: (a) these persons shall be deemed to be jointly and severally liable to the Employer for the performance of the Contract; (b) these persons shall notify the Employer of their leader who shall have authority to bind the Contractor and each of these persons; and (c) the Contractor shall not alter its composition or legal status without the prior consent of the Employer."
1.1.1.13	Amend Clause 1.1.1.13 as follows: "Defects Liability Period" means the period stated in the Contract Data, commencing on the date indicated on the Certificate of Completion for the works as a whole or Certificates of Completion in the event of more than one Certificate of Completion is issued for different parts of the Works, during which the Contractor has both the right and the obligation to make good defects in the materials, Plant and workmanship covered by the Contract. Defects Liability Period is: 12 months . The Defects Liability Period for the works shall commence on the calendar day following the date of the Certificate of Completion for the works as a whole or Certificates of Completion in the event of more than one Certificate of Completion is issued for different parts of the Works and end at midnight (00:00) three hundred and sixty five days (365) calendar days from the date of the Certificate of Completion.
1.1.1.14	Amend Clause 1.1.1.14 as follows: "Due Completion Date" means the date of expiry of the time stated in the Contract Data for achieving Practical Completion of the Works, calculated from the date of Access to and Possession of Site date (5.4.1) and as adjusted by such extensions of time or acceleration as may be allowed in terms of Contract (5.12).
1.1.1.15	The name of the Employer: Refer to A 3.1 [CD]
1.1.1.16	The name of the Employer's Representative: Refer to A 3.2 [CD]
1.1.1.17	The name of the Employer's Agent: Refer to A 4.0 and B 5.0 [CD]

Tender / Quotation no: JHB 26/03

1.1.1.20	Amend Clause 1.1.1.20 by inserting the following words at the end of this definition: "If the Acceptance section of the Form of Offer and Acceptance" contains conditional statements or a schedule of deviations is attached to the Form of Offer and Acceptance, then Form of Offer and Acceptance means the Contract Agreement, that shall be substantially in accordance with the form attached to the Scope of Works, and the date of signing the Contract Agreement shall be the date of the Form of Offer and Acceptance"
1.1.1.21.A	Add new Clause 1.1.1.21.A 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.
1.1.1.27	This Pricing Strategy is a: Re-measurement Contract.
1.1.1.31	Not applicable to this Contract.
1.1.1.35	Insert the definition of "Value of Works" as Clause 1.1.1.35: "Value of Works" means the value of the Works certified by the Employer's Agent as having been satisfactorily executed and shall include the value of the works done, the value of the materials and/or plant and Contract Price Adjustments.
1.1.1.36	Insert the definition of "Latent and Patent Defects" as Clause 1.1.1.36: A 'latent defect' is a material defect, which was not visible after 'reasonable' inspection. The latent defect period commences at the date of Final Approval Certificate and ends 5 years [after that date [5.16.3]. A patent defect is a flaw that is not hidden and ought to be easily identified upon reasonable inspection.
1.1.1.37	Add new Clause 1.1.1.37 Contract participation goals applicable to this Contract are as indicated in B16 [D] and described in the following tender documents: DPW 03 (EC): TENDER DATA, PG 01.1 (EC) SCOPE OF WORK and PG 02.1 (EC) PRICING ASSUMPTIONS.
1.2.3.	Replace Clause 1.2.3. with the following: The Employer's Agent is as indicated in clause B 5.0 and shall have the authority to act on behalf of the employer as indicated in the contract document read with the contract data. [3.2.3].
1.2.6	Add new Clause 1.2.6 The priority of the documents shall be in accordance with the following sequence: (a) The Form of Offer and Acceptance and the signed Schedule of Deviations, (b) Contract Data, (c) These General Conditions of Contract, (e) Scope of Work, and (f) Pricing Data
1.3.4	Not applicable to this Contract.

Tender / Quotation no: JHB 26/03

1.3.5	Replace Clause 1.3.5 with the following: (a) The Employer will become the owner of the information, documents, advice, recommendation and reports collected, furnished and/or compiled by the Contractor during the course of, and for the purposes of executing this Contract, all of which will be handed over to the Employer on request during the contract, but in any event on completion of contract, the termination and/or cancellation of this Contract for whatever reason. The Contractor relinquishes its lien / retention or any other rights thereon to which it may be entitled. (b) The copyright of all documents, recommendations and reports compiled by the Contractor during the course of and for the purposes of finalizing the Works will vest in the Employer, and may not be reproduced or distributed or made available to any person outside the Employer's service, or to any institution in any way, without the prior written consent of the Employer. The Employer shall have the right to use such material for any other purpose without the approval of information or payment to the Contractor. (c) The copyright of all electronic aids, software programmes etc. prepared or developed in terms of the Contract shall vest in the Employer, who shall have the right to use such material for any other purpose without the approval of, information or payment to the Contractor. (d) In case of the Contractor providing documents, electronic aids, software programs or like material to the Employer, the development of which has not been at the expense of the Employer, copyright shall not vest in the Employer. The Contractor shall be required to indicate to which documents, electronic aids, software programs or like material this provision applies. (e) The Contractor hereby indemnifies the Employer against any action, claim, damages or legal cost that may be instituted against the Employer on the grounds of an alleged infringement of any copyright, patents or any other intellectual property right in connection with the Works outlined in this Contract. (f) All information, documents, recommendations, programs and reports collected or compiled must be regarded as confidential and may not be communicated or made available to any person outside the Employer's service and may not be published either during the currency of this Contract or after termination thereof without the prior written consent of the Employer.
1.3.7	Replace Clause 1.3.7 with the following By entering into this contract, the Contractor waives any lien that he may have or acquire, notwithstanding any other condition/s in this contract.
3.2.3	Add to Clause 3.2.3 the following: 1. The Employer's Principal Agent's authority to act and/or to execute functions or duties or to issue instructions are expressly excluded in respect of the following, unless same has been approved by the employer: (a) Appointment of Subcontractors – clause 4.4.4; (b) Granting of an extension of time and/or ruling on claims associated with claims for extension of time – clauses 5.12, 10.1.5; (c) Acceleration of the rate of progress and determination of the cost for payment of such acceleration – clause 5.12.4; (c) Rulings on claims and disputes – clauses 10.1.5, 10.2.3 and 10.3.3; (d) Suspension of the Works – clause 5.11.2; (e) Final Payment Certificate – clause 6.10.9;

Tender / Quotation no: JHB 26/03

	(f) Issuing of <i>mora</i> notices to the Contractor – clauses 9.1.1, 9.1.2.1 and 9.2.1; (g) Cancellation of the contract between the Employer and Contractor – clauses 9.1.1, 9.1.2.1 and 9.2.1. (h) Any variation orders – clause 6.3.1 2. In order to be legally binding and have legal bearing and consequence, any ruling in respect of the above matters (a) to (h) must be on an official document, signed and issued by the Employer to the Contractor. 3. The Contractor must submit claims, demands, notices, notifications, updated particulars and reports in writing, as well as any other supporting documentation pertaining thereto, in respect of any of the above listed matters (a) to (h), to the Employer's Agent within the time periods and in the format(s) as determined in the relevant clauses of the Conditions of Contract. Failing to deliver such to the Employer's Agent and in the correct format will invalidate any claim and the consequences of such failure will <i>mutatis mutandis</i> be as stated in clause 10.1.4. 4. Clauses 6.10.9 and 10.1.5 shall be amended as follows to indicate the limitation on the Employer's Agent authority in respect thereof: Clause 6.10.9 – Amend to read as follows: Within 14 days of the date of final approval as stated in the Final Approval Certificate, the Contractor shall deliver to the Employer's Agent a final statement claiming final settlement of all moneys due to him (save in respect of matters in dispute, in terms of Clauses 10.3 to 10.11, and not yet resolved). The Employer's Agent shall within 14 days issue to the Contractor a Final Payment Certificate the amount of which shall be paid to the Contractor within 30 days of the date of such certificate, after which no further payments shall be due to the Contractor (save in respect of matters in dispute, in terms of Clauses 10.3 to 10.11 and not yet resolved). Clause 10.1.5 – Amend to read as follows: Unless otherwise provided in the Contract, the Employer shall, within 28 days after the Contractor has delivered his claim in terms of Clause 10.1.1 as read with Clause 10.1.2, deliver to the Contractor his written and adequately reasoned ruling on the claim (referring specifically to this Clause). The amount thereof, if any, allowed by the Employer shall be included to the credit of the Contractor in the next payment certificate. If no ruling has been made within the 28 days, as referred to in clause 10.1.5. or any extension thereof as agreed to by the parties, the claim shall be regarded as rejected by the Employer. 5. Insert the following under 3.2.3: Provided that, notwithstanding any provisions to the contrary in the Contract, the Employer shall have the right to reverse and, should it deem it necessary, to amend any certificate, instruction, decision or valuation of the Employer's Agent and to issue a new one, and such certificate instruction, decisions or valuations shall for the purposes of the Contract be deemed to be issued by the Employer's Agent, provided that the Contractor shall be remunerated in the normal manner for work executed in good faith in terms of an instruction issued by the Employer's Agent and which has subsequently been rescinded.
3.3.2.1	Amend Clause 3.3.2.1 to insert the word "plant" to read as follows: Observe how the Works are carried out, examine and test materials, plant and workmanship, and receive from the Contractor such information as he shall reasonably require.

Tender / Quotation no: JHB 26/03

3.3.2.2.3	Add to Clause 3.3.2.2.3 the following: All oral communication must be reduced into writing to be binding on the parties.
3.3.2.2.4	Add to Clause 3.3.2.2.4 the following: All oral communication must be reduced into writing to be binding on the parties.
3.3.3.2	Amend Clause 3.3.3.2 to insert the word "plant" to reads as follows: Notwithstanding any authority assigned to him in terms of Clauses 3.3.2 and 3.3.4, failure by the Employer's Agent's Representative to disapprove of any work, workmanship, plant or materials shall not prejudice the power of the Employer's Agent's thereafter to disapprove thereof and exercise any of his powers in terms of the Contract in respect of thereof.
4.4.4	Ref Clause 3.2.3.
4.4.6	Not applicable to this Contract.
4.8.2.1	Amend Clause 4.8.2.1 to include the word "person", as follows: Makes available to the Employer, or to any such contractor, person or authority, any roads or ways for the maintenance of which the Contractor is responsible, or
4.8.2.2	Amend Clause 4.8.2.2 to include "Employer" and "contractors", as follows: Provides any other facility or service of whatsoever nature to the Employer or to any of the said contractors, persons or authorities,
4.12.3	Add to Clause 4.12.3 the following: All oral communication must be reduced into writing to be binding on the parties.
5.3.1	Add to Clause 5.3.1: The documentation required before commencement with Works execution are: • Health and Safety Plan to be provided within 14 calendar days from award (Ref Clause 4.3) • Initial programme to be provided within 21 calendar days of handing over the site to the contractor (Clause 5.6) • Security (C1.0, Clause 6.2) • Insurance/s (B6, Clause 8.6) • <i>insert town</i>insert towninsert town
5.3.2	Add to Clause 5.3.2: The time to submit the documentation required before commencement with Works execution is: 21 calendar days .
5.4.2	Add to Clause 5.4.2: The access to, and possession of, the Site referred to in Clause 5.4.1 shall be NE to the Contractor. In the event of access to, and possession of, the Site is not exclusive to the Contractor, the following limitations apply: <i>insert town</i>

Tender / Quotation no: JHB 26/03

5.6.2.2	Replace Clause 5.6.2.2 with the following: The sequence, timing of activities and resources for carrying out the Works.
5.6.2.7	Add the following to Clause 5.6.2.7: Updated cash flows and construction programme/s to be submitted on a monthly basis to the Employer's Agent and the Employer.
5.8.1	Add the following to Clause 5.8.1: The non-working days are: Saturdays and Sundays The special non-working days are: Public Holidays and the year-end break annually published by the BCEI (Bargaining Council for the Civil Engineering Industry)
5.9.1	Amend Clause 5.9.1 as follows: On the Commencement Date, the Engineer shall deliver to the Contractor three (3) copies, at no cost to the Contractor, of the drawings and any instructions required for the commencement of the Works. The cost of any additional copies of such drawings and/or instructions, as may be required by the Contractor, will be for the account of the Contractor.
5.11.2	Ref Clause 3.2.3
5.12	Ref Clause 3.2.3
5.12.2.2	Amend Clause 5.12.2.2 as following: "Abnormal climatic conditions, therefore any weather conditions i.e. rain, wind (speed or dust), snow, frost, temperature (cold or heat) that have an adverse effect on the progress of the Works and during which no work is possible on site."
5.13.1	Add the following to Clause 5.13.1: The penalty for failing to complete the Works: Refer to B10 CD
5.14.1	Amend the second paragraph of Clause 5.14.1 as follows: When the Works are about to reach the said stage, the Contractor shall, in writing, request a Certificate of Practical Completion and the Employer's Agent shall, within 14 days after receiving such request, issue to the Contractor a written list setting out the work to be completed to justify Practical Completion. Should the Employer's Agent not issue such a list within the 14 days, the Contractor shall notify the Employer accordingly. Should the Employer not issue such a list within 7 days of receipt of such notice, Practical Completion shall be deemed to have been achieved on the 14th day after the contractor requested the Certificate of Practical Completion.
5.14.4	Add the following to Clause 5.14.4: Penalty for late Completion will be 30% of penalty applicable to late Practical Completion / calendar day. Penalty for late Final Completion will be 15% of penalty applicable to late Practical Completion / calendar day.
5.16.1	Amend Clause 5.16.1 by deleting the provision in the third paragraph of this clause.

Tender / Quotation no: JHB 26/03

5.16.2	Amend Clause 5.16.2 as follows: No certificate other than the Final Approval Certificate referred to in Clause 5.16.1 shall be deemed to constitute approval of the Works or shall be taken as an admission of the due performance of the Contract or any part thereof, nor of the accuracy of any claim made by the Contractor, nor shall any other certificate exclude or prejudice any of the powers of the Employer's Agent and/or the Employer.
5.16.3	The latent defect period for all works is: 5 years
6.2.1	The type of security for the due performance of the Contract, as selected by the Contractor in the Contract Data, must be delivered to the Employer.
6.2.3	Amend Clause 6.2.3 as follows: If the Contractor has selected a performance guarantee as security, he shall ensure that it remains valid and enforceable as required in terms of the Contract.
6.3.1	Amend first paragraph to Clause 6.3.1 as follows: If, at any time before the issue of the Practical Completion, the Employer's Agent shall require any variation of the form, quality or quantity of the Works or any part thereof provided that such Variation Order shall not substantially alter the Scope of Work, he shall have power to order the Contractor to do any of the following subject to obtaining approval from the Employer (3.2.3):
6.5.1.2.3	The percentage allowance to cover overhead charges is 33%, except on material cost where the percentage allowance is 10%.
6.8.2	When Contract Price Adjustment is applicable [B13] the value of payment certificates is to be adjusted by a Contract Price Adjustment Factor (CPAF): The value of the certificates issued shall be adjusted in accordance with the Contract Price Adjustment Factor with the following values: The value of "x" is 0.15. The values of the coefficients are: a = 0.25 (Labour) b = 0.3 (Contractor's equipment) c = 0.3 (Material) d = 0.15 (Fuel) The values of the coefficients for "Repair and Maintenance Project" (RAMP) contracts are: a = 0.35 (Labour) b = 0.20 (Contractor's equipment) c = 0.35 (Material) d = 0.10 (Fuel) The urban area nearest the Site is JHB. (Select urban area from Statistical News Release, P0141, Table A) The applicable industry for the Construction Material Price Index for materials / plant is ELEC +MECH. (Select the applicable industry from Statistical News Release, P0151.1, Tables 2,4,5) The area for the Producer Price Index for fuel is CONSTRUCTION. (Select the area from Statistical News Release, P0142.1, Table 1.) The base month is insert penalty amount insert penalty amount. (The month prior to the closing of the tender.)

Tender / Quotation no: JHB 26/03

6.8.3	Price adjustments for variations in the costs of special materials are not allowed.
6.9.1	Replace Clause 6.9.1 with the following: "Plant and materials will only be certified and paid for upon furnishing proof of ownership 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 Employers Agent.
6.10.1	Add at end of Clause 6.10.1 The contractor shall provide the Employer's Agent every month, on dates as agreed between parties / instructed by the Principal Agent, with the following information: (a) Monthly Local content report, (b) 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) (c) Tax Invoice (d) Labour intensive report (e) Contract participation goal reports (f) Updated construction programme (g) Revised cash flows
6.10.1.5	The percentage advance on materials not yet built into the Permanent Works is: 85 % .
6.10.3	The limit of retention money is dependent on the security to be provided by the Contractor in terms of Clause 6.2.1.
6.10.4	Replace "28 days" with "30 days" provided all required documents including an invoice have been submitted and are correct in all respects.
6.10.5	Replace Clause 6.10.5 with the following: <u>In respect of contracts up to R2 million and in respect of contracts above R2 million where the Contractor elects a security by means of a 10% retention</u>, 50% of the retention shall be released to the Contractor when the Employer's Agent issues the Certificate of Completion in terms of clause 5.14.4. The remaining 50% of the retention shall be released in accordance with the provisions of the conditions of contract and will become due and payable when the Contractor becomes entitled, in terms of Clause 5.16.1, to receive the Final Approval Certificate. <u>In respect of contracts above R2 million, where the Contractor elects a security by means of a cash deposit or fixed guarantee of 5% of the Contract Sum (excl. VAT) and a 5% retention of the Value of the Works (excl. VAT)</u>, the cash deposit or fixed guarantee, whichever is applicable, shall be refunded to the Contractor or return to the guarantor, respectively, when the Employer's Agent issues the Certificate of Completion in terms of Clause 5.14.4. The 5% retention of the Value of the Works (excl. VAT) shall become due and payable when the Contractor becomes entitled, in terms of Clause 5.16.1, to receive the Final Approval Certificate. <u>In respect of contracts above R2 million, where the Contractor elects a security by means of a cash deposit or a variable guarantee of 10% of the Contract Sum (excl. VAT)</u>, the cash deposit or the variable guarantee, whichever is applicable, will be reduced to 5% of the Value of the Works (excl. VAT) when the Employer's Agent issues the Certificate of Completion in terms of Clause 5.14.4. The balance of the cash deposit shall become due and payable or the variable guarantee shall expire when the Contractor becomes entitled in terms of Clause 5.16.1 to receive the Final Approval Certificate.

Tender / Quotation no: JHB 26/03

6.10.6.2	Replace Clause 6.10.6.2 with the following: "In the event of failure by the Employer to make the payment by the due date, he shall pay to the Contractor interest, at 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". (1.1.1.21.A).
6.10.9	Ref Clause 3.2.3.
7.2.1	The last sentence to read "Failing requirements or instructions, the Plant, workmanship and materials of the respective kinds shall be suitable for the intended purpose provided that materials procured for the works are 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 DPWI. Failing to comply, unless specified or approval granted will result in a ten percent (10%) penalty of the value of imported material used without approval.
7.5.3	Add the following to Clause 7.5.3 "Should the work inspected by the Employer's Agent be rejected, all consultant's fees / costs pertaining to the unsuccessful inspection shall be recovered from the contractor".
7.9.1	Insert the following at the end of Clause 7.9.1: Provided that, should the Contractor on demand not pay the amount of such costs to the Employer, such amount may be determined and deducted by the Employer from any amount due to or that may become due to the Contractor under this or any other previous or subsequent contract between the Contractor and the Employer.
8.2.2.1	Insert the following as a second paragraph to Clause 8.2.2.1: The Contractor shall at all times proceed immediately to remove or dispose of any debris arising from damage to or destruction of the Works and to rebuild, restore, replace and/or repair the Works, failing which the Employer may cause same to be done and recover the reasonable costs associated therewith from the Contractor.
8.3.1.10	Replace Clause 8.3.1.10 with the following: "Ionising, radiation, or contamination by radioactivity from any nuclear fuel, or from any nuclear waste from the combustion of nuclear fuels, excluding leakages of any radioactive material / gases / corrosive liquids/chemicals, which are harmful to the environment and biological life, brought on to site for installation or used in the Works prior to final approval".
8.4.3	Add the following as Clause 8.4.3: Where the Contractor has caused damage to property (moveable and immovable), of any person, the Employer or third parties, the Contractor shall on receiving a written instruction from the Employer's Agent immediately proceed at his own cost to remove or dispose of any debris and to rebuild, restore, replace and/or repair such property and to execute the Works.
8.6.1	Replace Clause 8.6.1 with the following: Except if provided otherwise in the Contract Data, the Contractor, without limiting his obligations in terms of the Contract, 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 [8.2.1]
8.6.1.1.1	Ref B6.0 CD for value of insurance.
8.6.1.1.2	Ref B6.0 CD for value of insurance.

Tender / Quotation no: JHB 26/03



8.6.1.1.3	Ref B6.0 CD for value of insurance.
8.6.1.3	Amend Clause 8.6.1.3 as follows: Liability insurance that covers the Contractor against liability for the death of, or injury to any person, or loss of, or damage to any property (other than property while it is insured in terms of Clause 8.6.1.1) arising from or in the course of the fulfilment of the Contract, from the Commencement Date to the date of the end of the Defects Liability Period, if applicable, or otherwise to the issue of the Certificate of Completion.
8.6.4	Not applicable to this Contract.
8.6.6	Replace Clause 8.6.6 with the following: 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 all the policies by which the insurances are effected and due proof of upfront payment of all premiums thereunder to keep the policies effective from the Commencement Date to the date of the end of the Defects Liability Period, if applicable, or otherwise to the issue of the Certificate of Completion.
8.6.7	Replace Clause 8.6.7 with the following: If the Contractor fails to effect and keep in force any of the insurances referred to in Clause 8.6.1, the Employer may cancel the Contract in terms of Clause 9.2.
8.6.8	Add new Clause 8.6.8. HIGH 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 subsurface conditions that might result in catastrophic ground movement evident by sinkhole or doline formation the following will apply: (1) Damage to the Works The Contractor shall, from the date of Commencement of the Works until the date of the Certificate of 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 Employer's 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. (2) Injury to Persons or Loss of or damage to Properties The Contractor shall be liable for and hereby indemnifies and holds harmless the Employer against any liability, loss, claim or proceeding arising during the Contract Period 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

Tender / Quotation no: JHB 26/03

	immovable 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 Contract Period. (3) It is the responsibility of the Contractor to ensure that he has adequate insurance to cover his risk and liability as mentioned in Clauses 8.6.8(1) and 8.6.8 (2) above. Without limiting his obligations in terms of the Contract, the Contractor shall, within 21 days of the Commencement Date and before Commencement of the Works, submit to the Employer proof of such insurance policy, if requested to do so. (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 Clauses 8.6.8 (1), 8.6.8 (2) and 8.6.8 (3). Provided that, should the Contractor on demand not pay the amount of such costs to the Employer, such amount may be determined and deducted by the Employer from any amount due to or that may become due to the Contractor under this or any other existing or subsequent contract between the Contractor and the Employer.
9.1.1	Ref Clause 3.2.3
9.1.2.1	Ref Clause 3.2.3
9.1.4	Replace the first paragraph of Clause 9.1.4 with the following: "In the circumstances referred to in Clauses 9.1.1, 9.1.2 or 9.1.3 (provided that the circumstances in 9.1.3 is not due to the fault of the Contractor, his employees, contractors or agents), and whether or not the Contract is terminated under the provisions of this Clause, the Contractor shall be entitled on proof of payment of any increased cost of or incidental to the execution of the Works which is specifically attributable to, or consequent upon the circumstances defined in Clauses 9.1.1, 9.1.2 or 9.1.3; necessary changes"
9.1.5	Replace the first paragraph of Clause 9.1.5 with the following: If the Contract is terminated on any account in terms of this Clause (provided that the circumstances in 9.1.3 is not due to the fault of the Contractor, his employees, contractors or agents) , the Contractor shall be paid by the Employer (insofar as such amounts or items have not already been covered by payments on account made to the Contractor) for all measured work executed prior to the date of termination, the amount (without retention), payable in terms of the Contract and, in addition: "
9.1.5.5	Not applicable to this Contract.
9.1.6	Not applicable to this Contract.
9.2.1	Ref Clause 3.2.3
9.2.1.3.9	Add new Clause 9.2.1.3.9: Has failed to effect and keep in force any of the insurances referred to in Clause 8.6.1.
9.2.4	Add the following as Clause 9.2.4: In the case where a contract is terminated by the Employer by no fault by any party, the contractor shall be entitled to no other compensation than for work done and materials on site as certified by the Principal Agent at the date of termination.

Tender / Quotation no: JHB 26/03

9.3.2.2	Replace Clause 9.3.2.2 with the following: All Plant and Construction Equipment, Temporary Works and unused materials brought onto the Site by the Contractor, and where ownership has not been transferred to the Employer (see Clause 6.9.1), shall be removed from the Site on termination of the contract by any party.
9.3.2.3	Not applicable to this Contract.
9.3.3	Add the following at the end of Clause 9.3.3 After cancellation of the Contract by the Contractor, the Contractor, when requested by the Employer to do so, shall not be entitled to refuse to withdraw from the Works on the grounds of any lien or a right of retention or on the grounds of any other right whatsoever. Nothing in this Clause shall prejudice the right of the Contractor to exercise, either in lieu of or in addition to the Contractor rights and remedies specified in this Clause, any other rights or remedies to which the Contractor may be entitled under the Contract or common law.
10.1.3.1	Replace Clause 10.1.3.1 with the following: All facts and circumstances relating to the claims shall be investigated as and when they occur or arise. For this purpose, the Contractor shall deliver to the Employer's Agent, records in a form approved by the Employer's Agent, of all the facts and circumstances which the Contractor considers relevant and wishes to rely upon in support of his claims, including details of all construction equipment, plant, labour, and materials relevant to each claim. Such records shall be submitted promptly after the occurrence of the event giving rise to the claim.
10.1.3.6	Replace Clause 10.1.3.6 with the following: The Employer, the Employer's Agent and the Contractor shall in any proceedings in accordance with Clauses 10.3 and 10.11 be entitled to give or lead evidence of or rely on any fact or circumstance not recorded in terms of this Clause, if other party to the dispute is prejudiced by such non-recording of the facts.
10.1.4	Ref Clause 3.2.3.
10.1.5	Ref Clause 3.2.3.
10.1.6	Add new Clause 10.1.6: If the Employer fails to give his ruling within the period referred to in Clause 10.1.5 he shall be deemed to have given a ruling dismissing the claim.
10.1.3.6	Replace Clause 10.1.3.6 with the following: The employer, the Employer's Agent and the Contractor shall in any proceedings in accordance with Clauses 10.3 and 10.11 be entitled to give or lead evidence of or rely on any fact or circumstance not recorded in terms of the Clause, if the other party to the dispute is prejudiced by such non-recording of the facts.
10.2.1	Replace Clause 10.2.1 with the following: In respect of any matter arising out of or in connection with the Contract, which is not required to be dealt with in terms of Clause 10.1 or which does not require the decision or ruling of the Employer, the Contractor or the Employer shall have the right to deliver a written dissatisfaction claim to the Employer's Agent. This written claim shall be supported by particulars and substantiated.

Tender / Quotation no: JHB 26/03



10.2.2	Replace Clause 10.2.2 with the following: If, in respect of any matter arising out of or in connection with the Contract, which is not required to be dealt with in terms of Clause 10.1 or which does not require the decision or ruling of the Employer, the Contractor or the Employer fails to submit a claim within 28 days after the cause of dissatisfaction, he shall have no further right to raise any dissatisfaction on such matter.
10.2.3	Ref clause 3.2.3.
10.3.2	Replace Clause 10.3.2 with the following: If either party shall have given notice in compliance with Clause 10.3.1, the dispute shall be referred immediately to mediation under Clause 10.5, unless amicable settlement is contemplated.
10.3.3	Replace Clause 10.3.3 with the following:: In respect of a ruling given by the Employer (Ref clause 3.2.3), and although the parties may have delivered a Dispute Notice, the ruling shall be in full force and carried into effect unless and until otherwise agreed by both parties, or in terms of a mediation decision or court judgement.
10.4.2	Replace Clause 10.4.2 with the following: If the other party rejects the invitation to amicable settlement in writing, or does not respond in writing to the invitation within 14 days, or amicable settlement is unsuccessful, referral to mediation shall follow immediately. Should mediation be unsuccessful, the dispute shall be resolved by Litigation.
10.4.4	Replace Clause 10.4.4 with the following: Save for reference to any portion of any settlement, or decision which has been agreed to be final and binding on the parties, no reference shall be made by or on behalf of either party in any subsequent court proceedings, to any outcome of an amicable settlement, or to the fact that any particular evidence was given, or to any submission, statement or admission made in the course of the amicable settlement.
10.5	Replace Clause 10.5 with the following: The parties may, by agreement and at any time before Litigation, refer a dispute to mediation, in which event: 10.5.1 The appointment of a mediator, the procedure, and the status of the outcome shall be agreed between the parties. 10.5.2 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.
10.6	Not applicable to this Contract.
10.7	Not applicable to this Contract.
10.10.3	Replace Clause 10.10.3 with the following: The court shall have full power to open up, review and revise any ruling, decision, order, instruction, certificate or valuation of the Employer's Agent and Employer and neither party shall be limited in such proceedings before such court to the evidence or arguments put before the Employer's Agent or Employer for the purpose of obtaining his ruling.

Tender / Quotation no: Error! Reference source not found.

B 16.0 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

Tender / Quotation no: JHB 26/03

PART 2: CONTRACT DATA COMPLETED BY THE TENDERER:

C TENDERER'S SELECTIONS

C 1.0 Securities [11.0]

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 more than R1 million, the security to be provided by the contractor to the employer will be selected by the Contractor as indicated below:

Guarantee for construction: Select Option A, B, C, D or E

Option A	cash deposit of 10 % of the contract sum (excluding VAT)
Option B	variable construction guarantee of 10 % of the contract sum (excluding VAT) (DPW-10.3 EC)
Option C	payment reduction of 10% of the value certified in the payment certificate (excluding VAT)
Option D	cash deposit of 5% of the contract sum (excluding VAT) and a payment reduction of 5% of the value certified in the payment certificate (excluding VAT)
Option E	fixed construction guarantee of 5% of the contract sum (excluding VAT) and a payment reduction of 5% of the value certified in the payment certificate (excluding VAT) (DPW-10.1 EC)]

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) on the pro-forma referred to above. No alterations or amendments of the wording of the pro-forma will be accepted.

Guarantee for payment by employer [11.5.1; 11.10]	Not applicable
Advance payment, subject to a guarantee for advance payment [11.2.2; 11.3]	Not applicable

Tender / Quotation no: JHB 26/03

C 2.0 Payment of preliminaries [25.0]

Contractor's selection

Select Option A or B

☐

Where the **contractor** does not select an option, Option A shall apply

Payment methods

Option A	The preliminaries shall be paid in accordance with an amount prorated to the value of the works executed in the same ratio as the amount of the preliminaries to the contract sum , which contract sum shall exclude the amount of preliminaries . Contingency sum(s) and any provision for cost fluctuations shall be excluded for the calculation of the aforesaid ratio
Option B	The preliminaries shall be paid in accordance with an amount agreed by the principal agent and the contractor in terms of the priced document to identify an initial establishment charge, a time-related charge and a final dis-establishment charge. Payment of the time-related charge shall be assessed by the principal agent and adjusted from time to time as may be necessary to take into account the rate of progress of the works

Lump sum contract

Where the amount of **preliminaries** is not provided it shall be taken as 7.5% (seven and a half per cent) of the **contract sum**, excluding contingency sum(s) and any provision for cost fluctuations.

C 3.0 Adjustment of preliminaries [26.9.4]

Lump sum contract

Where the amount of **preliminaries** is not provided it shall be taken as 7.5% (seven and a half per cent) of the **contract sum**, excluding contingency sum(s) and any provision for cost fluctuations.

Contractor's selection

Select Option A or B

☐

Where the **contractor** does not select an option, Option A shall apply.

Provision of particulars

The **contractor** shall provide the particulars for the purpose of the adjustment of **preliminaries** in terms of his selection. Where completion in **sections** is required, the **contractor** shall provide an apportionment of **preliminaries** per **section**.

Option A	An allocation of the preliminaries amounts into Fixed, Value-related and Time-related amounts as defined for adjustment method Option A below, within fifteen (15) working days of the date of acceptance of the tender
Option B	A detailed breakdown of the preliminaries amounts within fifteen (15) working days of possession of the site . Such breakdown shall include, inter alia, the administrative and supervisory staff, the use of construction equipment , establishment and dis-establishment charges, insurances and guarantees, all in terms of the programme

Tender / Quotation no: JHB 26/03

Adjustment methods

The amount of **preliminaries** shall be adjusted to take account of the effect which changes in time and/or value have on **preliminaries**. Such adjustment shall be based on the particulars provided by the **contractor** for this purpose in terms of Options A or B, shall preclude any further adjustment of the amount of **preliminaries** and shall apply notwithstanding the actual employment of resources by the **contractor** in the execution of the **works**.

Option A	The preliminaries shall be adjusted in accordance with the allocation of preliminaries amounts provided by the contractor, apportioned to sections where completion in sections is required Fixed - An amount which shall not be varied. Value-related - An amount varied in proportion to the contract value as compared to the contract sum. Both the contract sum and the contract value shall exclude the amount of preliminaries, contingency sum(s) and any provision for cost fluctuations. Time-related - An amount varied in proportion to the number of calendar days extension to the date of practical completion to which the contractor is entitled with an adjustment of the contract value [23.2; 23.3] as compared to the number of calendar days in the initial construction period [26.9.4].
Option B	The adjustment of preliminaries shall be based on the number of calendar days extension to the date of practical completion to which the contractor is entitled with an adjustment of the contract value [23.2; 23.3] as compared to the number of calendar days in the initial construction period [26.9.4]. The adjustment shall take into account the resources as set out in the detailed breakdown of the preliminaries for the period of construction during which the delay occurred.

Failure to provide particulars within the period stated

Option A	Where the allocation of preliminaries amounts for Option A is not provided, the following allocation of preliminaries amounts shall apply: Fixed - Ten per cent (10%) Value-related - Fifteen per cent (15%) Time-related - Seventy-five per cent (75%) Where the apportionment of the preliminaries per section is not provided, the categorised amounts shall be prorated to the cost of each section within the contract sum as determined by the principal agent
Option B	Where the detailed breakdown of preliminaries amounts for Option B is not provided, Option A shall apply

C1.3 Form of Guarantee

DPW-10.4 (EC): FIXED CONSTRUCTION GUARANTEE GCC 3rd Edition (2015)

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

FOR ATTENTION

Nothemba Djalivani
Private Bag X3
Braamfontein
2017

Sir,

FIXED CONSTRUCTION GUARANTEE FOR THE EXECUTION OF A CONTRACT IN TERMS OF GCC 3rd Edition (2015)

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: **JHB 26/03**, for the installation of backup generators (hereinafter referred to as the "**contract**"), for the sum 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 (in the **employer's** opinion and sole discretion):
 - (a) the **contractor** has failed or neglected to comply with the terms and/or conditions of the **contract**;
or
 - (b) the **contractor's** estate is sequestered; liquidated or surrendered in terms of the insolvency laws in force within the Republic of South Africa.
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 approval certificate**, the **employer** shall account to the **guarantor** showing how this amount has been expended and refund any balance due to the **guarantor**.

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 completion** of works.
8. 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. _____

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 Instructions

PG-02.1 (EC) PRICING ASSUMPTIONS – GCC 3rd Edition (2015)

Project title:	<i>Various Magistrate's Office: Hardach, Kwa Thema, Dunnottar and Fochville Installation of Backup Generator</i>		
Tender / Quotation no:	JHB 26/03	Reference no:	

C2.1 Pricing Assumptions

C2.1.1 GENERAL

The Bill of Quantities forms part of the Contract Documents and must be read and priced in conjunction with all the other documents comprising the Contract Documents, which include the Conditions of Tender, Conditions of Contract, the Specifications (including the Project Specification) and the Drawings.

C2.1.2 DESCRIPTION OF ITEMS IN THE SCHEDULE

The Bill of Quantities has been drawn up generally in accordance with Civil Engineering Quantities 1990 issued by the SA Institution of Civil Engineers.

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

C2.1.3 QUANTITIES REFLECTED IN THE SCHEDULE

The quantities given in the Bill of Quantities are estimates only, and subject to remeasuring during the execution of the work. The Contractor shall obtain the Engineer's detailed instructions for all work before ordering any materials or executing work or making arrangements for it.

The Works as finally completed in accordance with the Contract shall be measured and paid for as specified in the Bill of Quantities and in accordance with the General and Special Conditions of Contract, the Specifications and Project Specifications and the Drawings. Unless otherwise stated, items are measured net in accordance with the Drawings, and no allowance has been made for waste.

The validity of the contract will in no way be affected by differences between the quantities in the Bill of Quantities and the quantities finally certified for payment.

C2.1.4 PROVISIONAL SUMS

Where Provisional sums or Prime Cost sums are provided for items in the Bill of Quantities, payment for the work done under such items will be made in accordance with Clause 45 of the General Conditions of Contract 2004. The Employer reserves the right, during the execution of the works, to adjust the stated amounts upwards or downwards according to the work actually done under the item, or the item may be omitted altogether, without affecting the validity of the Contract.

The Tenderer shall not under any circumstances whatsoever delete or amend any of the sums inserted in the "Amount" column of the Bill of Quantities and in the Summary of the Bill of Quantities unless ordered or authorized in writing by the Employer before closure of tenders. Unauthorized changes made by the Tenderer to provisional items in the Bill of Quantities, or to the provisional percentages and sums in the Summary of the Bill of Quantities will lead to the disqualification of the Tenderer.

C2.1.5 PRICING OF THE BILL OF QUANTITIES

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.

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.

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.

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 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 SANS 1200 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.

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"

C2.1.6 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

C2.1.7 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.

C2.1.8 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.

C2.1.9 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.

C2.1.10 UNITS OF MEASUREMENT

The units of measurement described in the Bill of Quantities are metric units for which the standard international abbreviations are used. Non-standard abbreviations which may appear in the Bill of Quantities are as follows:

No.	=	Number
%	=	Percent
Sum	=	Lump sum
PCsum	=	Prime cost sum
Prov sum	=	Provisional sum
m ³ .km	=	Cubic metre - kilometre
Km-pas	=	kilometre - pass
m ² .pass	=	square metre – pass

C2.1.11 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.

C2.1.12 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.

C2.1.13 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.

C2.1.14 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.

C2.1.15 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.

C2.1.16 CONTRACT PARTICIPATION GOALS

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

Provision for pricing of compliance with the achieving the CPGs is made in the Contract Participation Goal Section of the Bills of Quantities and it is explicitly pointed out that all requirements in respect of the aforementioned are deemed to be priced thereunder and no additional claims in this regard shall be entertained

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.

C2.1.16.1 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-01.1 (EC) SCOPE OF WORKS C3.7.1. 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.

C2.1.16.2 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-01.1 (EC) SCOPE OF WORKS C3.7.2. 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.

C2.1.16.3 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-01.1 (EC) SCOPE OF WORKS C3.7.3. 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.

C2.1.16.4 MINIMUM TARGETED ENTERPRISE DEVELOPMENT: CONTRACT PARTICIPATION GOALS (CPG)

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-01.1 (EC) SCOPE OF WORKS C3.7.4. 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.

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.

C2.1.16.5 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-01.1 (EC) SCOPE OF WORKS C3.7.5. 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 3 of the Standard.

Table 1: 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)

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 $0,50\% \times R65\,700\,000 = R328\,500$ (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

C2.1.16.6 NATIONAL YOUTH SERVICE TRAINING AND DEVELOPMENT PROGRAMME

The National Youth Service Training and Development Programme is *not 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-01.1 (EC) SCOPE OF WORKS C3.7.6.

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.

C2.1.16.7 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-01.1 (EC) SCOPE OF WORKS C3.7.7 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.

PART C3: Scope of Work

C3 Scope of Work

PG-01.1 (EC) SCOPE OF WORKS – GCC 3rd Edition (2015)

Project title:	Various Magistrate's Office: Hardach, Kwa Thema, Dunnottar and Fochville Installation of Backup Generator		
Tender no:	JHB 26/03	Reference no:	

C3. Scope of Works

CONTENTS

C3.1 STANDARD SPECIFICATIONS

C3.2 PROJECT SPECIFICATIONS

A: GENERAL

- PS-1 PROJECT DESCRIPTION
- PS-2 DESCRIPTION OF SITE AND ACCESS
- PS-3 DETAILS OF CONTRACT
- PS-4 CONSTRUCTION AND MANAGEMENT REQUIREMENTS
- PS-5 CONSTRUCTION PROGRAMME
- PS-6 SITE FACILITIES AVAILABLE
- PS-7 SITE FACILITIES REQUIRED
- PS-8 REQUIREMENTS FOR ACCOMMODATION OF TRAFFIC
- PS-9 OCCUPATIONAL HEALTH AND SAFETY
- PS-10 ADVERSE WEATHER CONDITIONS

B: AMENDMENTS TO THE PARTICULAR SPECIFICATIONS

Refer to specifications document.

C3.3 PARTICULAR SPECIFICATIONS

Refer to specifications document.

C3.4 STANDARD SPECIFICATIONS:

The standard specifications on which this contract is based are the **South African Bureau of Standards Standardized Specifications for Civil Engineering Construction SABS 1200**. *(Note to compiler. "SABS" has been changed to "SANS"; the SABS 1200 specifications are due to be replaced in the foreseeable future by SANS 2100)*

Although not bound in nor issued with this Document, the following Sections of the Standardized Specifications of SABS 1200 shall form part of this Contract:

A - 1986 - GENERAL / D – (etc, to be provide by compiler)

3.5 PROJECT SPECIFICATIONS:

Status

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

Part 1 A contains a general description of the works, the site and the requirements to be met.

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

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

3.5.1 GENERAL

PS-1 PROJECT DESCRIPTION:

Various Magistrate's Office: Hardach, Kwa Thema, Dunnottar and Fochville Installation of Backup Generator

3.5.2 AMENDMENTS TO THE STANDARD AND PARTICULAR SPECIFICATION:

Refer to specifications document.

C3.5.3 PARTICULAR SPECIFICATIONS:

Refer to specifications document.

C3.6 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:

- C3.6.1 cidb Best Practice: Green Building Certification, No. 34158 Government Gazette, 1 April 2011
- C3.6.2 cidb Standard for Developing Skills through Infrastructure Contracts, No. 36760 Government Gazette, 23 August 2013
- C3.6.3 cidb Standard for Indirect Targeting for Enterprise Development through Construction Works Contracts, No 36190 Government Gazette, 25 February 2013
- C3.6.4 Preferential Procurement Policy Framework Act, 2000: Preferential Procurement Regulations, 2017, No. 40553 Government Gazette, 20 January 2017
- C3.6.5 cidb Standard for Contract Participation Goals for Targeting Enterprises and Labour through Construction Works Contracts, No. 41237 Government Gazette, 10 November 2017
- C3.6.6 cidb Standard for Minimum Requirements for Engaging Contractors and Sub-Contractors on Construction Works Contracts, No. 41237 Government Gazette, 10 November 2017
- C3.6.7 cidb Standard for Minimum Requirements for Engaging Contractors and Sub- Contractors on Construction Works Contracts, No. 42021 Government Gazette, 9 November 2018

C3.6.8 cidb Standard for Developing Skills through Infrastructure Contracts, No 48491 Government Gazette, 23 April 2023

C3.7 CONTRACT PARTICIPATION GOALS AND CIDB BUILD PROGRAMME

Provision has been made within the Contract Participation Goal section in the Bill of Quantities for the respective CPGs. 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.

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

C3.7.1 Minimum Targeted Local Material Manufacturer Contract Participation Goal

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

It is the requirement of the employer that the contractor enhances the use of local Small, Micro and Medium Enterprise Local Material Manufacturers (SMME's) in executing this contract, irrespective whether a minimum percentage Participation Goals is applicable or not.

The 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.

A Targeted Local Material Manufacturer is a targeted enterprise that operates or maintains a factory or establishment that produces on its premises materials or goods required by the principal contractor for the performance of the contract.

Note: Adapted from SANS 10845-7:2015, definition 2.13

Preference shall be given to the Targeted Local Material Manufacturer where feasible in **insert applicable Ward/s, Municipal District, Town, City, Province**, and provided that:

- (a) Such materials comply in all respects with the specific requirements of PW371 and SANS specifications,
- (b) The non-availability of such materials shall not adversely affect the desired progress of the specific works,
- (c) The use of such suppliers shall not constitute grounds for any claim for increased cost in respect thereof,
- (d) Materials of at least **insert applicable percentage, both in words and figures** of the total value of materials purchased excluding VAT to be sourced from within **insert applicable kilometers** radius of the project site,
- (e) Material of at least **insert applicable percentage, both in words and figures** of the total value of materials purchased excluding VAT to be sourced from within **insert applicable kilometers** radius of the project site.

Failure to achieve the minimum specified value as indicated in the CPG Bill of Quantity Section for Targeted Local Material Manufacturer participation will result in a **thirty percent (30%)** penalty of the prorated targeted value of materials not complied with unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control.

The contractor shall submit monthly reports in terms of monthly achievement and accumulative targets achieved including audited supporting documentation to the Employer's Representative.

C3.7.2 Minimum Targeted-Local Building Material Suppliers Contract Participation Goal

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

It is the requirement of the employer that the contractor enhances the use of local Small, Micro and Medium Enterprise Local Material Suppliers (SMME's) in executing this contract, irrespective whether a minimum percentage Participation Goals is applicable or not.

The Minimum Targeted Local Manufacturers of Material Contract Participation Goal shall be achieved 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..

A targeted supplier is a targeted enterprise that

- a) owns, operates or maintains a store, warehouse or other establishment in which goods are bought, kept in stock and regularly sold to wholesalers, retailers or the public in the usual course of business; and
- b) engages, as its principal business and in its own name, in the purchase and sale of goods.

Note: Adapted from SANS 10845-7:2015, definition 2.14

Preference shall be given to the local material suppliers where feasible in the **insert applicable Ward/s, Municipal District, Town, City, Province**, and provided that:

- (a) Such materials comply in all respects with the specific requirements of PW371 and SANS specifications,
- (b) The none availability of such materials shall not adversely affect the desired progress of the specific works,
- (c) The use of such suppliers shall not constitute grounds for any claim for increased cost in respect thereof,
- (d) Materials of at least **insert applicable percentage, both in words and figures** of the total value of materials purchased excluding VAT to be sourced from within **insert applicable kilometerskm** of the project site,
- (e) Material of at least **insert applicable percentage, both in words and figures** of the total value of materials purchased excluding VAT to be sourced from within **insert applicable kilometerskm** of the project site.

Failure to achieve the minimum specified value as indicated in the CPG Bill of Quantity Section for Targeted Local Material Manufacturer participation will result in a **thirty percent (30%)** penalty of the prorated targeted value of materials not complied with, unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control.

The bidder shall submit monthly reports in terms of monthly achievement and accumulative targets achieved including audited supporting documentation to the Employer's Representative.

C3.7.3 Minimum Targeted Local Labour Skills Development Contract Participation Goal

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

It is the requirement of the employer that the contractor enhances the use of local labour in executing this contract. This is required to be done through the use of both traditional building techniques and labour-intensive construction techniques careful and considered construction planning and implemented in the project irrespective whether a minimum percentage Participation Goal is applicable or not.

The Minimum Targeted Local Skills Development Contract Participation Goal shall be achieved 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.

No. 48491 of 28 April 2023 and the cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract..

Targeted labour: individuals who:

- a) are employed by the principal contractor, sub-contractor or targeted enterprises in the performance of the contract;
- b) are defined as the target group in the targeting data; and
- c) permanently reside in the target area or who are recognized as being residents of the target area on the basis of identification and association with and recognition by the residents of the target area.

Adapted from SANS 10845-7:2015, definition 2.12

Targeting of labour by skills categories is only permissible within categories of semi-skilled and unskilled labour.

Contract participation goals for semi-skilled and unskilled labour shall be limited to on-the-job training to targeted labour to enable such labour to master the basic work techniques required to undertake the work in accordance with the requirements of the contract and in a manner that does not compromise worker health and safety. In the case of targeted labour, the certification of records shall be in accordance with SANS 10845-8.

Beneficiaries will be sourced from the **insert applicable Ward/s, Municipal District, Town, City, Province** for the full duration of the Construction Period, employed by either the principal contractor, sub-contractors or targeted enterprises. The total number of working days to complete the Works amount to **insert number of working days as determined by the Construction Period** working days. The minimum CPG participation for Targeted Local Labour Skills Development is **insert applicable percentage, both in words and figures**, expressed as a percentage of the total number of working days required to complete the Works. The contractor shall attain or exceed the CPG in the performance of the contract. Failure to achieve the minimum Targeted Local Labour Skills Development CPG will result in a payment reduction of **R5 000** (Excluding VAT), per working day which training has not been provided to the workforce in attendance, unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control.

The bidder shall submit monthly reports in terms of monthly achievement and accumulative targets achieved including audited supporting documentation to the Employer's Representative.

C3.7.4 CIDB BUILD PROGRAMME: Minimum Targeted Enterprise Development Contract Participation Goal

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

The aim of this best practice standard for indirect targeting for enterprise development in accordance with the Standard for Indirect Targeting for Enterprise Development (published in Government Gazette 36190 of 25 February 2013), as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract, is to promote enterprise development by providing for a minimum Contract Participation Goal (CPG) of **insert percentage Min 5% and Max 30%** of the contract amount as defined in the Standard (Tender amount, excluding allowances and VAT) on selected contracts to be undertaken by joint-venture partners or to be sub-contracted to developing contractors that are also to be beneficiaries of enterprise development support from the main contractor.

The bidder shall submit monthly reports in terms of monthly achievement and accumulative targets achieved including audited supporting documentation to the Employer's Representative.

The lead partner or main contractor shall dedicate a **minimum insert percentage Min 5% and Max 30%** of the tender value at the time of award, excluding allowances and VAT, to provide developmental support to targeted subcontractor or joint venture partner applicable to contracts in Grades 7 to 9, General Building and Civil Engineering contracts. Preference will be given to insert type of enterprises, e.g. General Building, Electrical, Mechanical, Plumbing, etc. It could be either or any combination of all Enterprises.

Failing to achieve the targeted Contract Skills Development Goal will result in A) a thirty percent (30%) penalty of the value of the portion not achieved, excluding VAT, and B) the issuing of completion certificates only after the completion certificate of achieving the skills development goal, counter-signed by the relevant individuals has been submitted, unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control.

The bidder shall submit monthly reports in terms of monthly achievement and accumulative targets achieved including audited supporting documentation to the Employer's Representative.

C3.7.4.1 Criteria

The main or lead partner of the successful bidder shall:

- (a) There must be a needs analysis for indirect targeting and development or skill standard and should be development in at least any two developmental areas namely;
 - Administrative and cost control systems
 - construction management systems and plans
 - planning, tendering and programming
 - business; technical; procurement skills
 - legal compliance
 - credit rating/history; financial loan capacity/history
 - contractual knowledge
- (b) The above needs analysis shall be mutually agreed upon between contractor and targeted enterprise
- (c) The contractor shall appoint an enterprise development coordinator to:
 - perform needs analysis on the targeted enterprise to identify developmental goals
 - develop a project specific enterprise development plan to improve the targeted enterprise/s performance in the identified developmental areas
 - provide internal mentorship support to improve the targeted enterprise/s performance
 - monitor and submit to the employer's representative a monthly enterprise development report thereby reporting on the progress of the agreed development areas with the targeted enterprise/s
 - submit a project completion report to the Employer's representative for each targeted enterprise.

C3.7.4.2 Management

The contractor shall provide a competent person/s to provide internal mentorship to the Targeted Enterprise/s in the two agreed developmental areas.

C3.7.4.3 Competence Criteria for an Enterprise Development Co-ordinator

The enterprise development co-ordinator shall have the following competencies:

- Minimum experience of 5 years in the construction industry at Managerial level as a Site Agent, Contracts Manager, Site Manager, Construction Manager, Business Development Manager or Enterprise Development Manager.
- Minimum experience of 2 years in training and development in Building or Construction; and
- National Diploma or B Degree in the Built Environment or Business Management

C3.7.4.4 Format of Communications

The contractor shall submit to the Employer's Representative:

- *Project interim reports* in the specified format (**ED105P**) detailing interim values of the CPG that was achieved together with an assessment of the enterprise development support provided should be tabled and discussed at least monthly at progress meetings between employer's representative and the contractor;
- *Project completion report* in the specified format (**ED101P**) to the Employer's Representative for acceptance within 15 days of achieving practical completion. The report shall include the value of the CPG that was certified in accordance with the contract, cidb registration numbers of each and every targeted enterprise, and the value of the subcontracted works or of the joint venture entered into; and the participation parameter
- *Enterprise development declaration* (**ED104P**).

C3.7.4.5 The Key Personal

The contractor shall appoint an Enterprise Development Co-ordinator and a competent person/s to provide internal mentorship.

C3.7.4.6 Management Meetings

The contractor shall report to the Employer's Representative on the implementation and progress of the targeted enterprise development and CPG at monthly progress site meetings.

C3.7.4.7 Forms for contract administration

The contractor shall submit to the Employer's Representative the following proformas:

- Form ED 105P Project Interim Report
- Form ED 104P Enterprise Development Declaration
- Form ED 101P Project Completion Report

C3.7.4.8 Records

The contractor shall:

- keep records of the targeted enterprise development
- keep records of the payments made to the targeted enterprises in relation to the CPG.
- ensure all the documentation required in terms of the Standard is provided with each monthly progress payment certificate and according to a prescribed format where applicable.

C3.7.4.9 Payment Certificates

The contractor shall:

- achieve the measurable CPG and providing enterprise development support to the targeted enterprise/s as per the Standard.
- submit payment certificates to the Employer Representative at intervals determined in the Contract.

C3.7.4.10 Compliance requirements

Non-compliance with the Best Practice Project Assessment Scheme

The wording of regulation 27A of the cidb regulations makes provision for the Board to enforce the cidb code of conduct in the event of clients being found to be in breach of the best practice project assessment scheme.

- Not including the requirements of the cidb standards in the conditions of tender
- Not registering the award of contract on the cidb Register of Projects (RoP)
- Not reporting practical completion on the cidb Register of Projects (RoP)

3.7.5 CIDB BUILD PROGRAMME: Minimum Targeted Contract Skills Development Goal (CSDG)

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

The contractor shall achieve or exceed in the performance of the contract the Contract Skills Development Goal (CSDG) established in the Standard for Developing Skills through Infrastructure Contracts (published in Government Gazette No. 48491 of 23 April 2023 and the cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract.

Failing to achieve the targeted Contract Skills Development Goal will result in A) a **thirty percent (30%)** penalty of the value of the portion not achieved, excluding VAT, and B) the issuing of completion certificates only after the completion certificate of achieving the skills development goal, counter-signed by the relevant individuals has been submitted, unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control.

The contractor shall apportion the learners in the different construction activities based on the scope of work. The cost of accommodating learners will be determined by using Table 3 in the Standard and this cost will be used to determine the value in Rand and will be added to the provision for training as provided for in the Preliminary and General section in the Bill of Quantities/Pricing schedules/Activity schedule.

C3.7.5.1 Methodology

The contractor shall achieve the measurable contract skills development goal by providing opportunities to learners requiring structured workplace learning using one or a combination of any of the following in relation to work directly related to the contract or order:

Method 1: structured workplace learning opportunities for learners towards the attainment of a part or a full occupational qualification;

Method 2: structured workplace learning opportunities for apprentices or other artisan learners towards the attainment of a trade qualification leading to a listed trade (GG No. 35625, 31 August 2012) subject to at least sixty percent (60%) of the artisan learners being holders of public TVET college qualifications;

Method 3: work integrated learning opportunities for University of Technology or Comprehensive University students completing their national diplomas;

Method 4: structured workplace learning opportunities for candidates towards registration in a professional category by a statutory council.

The contract skills participation goals, expressed in Rand, shall not be less than the contract amount multiplied by a percentage (%) factor given in Table 1 in the Standard for the applicable class of construction works.

Table 1: Contracting skills development goals for different classes of engineering and construction works contracts

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

The contractor shall apportion the learners in the different construction activities based on the scope of work. The cost of accommodating learners will be determined by using Table 2 in the Standard and this cost will be used to determine the value in Rand and will be added to the provision for training as provided for in the Preliminary and General section in the Bill of Quantities/Pricing schedules/Activity schedule.

Table 2: Notional Cost of Training per Headcount

Source: cidb Standard for Skills Development

Source: cidb Standard for Skills Development

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 required CPG will be recalculated based on the awarded tender amount and "Contract amount" once the beneficiaries have been appointed and actual costs are known. 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 remeasuarble item.

- (a) (a) The successful contractor may employ part/full occupational qualification learners, trade qualification learners, work integrated learners or candidates directly or through a Skills Development Agency (SDA), (A1 - List of cidb accredited SDAs).
- (b) The successful contractor must employ at least sixty percent (60%) of the learners from an FET / TVET college should the contractor select to have part/full occupational qualification learners and trade qualification learners contributing to the CSDG.
- (c) The successful contractor shall employ at least **insert applicable percentage, both in words and figures** from eligible part/full occupational qualification learners, trade qualification learners, work integrated learners or candidates in the employment of the employer.
- (d) The successful contractor shall ensure that no single method shall contribute more than seventy five percent (75%) of the CSDG for the contract.
- (e) The successful contractor may only place thirty three percent (33%) employed employees or that of his subcontractors contributing to the CSDG.

- (f) The contractor shall employ at least sixty percent (60%) of the learners from a Public FET / TVET college should the contractor select to have trade qualification learners (Method 2) contributing to the CSDG.
- (g) One of the objectives of the project is to train **insert applicable number, both in words and figures** Occupational qualifications, trade qualification, work integrated learners – P1 and P2 learners, professional candidates.

C3.7.5.2 Management

- (a) The successful contractor must keep site records regarding the part/full occupational qualification learners', trade qualification learners', work integrated learners' or candidates' (delete that which is not applicable) progress, site attendance, hours worked and other relevant information as required by the Standard.
- (b) The successful contractor shall provide the required number of appropriately qualified mentors to the maximum number of part/full occupational qualification learners, trade qualification learners, work integrated learners in the proportion as specified in the Standard.
- (c) The successful contractor shall provide a supervisor to manage the training of the part/full occupational qualification learners, trade qualification learners, work integrated learners, candidates.
- (d) The successful contractor shall submit to the employer's representative a baseline training plan in the specified format (Pro-forma A2) for the part/full occupational qualification learners, trade qualification learners, work integrated learners, candidates within 30 days of start of the contract.
- (e) The successful contractor shall submit to the employer's representative project interim report in the specified format (Pro-forma A3) on the progress of each of part/full occupational qualification learner, trade qualification learner, work integrated learner, candidate every three months.
- (f) The successful contractor shall submit to the employer's representative the names and particulars in the specified format (Pro-forma A4) of the supervisor, mentors for the part/full occupational qualification learners, trade qualification learners, work integrated learners or candidates within 30 days of start of the contract.
- (g) The successful contractor shall keep a daily record of all the part/full occupational qualification learners, trade qualification learners, work integrated learners, candidates on site and their daily activities and shall be made available to the employer's representative on request.
- (h) The successful contractor shall submit to the employer's representative the reports on the progress and status of the part/full occupational qualification learners, trade qualification learners, work integrated learners or candidates with the monthly invoice for the payment certificate.
- (i) The successful contractor shall have health and safety inductions for all part/full occupational qualification learners, trade qualification learners, work integrated learners or candidates.
- (j) The successful contractor shall conduct entry and exit medical tests of all part/full occupational qualification learners, trade qualification learners, work integrated learners or candidates.
- (k) The successful contractor shall provide personal protective equipment (PPE) to all part/full occupational qualification learners, trade qualification learners, work integrated learners or candidates at the start of their employment on site.
- (l) Based on the agreed skills methods the contractor may employ part/full Occupational Qualification Learners and /or Trade Qualification Learners and/or Work Integrated Learners and/or Candidates directly or through a Skills Development Agency (SDA), training provider or skills development facilitator (Form A1 - List of cidb accredited SDAs). The contractor shall ensure that no more than one Method shall be applied to any individual concurrently in the calculation of the CSDG for the contract.

C3.7.6 NATIONAL YOUTH SERVICE TRAINING AND DEVELOPMENT PROGRAMME (NYS)

The National Youth Service Training and Development Programme is *not 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. Monthly reports are to be submitted to the Employer's Representative.

Failure by the contractors to achieve the specified number to be trained in the NYS section of the CPG section within the Bills of quantities will result in a payment reduction as per bill of quantities per person, excluding VAT unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control.

C3.7.7 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. Allowance must be made for submitting monthly reports illustrating the value of the works executed under Labour Intensive Works.

Failure by the contractor to achieve the specified value of the Labour Intensive Participation Goal as stipulated within the Bills of Quantities will result in a **thirty percent (30%)** penalty of the value of the works not done by means of labour intensive methods, excluding VAT, unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control.

Employer's objectives:

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

Labour-intensive works:

Labour-intensive works shall be constructed/maintained using local workers who are temporarily employed in terms of the scope of work.

Labour-intensive competencies of supervisory and management staff:

Contractors shall only engage supervisory and management staff in labour-intensive works that have completed the skills programme including Foremen/ Supervisors at NQF level 4 "National Certificate: Supervision of Civil Engineering Construction Processes" and Site Agent/ Manager at NQF level 5 "Manage Labour-Intensive Construction Processes" or equivalent QCTO qualifications (See Appendix C) at NQF outlined in Table 1

C3.7.7.1 GENERIC LABOUR-INTENSIVE SPECIFICATION

Contractors are referred to the Guidelines for the Implementation of Labour-intensive Infrastructure Projects under the Expanded Public Works Programme (EPWP) for the generic labour-intensive specification applicable to the contract.

This specification establishes general requirements for activities which are to be executed by hand involving the following:

- trenches having a depth of less than 1.5 metres
- stormwater drainage
- roads
- sidewalks and non-motorised transport infrastructure
- water and sanitation

Precedence

Where this specification is in conflict with any other standard or specification referred to in the Scope of Works to this Contract, the requirements of this specification shall prevail

Hand excavateable material

Hand excavateable material is:

a) granular materials:

i) whose consistency when profiled may in terms of Table 3 be classified as very loose, loose, medium dense, or dense; or

ii) where the material is a gravel having a maximum particle size of 10mm and contains no cobbles or isolated boulders, no more than 15 blows of a dynamic cone penetrometer is required to penetrate 100mm;

b) cohesive materials:

i) whose consistency when profiled may in terms of Table 3 be classified as very soft, soft, firm, stiff and stiff / very stiff; or

ii) where the material is a gravel having a maximum particle size of 10mm and contains no cobbles or isolated boulders, no more than 8 blows of a dynamic cone penetrometer is required to penetrate 100mm;

Note

1) A boulder is material with a particle size greater than 200mm, a cobble and gravel is material between 60 and 200mm.

2) A dynamic cone penetrometer is an instrument used to measure the in-situ shear resistance of a soil comprising a drop weight of approximately 10 kg which falls through a height of 400mm and drives a cone having a maximum diameter of 20mm (cone angle of 60° with respect to the horizontal) into the material being used.

Table 3: Consistency of materials when profiled			
GRANULAR MATERIALS		COHESIVE MATERIALS	
CONSISTENCY	DESCRIPTION	CONSISTENCY	DESCRIPTION
Very loose	Crumbles very easily when scraped with a geological pick.	Very soft	Geological pick head can easily be pushed in as far as the shaft of the handle.
Loose	Small resistance to penetration by sharp end of a geological pick.	Soft	Easily dented by thumb; sharp end of a geological pick can be pushed in 30-40 mm; can be moulded by fingers with some pressure.
Medium dense	Considerable resistance to penetration by sharp end of a geological pick.	Firm	Indented by thumb with effort; sharp end of geological pick can be pushed in up to 10 mm; very difficult to mould with fingers; can just be penetrated with an ordinary hand spade.
Dense	Very high resistance to penetration by the sharp end of a geological pick; requires many blows for excavation.	Stiff	Can be indented by thumb-nail; slight indentation produced by pushing geological pick point into soil; cannot be moulded by fingers.
Very dense	High resistance to repeated blows of a geological pick.	Very stiff	Indented by thumb-nail with difficulty; slight indentation produced by blow of a geological pick point.

Trench excavation

All hand excavateable material in trenches having a depth of less than 1,5 metres shall be excavated by hand.

Compaction of backfilling to trenches (areas not subject to traffic)

Backfilling to trenches shall be placed in layers of thickness (before compaction) not exceeding 100mm. Each layer shall be compacted using hand stampers;

- a) to ninety percent (90%) Mod AASHTO;
- b) such that in excess of 5 blows of a dynamic cone penetrometer (DCP) is required to penetrate 100 mm of the backfill, provided that backfill does not comprise more than ten (10%) gravel of size less than 10mm and contains no isolated boulders, or
- c) such that the density of the compacted trench backfill is not less than that of the surrounding undisturbed soil when tested comparatively with a DCP.

Excavation

All excavateable material including topsoil classified as hand excavateable shall be excavated by hand. Harder material may be loosened by mechanical means prior to excavation by hand. Any material which presents the possibility of danger or injury to workers shall not be excavated by hand.

Clearing and grubbing

Grass and bushes shall be cleared by hand.

Shaping

All shaping shall be undertaken by hand.

Loading

All loading shall be done by hand. Haulage equipment should be selected in a manner that allows loading by hand to the greatest extent possible.

Haul

Excavation material shall be hauled to its point of placement by means of wheelbarrows where the haul distance is not greater than 150m.

Offloading

All material, however transported, is to be off-loaded by hand, unless tipper-trucks are utilised for haulage.

Spreading

All material shall be spread by hand.

Compaction

Small areas may be compacted by hand provided that the specified compaction is achieved. Appropriate rollers should be used where higher (than can be achieved by hand) levels of compaction are required or for large areas.

Grassing

All grassing shall be undertaken by sprigging, sodding, or seeding by hand.

Stone pitching and rubble concrete masonry

All stone required for stone pitching and rubble concrete masonry, whether grouted or dry, must to be collected, loaded, off loaded and placed by hand.

Sand and stone shall be hauled to its point of placement by means of wheelbarrows where the haul distance is not greater than 150m.

Grout shall be mixed and placed by hand.

Manufactured Elements

Elements manufactured or supplied by the Contractor, such as manhole rings and cover slabs, precast concrete planks and pipes, masonry units and edge beams shall not individually, have a mass of more than 320kg. Where the mass of an element exceeds 55 kg, consideration should be given to the size of the element relative to its total mass related to the number of workers who would be needed to lift such mass

C3.8 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.

C.3.9 Submission of Monthly Local Material Utilisation Report (Local Content)

Submission of Monthly Local Material Utilisation Report (Local Content) is *not applicable* to this project.

The contractors 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, 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.

Failure by the contractors to achieve the specified percentage of local content per designated industry/sector/sub-sector as listed will result in a thirty percent thirty percent (30%) penalty of the value not achieved, excluding VAT, unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control. Allowance must be made for submitting monthly reports illustrating the value of local material utilisation report.



DEPARTMENT OF PUBLIC WORKS

HIV/AIDS

SPECIFICATION

OCTOBER 2004

SECTION

HIV/AIDS SPECIFICATION

HIV/AIDS REQUIREMENTS

1 SCOPE

This specification contains all requirements applicable to the Contractor for creating HIV/AIDS awareness amongst all of the Workers involved in this project for the duration of the construction period, through the following strategies:

- Raising awareness about HIV/AIDS through education and information on the nature of the disease, how it is transmitted, safe sexual behaviour, attitudes towards people affected and people living with HIV/AIDS, how to live a healthy lifestyle with HIV/AIDS, the importance of voluntary testing and counselling, the diagnosis and treatment of Sexually Transmitted Infections and the closest health Service Providers;
- Informing Workers of their rights with regard to HIV/AIDS in the workplace;
- Providing Workers with access to condoms and other awareness material that will enable them to make informed decisions about sexual practices.

2 DEFINITIONS AND ABBREVIATIONS

2.1 Definitions

- Service Provider: The natural or juristic person recognised and approved by the Department of Public Works as a specialist in conducting HIV/AIDS awareness programmes.

Service Provider Workshop Plan: A plan outlining the content, process and schedule of the training and education workshops, presented by a Service Provider which has been approved by the Representative/Agent.

Worker: Person in the employ of the Contractor or under the direction or supervision of the Contractor or any of his Sub-contractors, who is on site for a minimum period of 30 days in all.

2.2 Abbreviations

- HIV : Human Immunodeficiency Virus.
- AIDS : Acquired Immune Deficiency Syndrome.
- STI : Sexually Transmitted Infection.

3 BASIC METHOD REQUIREMENT

- 3.1 The Contractor shall, through a Service Provider, conduct onsite workshops with the Workers.

The Service Provider shall develop and compile a Service Provider Workshop Plan to be presented at the workshops and which will be best suited for this project to achieve the specified objectives with regard to HIV/AIDS awareness.

The Service Provider Workshop Plan shall be based on the following information provided by the Contractor:

- Number of Workers and Sub-contractors on site;
- When new Workers or Sub-contractors will join the construction project;
- Duration of Workers and Sub-contractors on site;
- How the maximum number of Workers can be targeted with workshops;
- How the Contractor prefers workshops to be scheduled, e.g. three hourly sessions per Worker, or one 2.5 hour workshop per Worker;
- Profile of Workers, including educational level, age and gender (if available);
- Preferred time of day or month to conduct workshops;
- A Gantt chart reflecting the construction programme, for scheduling of workshops;
- Suitable venues for workshops.

The Contractor shall submit the Service Provider Workshop Plan for approval within 21 days after the tender acceptance date. After approval by the Representative/Agent, the Contractor shall make available a suitable venue that will be conducive to education and training.

3.2 The Service Provider Workshop Plan shall address, but will not be limited to the following:

- 3.2.1 The nature of the disease;
- 3.2.2 How it is transmitted;
- 3.2.3 Safe sexual behaviour;
- 3.2.4 Post exposure services such as voluntary counselling and testing (VCT) and nutritional plans for people living with HIV/AIDS;
- 3.2.5 Attitudes towards other people with HIV/AIDS;
- 3.2.6 Rights of the Worker in the workplace;
- 3.2.7 How the Awareness Champion will be equipped prior to commencement of the HIV/AIDS awareness programme with basic HIV/AIDS information and the necessary skills to handle questions regarding the HIV/AIDS awareness programme on site sensitively and confidentially;
- 3.2.8 How the Service Provider will support the Awareness Champion;
- 3.2.9 Location and contact numbers of the closest clinics, VCT facilities, counselling services and referral systems;
- 3.2.10 How the workshops will be presented, including frequency and duration;
- 3.2.11 How the workshops will fit in with the construction programme;
- 3.2.12 How the Service Provider will assess the knowledge and attitude levels of attendees to structure workshops accordingly;
- 3.2.13 How the video will be used;
- 3.2.14 How the Service Provider will elicit maximum participation from the Workers;
- 3.2.15 A questions and answers slot (interactive session).

The Service Provider Workshop Plan shall encompass the Specific Learning Outcomes (SLO) as stipulated.

4 HIV/ AIDS AWARENESS EDUCATION AND TRAINING

4.1 Workshops

The Contractor shall ensure that all Workers attend the workshops.

The workshops shall adequately deal with all the aspects contained in the Service Provider Workshop Plan. A video of HIV/AIDS in the construction industry, which can be obtained from all Regional Offices of the Department of Public Works, is to be screened to Workers at workshops. In order to enhance the

learning experience, groups of not exceeding 25 people shall attend the interactive sessions of the workshops.

4.2 Recommended practice

4.2.1 Workshop Schedule

Presenting information contained in the Service Provider Workshop Plan can be divided in as many workshop sessions as deemed practicable by the Contractor, provided that all Workers are exposed to all aspects of the workshops as outlined in the Service Provider Workshop Plan.

Breaking down the content of information to be presented to Workers into more than one workshop session however, has the added advantage that messages are reinforced over time while providing opportunity between workshop sessions for Workers to reflect and test information. Workers will also have an opportunity to ask questions at a following session.

4.2.2 Service Providers

A database of recommended Service Providers is available from all Regional Offices of the Department of Public Works.

4.2.3 HIV/AIDS Specific Learning Outcomes and Assessment Criteria

Workers shall be exposed to workshops for a minimum duration of two-and-a-half hours. In order to set a minimum standard requirement, the following specific learning outcomes and assessment criteria shall be met.

4.2.3.1 UNIT 1: The nature of HIV/AIDS

After studying and understanding this unit, the Worker will be able to differentiate between HIV and AIDS and comprehend whether or not it is curable. The Worker will also be able to explain how the HI virus operates once a person is infected and identify the symptoms associated with the progression of HIV/AIDS.

Assessment Criteria:

1. Define and describe HIV and AIDS;
2. List and describe the progression of HIV/AIDS.

4.2.3.2 UNIT 2: Transmission of the HI virus

After studying and understanding this unit, the Worker will be able to identify bodily fluids that carry the HI virus. The Worker will be able to recognise how HIV/AIDS is transmitted and how it is not transmitted.

Assessment Criteria:

1. Record in what bodily fluids the HI virus can be found;
2. Describe how HIV/AIDS can be transmitted;
3. Demonstrate the ability to distinguish between how HIV/AIDS is transmitted and misconceptions around transmittance of HIV/AIDS.

4.2.3.3 UNIT 3: HIV/AIDS preventative measures

After studying and understanding this unit, the Worker will comprehend how to act in a way that would minimise the risk of HIV/AIDS infection and to use measures to prevent the HI virus from entering the bloodstream.

Assessment Criteria:

1. Report on how to minimise the risk of HIV/AIDS infection;
2. Report on precautions that can be taken to prevent HIV/AIDS infection;
3. Explain or demonstrate how to use a male and female condom;
4. List the factors that could jeopardize the safety of condoms provided against HIV/AIDS Transmission.

4.2.3.4 UNIT 4: Voluntary HIV/AIDS counselling and testing

After studying and understanding this unit, the Worker will be able to recognise methods of testing for HIV/AIDS infection. The Worker will be able to understand the purpose of voluntary HIV/AIDS testing and pre- and post-test counseling.

Assessment Criteria:

1. Describe methods of testing for HIV/AIDS infection;
2. Report on why voluntary testing is important;
3. Report on why pre- and post-test counselling is important.

4.2.3.5 UNIT 5: Living with HIV/AIDS

After studying and understanding this unit, the Worker will be able to recognise the importance of caring for people living with HIV/AIDS and be able to manage HIV/AIDS.

Assessment Criteria:

1. List and describe ways to manage HIV/AIDS;
2. Describe nutritional needs of people living with HIV/AIDS;
3. Describe ways to embrace a healthy lifestyle as a person living with HIV/AIDS;
4. Explain the need for counselling and support to people living with HIV/AIDS.

4.2.3.6 UNIT 6: Treatment options for people with HIV/AIDS

After studying and understanding this unit, the Worker will be familiar with the various treatments available to HIV/AIDS infected or potentially HIV/AIDS infected people.

Assessment Criteria:

1. Discuss anti-retroviral therapy;
2. List methods of treatment to prevent HIV/AIDS transmission from mother-to-child;
3. Describe the need for treatment of opportunistic diseases for people living with HIV/AIDS;
4. Describe post exposure prophylactics.

4.2.3.7 UNIT 7: The rights and responsibilities of Workers in the workplace with regard to HIV/AIDS

After studying and understanding this unit, the Worker will be able to identify the rights and responsibilities of the Worker living with HIV/AIDS in the workplace. The Worker will recognise the importance of accepting colleagues living with HIV/AIDS and treating them in a non-discriminative way.

Assessment Criteria:

1. Discuss the rights of a person living with HIV/AIDS in the workplace;
2. Discuss the responsibilities of a person living with HIV/AIDS in the workplace;
3. Report on why acceptance and non-discrimination of colleagues living with HIV/AIDS is important.

4.3 Displaying of plastic laminated posters and distribution of information booklets

The Contractor shall obtain a set of four laminated posters conveying different key messages and information booklets. The contractor should include the costs of posters and information booklets in his/her tender price.

The above-mentioned posters and information booklets have been prepared to raise awareness and to share information about HIV/AIDS and STI's.

Posters or display stands shall be displayed on site as soon as possible, but not later than 14 days after the date of site handover.

Posters shall be displayed in areas highly trafficked by Workers, including toilets, rest areas, the site office and compounds.

The posters on display must always be intact, clear and readable.

Information booklets must be distributed to all Workers as soon as possible, but not later than 14 days after site handover, or as soon as the Worker joins the site.

5 PROVIDING WORKERS WITH ACCESS TO CONDOMS

The Contractor shall provide and maintain condom dispensers and make both male and female condoms, complying with the requirements of SABS ISO 4074, available at all times to all Workers at readily accessible points on site, for the duration of the contract. The Contractor may obtain condom dispensers from the Department of Health and condoms may be obtained from the Local Clinic or the Department of Health.

At least one male and one female condom dispenser and a sufficient supply of condoms, all to the approval of the Representative/Agent, shall be made available on site within 14 days of site hand over. Contractors should note that arrangements to obtain condoms from the Department of Health Clinics prior to site hand over may be necessary, to ensure that condoms are available within 14 days of site handover.

Condoms shall be made available in areas highly trafficked by Workers, including toilets, the site office and compounds.

6 ENSURING ACCESS TO HIV/AIDS TESTING AND COUNSELLING FACILITIES AND TREATMENT OF SEXUALLY TRANSMITTED INFECTIONS (STI)

The Contractor shall provide Workers with the names of the closest Service Providers that provide HIV/AIDS testing and counselling and Clinics providing Sexually Transmitted Infection (STI) diagnosis and treatment. Information on these Service Providers and Clinics must be displayed on a poster of a size not smaller than A1 in an area highly trafficked by Workers.

7 APPOINTMENT OF AN HIV/AIDS AWARENESS CHAMPION

- 7.1 Within 14 days of site handover the Contractor shall appoint an Awareness Champion from amongst the Workers, who speaks, reads and writes English, who speaks and understands all the local languages spoken by the Workers and who shall be on site during all stages of the construction period. The Contractor shall ensure that the Awareness Champion has been trained by the Service Provider on basic HIV/AIDS information, the support services available and the necessary skills to handle questions regarding the HIV/AIDS programme in a sensitive and confidential manner.

7.2 The Awareness Champion shall be responsible for:

- 7.2.1 Liaising with the Service Provider on organising awareness workshops;
- 7.2.2 Filling condom dispensers and monitoring condom distribution;
- 7.2.3 Handing out information booklets;
- 7.2.4 Placing and maintaining posters.

8 MONITORING

The Contractor shall grant to the Representative/Agent reasonable access to the construction site, in order to establish that the Contractor complies with his obligations regarding HIV/AIDS awareness under this contract.

The Contractor must report problems experienced in implementing the HIV/AIDS requirements to the Representative/Agent.

The attached SITE CHECKLIST (SCHEDULE A) shall be completed and submitted at every construction progress inspection to the Representative/Agent.

The attached SERVICE PROVIDER REPORT (SCHEDULE B) shall be completed and submitted on a monthly basis to the Department's Project Manager, through the Representative/Agent.

The attached CONTRACTOR HIV/AIDS PROGRAMME REPORT (SCHEDULE C), a close out programme report, shall be completed by the Contractor at the end of the contract.

SCHEDULE A

HIV/AIDS PROGRAMME: SITE CHECKLIST

When did construction commence: _____

Name of Departmental Project Manager: _____

Please refer to HIV/AIDS Programme activities during the reporting period

DATE		Tick the block if Contractor satisfactorily complied with specifications																	
		PI			PI			PI			PI			PI					
		D	D	M	D	D	M	D	D	M	D	D	M	D	D	M	D	D	M
Programme implemented within 14 days of site handover																			
Awareness champion on site																			
HIV/AIDS awareness service provider report																			
Male condom dispenser																			
Sufficient male condoms available																			
Male condom dispenser in a highly trafficked area																			
Female condom dispenser																			
Sufficient female condoms available																			
Female condom dispenser in a highly trafficked area																			
All four types of posters displayed																			
Posters in a good condition																			
Posters in a highly trafficked area																			
Posters displayed on local support services: clinic & VCT centre																			
Support service poster/s in highly trafficked area																			
Support service poster/s in a good condition																			

Please indicate the applicable number for the reporting period									
Workers on payroll (at PI)									
Sub-Contractors who will be on site for longer than 30 days (at PI)									
Workshop attendees									
Number of workshops held									
Scheduled workshops according to approved workshop plan									
Booklets distributed									
Male condoms distributed									
Female condoms distributed									

Representative/Agent _____ Date _____

Contractor _____ Date _____

Date of progress inspection: (ccyy/mm/dd)

Reporting period: (ccyy/mm/dd) _____ to (ccyy/mm/dd) _____

Deviations from HIV/AIDS awareness programme plan:

--

Corrective actions:

--

Representative/Agent

Departmental Project Manager

Date

Date

SCHEDULE B**HIV/AIDS AWARENESS PROGRAMME: SERVICE PROVIDER REPORT**

Reporting period: (ccyy/mm/dd) _____ to (ccyy/mm/dd) _____

Number of workshops conducted in reporting period: _____

Number of scheduled workshops according to approved workshop plan: _____

Deviations from workshop plan:

--

State reasons for deviating from workshop plan:

--

Corrective actions:

--

Service Provider_____
Date_____
Date

HIV/AIDS AWARENESS PROGRAMME : WORKSHOP CONTENT ADDRESSED

DATE		W/S							W/S							W/S							W/S						
		D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M
Content of workshop: (Mark the content included)																													
SLO1																													
SLO2																													
SLO3																													
SLO4																													
SLO5																													
SLO6																													
SLO7																													
HIV/AIDS in construction video																													
Indicate the duration of the workshop in hours																													
Total number of Workers																													
Indicate workshop venue																													

HIV/AIDS AWARENESS PROGRAMME: ATTENDANCE REGISTER

[illegible]

SCHEDULE C**CONTRACTOR HIV/AIDS PROGRAMME REPORT**

Project name: _____

Project Location: _____

Contract value of project: R_____

Department of Public Works Project Manager: _____

HIV/AIDS Programme duration: (ccyy/mm/dd) _____ to (ccyy/mm/dd) _____

AWARENESS MATERIAL

Describe location of posters displayed during the programme: _____

Comments on posters: _____

Indicate total number of booklets distributed: _____

Comments on booklets: _____

CONDOMS

Indicate total number of male condoms distributed: _____

Indicate total number of female condoms distributed: _____

Describe where male condom dispenser was placed: _____

Describe where female condom dispenser was placed: _____

HIV/AIDS WORKSHOPS

Indicate the total number of HIV/AIDS workshops conducted: _____

Indicate the duration of workshops: _____

Indicate the total number of Workers that participated in the HIV/AIDS workshops: _____

Indicate the total number of Workers that were exposed to the video on HIV/AIDS in the Construction Industry: _____

Comments on HIV/AIDS workshops on site: _____

GENERAL

Briefly describe programme activities and satisfaction with outcome: _____

Additional comments, suggestions or needs with regard to the HIV/AIDS awareness programmes on site:

Please indicate if your company has a formal HIV/AIDS policy focussing on HIV/AIDS awareness raising and care and support of HIV/AIDS Workers:

Yes	No	Currently developing one
-----	----	--------------------------

Please indicate if, to your knowledge, you have lost any workers during the duration of the project to HIV/AIDS related sicknesses. One or more of the following might indicate an HIV/AIDS related death:

Excessive weight loss
Reactive TB
Hair loss
Severe tiredness

Coughing or chest pain
Pain when swallowing
Persistent fever
Diarrhoea

Vomiting
Meningitis
Memory loss
Pneumonia

Number of HIV/AIDS-related deaths: _____

Contractor

Date

Departmental Project Manager

Date



public works

Department:
Public Works
REPUBLIC OF SOUTH AFRICA

OCCUPATIONAL HEALTH AND SAFETY

IN

**CONSTRUCTION PROJECTS, REPAIRS,
RENOVATIONS & MAINTENANCE**

MANAGED BY

**THE DEPARTMENT OF
PUBLIC WORKS**

TABLE OF CONTENT

1.	PREAMBLE	3
2.	SCOPE OF HEALTH AND SAFETY SPECIFICATION DOCUMENT	4
3.	PURPOSE	4
4.	DEFINITIONS	5
5.	OCCUPATIONAL HEALTH & SAFETY MANAGEMENT	7
5.1.	Structure and Organization of OH&S Responsibilities	7
5.1.1.	Overall Supervision and Responsibility for OH&S	7
5.2.	Communication, Participation & Consultation	9
6.	INTERPRETATION	9
7.	RESPONSIBILITIES	9
7.1.	Client	9
7.2.	Principal Contractor	10
7.3.	Contractor	11
7.4.	Responsibilities of Construction Health & Safety Agent (SACPCMP)	11
8.	SCOPE OF WORK	12
9.	PREPARING A HEALTH & SAFETY PLAN	13
10.	HEALTH AND SAFETY FILE	14
11.	OH&S GOALS AND OBJECTIVES AND ARRANGEMENTS FOR MONITORING AND REVIEWING OH&S PERFORMANCE	15
11.1.1.	Audit by Client and/or its Agent	15
11.1.2.	Health & Safety incident/accident reporting & investigations	16
12.	Review	17
12.1.	Site Rules and other Restrictions	18
12.1.1.	Appointment of Health & Safety Representatives	18
12.1.2.	Duties and Functions of the H&S Representatives	18
12.1.3.	Establishment of H&S Committee(s)	19
12.1.4.	Training & Awareness	19
13.	PROJECT/SITE SPECIFIC REQUIREMENTS	20
14.	OUTLINED DATA, REFERENCES AND INFORMATION ON CERTAIN AND/OR SPECIFIC OBLIGATORY REQUIREMENTS TO ENSURE COMPLIANCE	21
15.	THE PRINCIPAL CONTRACTOR'S GENERAL DUTIES	26
16.	THE PRINCIPAL CONTRACTOR'S SPECIFIC DUTIES	26
17.	THE PRINCIPAL CONTRACTOR'S SPECIFIC RESPONSIBILITIES WITH REGARD TO HAZARDOUS ACTIVITIES	26
18.	GENERAL NOTES TO THE PRINCIPAL CONTRACTOR	27
19.	HOUSEKEEPING	28
20.	LOCKOUT SYSTEMS	30
21.	IMPORTANT LISTS AND RECORDS TO BE KEPT	30

1. PREAMBLE

In terms of Construction Regulation 4(1)(a) of the Occupational Health and Safety Act, 1993 (Act 85 of 1993), and 5(1) construction regulation of 2014, the Department of Public Works, as the Client and/or its Agent on its behalf, shall be responsible to prepare 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 thereunder. 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, cognizance 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 35 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.

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 6,7 and 8 of the construction regulation (2014).

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.

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.

“Health & Safety Specification” – means a document that includes information required under the construction regulation and obtained from the clients & designers during the early planning & design stage for a specific project on a specific site for use by the contractors when preparing their tenders or bids to clients.

“Health & Safety Plan” – means a document which is site specific and includes all identified hazards, safe work procedures to mitigate, reduce & control the hazards identified in a project.;

“Agent” – means any person who acts as a representative for a client;

“Client” – means any person for whom construction work is performed;

“Construction Health & Safety Agent (SACPCMP)” – The person or entity appointed by the client through the Agent and who has a full authority and obligation to act on the client's behalf in terms of the construction regulations;

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

- (a) the erection, maintenance, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure;
- (b) the installation, erection, dismantling or maintenance of a fixed plant where such work includes the risk of a person falling;
- (c) the construction, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system or any similar civil engineering structure; or
- (d) the moving of earth, clearing of land, the making of an excavation, piling, or any similar type of work;

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

“Contract Amount” Financial value of the contract at the time of the award of the contract, exclusive of all allowance and any value added tax or sales tax which the law requires the employer to pay to the contractor.

“Dolomite Land” land underlain by dolomite or limestone residuum or bedrock (or both), within the Malmani Subgroup and Campbell Rand Subgroup, typically at depths of no more than

- (a) 60m in areas where no de-watering has taken place and the local authority has jurisdiction, is monitoring and has control over the groundwater levels in the areas under consideration;
- (b) 100m in areas where de-watering has taken place or where the local authority has no jurisdiction or control over groundwater levels.

NOTE: For more information on dolomite land in South Africa, see annex B of SANS 1936-1.

“Practical Completion Certificates” A certificate issued in terms of a contract by the employer, signifying that the whole of the construction works has reached a state of readiness for occupation or use for the purposes intended, although some minor work may be outstanding.

“Accident” – means unplanned occurrence that happens due to the unsafe condition and may cause injury to a person, damage to the property, material, plant, equipment and the environment;

“Hazard” – means anything including work activities and practices with the potential to cause harm;

“Risk” – means the likelihood that harm will occur and the subsequent consequences.

“Risk assessment” – means a process to determine any risk associated with any hazard at a construction site in order to identify the steps needed to be taken to mitigate, reduce or control such hazards.

Health and Safety File” – means a file, or other record in permanent form, containing the information required a contemplated in the regulations;

5. OCCUPATIONAL HEALTH & SAFETY MANAGEMENT

5.1. Structure and Organization of OH&S Responsibilities

5.1.1. Overall Supervision and Responsibility for OH&S

- a) The Client and/or its Agent on its behalf to ensure that the Principal Contractor, appointed in terms of Construction Regulation 4(1)(c), 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.
- b) 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.
- c) 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).
- d) The Construction Supervisor and Assistant Construction Supervisor/s appointed in terms of Construction Regulation 6 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).

- e) All Health and Safety Representatives (SHE-Reps) shall act and report as per Section 18 of the Act.

5.12 Required appointments as per the Construction Regulations:-

Item	Regulation	Appointment	Responsible Person
1.	3.	Application Construction work permit	Client
2.	5(1)(k)	Principal contractor for each phase or project	Client
3.	5(6)	Construction Health & Safety Agent	Client
4.	7.(1)(c)	Contractor	Principal Contractor
5.	7(3)	Contractor	Contractor
6.	8(1)	Construction manager	Contractor
7.	8(2)	Assistance Construction manager	Contractor
8.	6(1)	Construction supervisor	Contractor
9.	6(2)	Construction supervisor sub-ordinates	Contractor
10.	8(5)	Construction Safety Officer	Contractor
11.	8(8)	Responsible employee	
12.	9(1)	Person to carry out risk assessment	Contractor
13.	9(1)	Competent person (dolomite) – SANS 1936	Contractor
14.	10(1)	Fall protection planner	Contractor
15.	12(1)	Temporal work designer	
16.	12(2)	Supervisor of temporal work operation	
17.	13(1)	Excavation supervisor	Contractor
18.	13(2)(k)	Competent person in the use of explosive for excavations	Contractor
19.	14(11)	Explosives expert	Contractor
20.	14(1)	Supervisor demolition work	Contractor
21.	14(2)	Scaffold supervisor	Contractor
22.	16(1)	Suspended platform supervisor	Contractor
23.	18(1)a	Rope access	Contractor
24.	19(8)(a)	Material hoist inspector	Contractor
25.	20(1)	Bulk mixing plant supervisor	Contractor
26.	21(2)	Explosive actuated fastening device inspector	Contractor
27.	21(2)(g)	Explosive actuated fastening device cartridge, nails and studs: issuer & collector	Contractor
28.	23 (1)	Operator : construction vehicle and mobile plant	Contractor
29.	28 (a)	Stacking and storage supervisor	Contractor
30.	29 (h)	Fire equipment inspector	Contractor

5.2. Communication, Participation & Consultation

- 5.2.1. Occupational Health & Safety matters/issues shall be communicated between the Employer, the Principal Contractor, the other Contractors, the Designer and other concerned parties shall be through the H&S Committee or other means determined by the client.
- 5.2.2. In addition to the above, communication may be directly to the Client or his appointed Agent, 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

- a) 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.
- b) (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.
- c) 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.

7. RESPONSIBILITIES

7.1. Client

- a) 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.

- b) 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.
- c) 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.
- d) 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

- a) 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. Annexure 2 of this construction regulation 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.
- b) The Principal Contractor shall ensure that he is fully conversant with the requirements of this Specification and all relevant health and safety legislation.
- c) 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.
- d) 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.

- e) 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.
- f) 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.)
- g) 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.
- h) 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.
- i) 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.
- j) 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.
- k) 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

The contractor must demonstrate to the Principal Contractor that he has the Necessary competencies and resources to perform the construction work safely.

7.4. Responsibilities of Construction Health & Safety Agent (SACPCMP)

The construction Health & Safety Agent acts as a link between the client, Principal Contractor and the project team members with respect to health & safety. They are required to ensure that the client carries out its H&S responsibilities in terms of legislation as well as to co-ordinate and ensure good H&S practices are maintained throughout the duration of the project. In many cases this role starts from project initiation to project close-out.

- a) H&S competence: In the event that the client is unable to satisfy the requirements of the Construction Regulations for whatever reasons, the construction H&S agent may be appointed to perform these functions on behalf of the client. Given the need to appoint a registered construction H&S agent that is competent and adequately resourced with respect to H&S matters.
- b) H&S goals: It is important that the construction H&S agents demonstrate clearly to clients how they are going to contribute to the achievement of any client H&S goals and objectives. They should also set their own H&S goals.
- c) H&S responsibilities: Prior to accepting the H&S agent appointment from clients, H&S agents need to ensure that they brief clients fully on the client's particular responsibilities in terms of the OH&SA of 1993 and Construction Regulations as amended from time to time. In the absence of acceptance by clients of these responsibilities, H&S agents will not be able to adequately meet their own H&S responsibilities and duties.
- d) H&S information: H&S agents must provide the designer or design team with all H&S information to enable them to conduct a design HIRA to identify the significant hazards that need to be included in the H&S specification. This information may be gathered from multiple sources such as, for example, discussion with the client, previous historical use of the site or facility, previous surveys and investigations and past H&S files.

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 for example:

- a) Construction, erecting, alteration, renovations, refurbishment, repairs, demolishing or dismantling of building and structures.
 - Site clearance
 - Site hoarding, demarcation and demolition works
 - excavations, filling, compaction, evening surface
 - Piling (by drilling, excavating,)
 - Temporal works
- b) Construction, erecting, alteration, renovations, refurbishment, repairs, demolishing or dismantling of any bridge, dam, canal, road, railway, runaway, sewer, or water reticulation system or any civil engineering structure or type of work
- c) Construction of a new two storied Administration building.
 - Preparation of site by leveling, compaction etc.

- Excavations for parking areas/services
- d) Construction on land underlain by dolomite.

9. PREPARING A HEALTH & SAFETY PLAN

- a) The level of detail required for a H&S plan will depend on how complex the workplace is (in particular, the number of contractors at the workplace at any one time) and the risks involved in the work. The plan must be easily accessible in a construction site and it must be clearly understood by management, supervisors & workers on construction site.
- b) The plan must be implemented, maintained and kept up to date during the construction of the project.
- c) The principal contractor should prepare a H&S plan that includes
 - project information;
 - client requirements for H&S management on the project;
 - Environmental restrictions and existing on-site risks arrangements, imposed by others or developed by the principal contractor, to control significant site H&S risks; H&S file & project H&S review.
- d) The H&S plan should include the following information:
 - details of the client, that is the person commissioning the construction work, for example their name, representative and contact details;
 - details of the principal contractor;
 - details of the construction project, for example address of the workplace, anticipated start and end date and a brief description of the type of construction work that the H&S plan will cover;
 - details on how subcontractors will be managed and monitored, including how the principal contractor intends to implement and ensure compliance with the H&S plan such as checking on the performance of subcontractors and how non-compliance will be handled;
 - details on how the risks associated with falls, falling objects, moving plant, electrical work and all high risk construction work that will take place on a construction project will be managed;
 - details on how the risks associated with dolomite land will be managed.
- e) The H&S plan should also include information on:
 - the provision and maintenance of a hazardous chemicals register, safety data sheets and hazardous chemicals storage;

- the safe use and storage of plant;
 - the development of a construction project traffic management plan;
 - obtaining and providing essential services information – electrical, gas, telecom, water and similar services;
 - workplace security and public safety;
 - ensuring workers have appropriate licences and training to undertake the construction work.
- f) The H&S plan must contain:
- a general description of the type of work activities involved in the project and not just a description of the facility to be constructed;
 - the project program or schedule details, including start and finish dates, showing principal activities;
 - details of client, design team, principal contractor, subcontractors, and major suppliers;
 - extent and location of relevant existing records, surveys, site investigation and geotechnical reports, 'as-built' plans, H&S files.

10. HEALTH AND SAFETY FILE

- a) The H&S file is a document prepared by the principal contractor containing important project H&S information for use by the owner of the completed structure after construction has been completed.
- b) The principal contractor is responsible for producing an H&S file. It contains important project H&S information for use by the owner of the completed structure after construction has been completed. It is essential that the process of compiling the file commences as early as possible to ensure sufficient time to gather the required information.
- c) The Principal Contractor must, in terms of Construction Regulation 7(7), 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 & Safety File.
- d) The contractor must ensure that the client's format and layout of the H&S file is adhered to. The contractor must identify the responsible person that will prepare

the H&S file and who will be responsible for the drafting of as-built drawings. The contractor must establish procedures:

- e) 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.

11. 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.

11.1 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.

11.1.1. Audit by Client and/or its Agent.

The Client and/or its Agent on its behalf will be conducting Periodic Audits at times agreed with the Principal Contractor to comply with Construction Regulation 5(1)(o) to ensure that the principal Contractor has implemented, is adhering to and is maintaining the agreed and approved OH&S Plan.

- a) 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.

- b) Audits shall be performed at least once every 30 days for normal construction activities, but at least once every 14 days where construction takes place on dolomite land.

11.1.2. Health & Safety incident/accident reporting & investigations

- a) The Principal Contractor shall report all incidents where an employee is injured on duty to the extent that he/she:
 - i. dies
 - ii. becomes unconscious
 - iii. loses a limb or part of a limb
 - iv. 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:

- i. a major incident occurred
 - ii. the health or safety of any person was endangered
 - iii. where a dangerous substance was spilled
 - iv. the uncontrolled release of any substance under pressure took place
 - v. machinery or any part of machinery fractured or failed resulting in flying, falling or uncontrolled moving objects
 - vi. 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.
 - vii. a dolomite-related instability event (severe distress, subsidence or sinkhole formation) occurred.
- b) 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.
- c) The Principal Contractor is required to provide the Client and/or its Agent on its behalf with a monthly "SHE Risk Management Report".
- d) 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.

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)

- (e) The results of the investigation to be entered into the Accident/Incident Register listed above. (General Administrative Regulation 9)
- (f) 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.
- (g) The Principal Contractor is responsible for the investigation of all 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.
- (h) 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.
 - Determine the underlying H&S deficiencies and other contributory factors
 - Identification of corrective/preventative actions and continual improvement
 - Communicating the outcome/results and documenting the events of the investigation.
- (i) **Reporting of Near-Misses**
 - Department of Public Works views the reporting of near misses as a critical component in creating a positive health and safety awareness culture on site.
 - Department of Public Works retains the right to enforce the reporting of near misses within 24 hours of occurrence.

12. 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.

12.1. Site Rules and other Restrictions

a) 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.

b) 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, the Principal Contractor must appoint a competent person who must develop contingency plans for any emergency that may arise on site as indicated by the risk assessments.

12.1.1. Appointment of Health & Safety Representatives

a) 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 Representatives for every 50 employees or part thereof. (Section 17 of the Act and General Administrative Regulation 6. & 7.)

H&S Representatives must be appointed 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.

12.1.2. 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 developed by a Principal Contractor.
- The report must be consolidated and submitted to the Health & Safety Committee.
- H&S Representatives must form part of the incident/accident investigating team.

12.1.3. 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, an agreed Agenda for the first meeting. Thereafter the H&S Committee shall determine its own procedures.

12.1.4. Training & Awareness

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.

a) Training & Induction

All employees performing work or task on site that potentially impact on H&S must be competent & have the necessary appropriate education, training & experience.

All the training must be closely aligned with the risk profile of the project; procedures must be put in place to ensure that all workers are aware of the consequences of their work activities & benefits of improved H&S performance.

Where work is performed on dolomite land, the Principal Contractor and other Contractors shall implement a dolomite risk awareness training programme, which shall be applicable to all persons present on the site.

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

b) 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, including dolomite risk awareness training when working on dolomite land.

c) Other Training

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

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:

- a) Clearing & grubbing the area/site
- b) Site establishment
- c) Dealing with existing structures
- d) Location of existing services
- e) Boundary & Access control/Public liability exposures
- f) Protection against heat exhaustion, dehydration, wet & cold conditions
- g) Dealing with HIV & aids other related diseases
- h) Use of portable electrical & explosive tools
- i) Any Excavation work
- j) Any welding work
- k) Loading & offloading of trucks
- l) Driving & operations of Construction vehicles & mobile plant
- m) Temporal works and
- n) Construction work as defined in the construction regulation 2014
- o) Construction work performed on dolomite land (as defined in SANS 1936).

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

Administrative & Legal Requirements

OHS Act Section/ Regulation	Subject	Requirements
Construction. Regulation	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 Act Section 80	Registration with Compensation Insurer.	• Written proof of registration/Letter of good standing available on Site
Construction. Regulation 4 & 5(1)	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 7	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 6(1)	Designation of Person Responsible on Site	• Competent person appointed in writing as Construction Supervisor with job description
Construction. Regulation 6(2)	Designation of Assistant for above	• Competent person appointed in writing as Assistant Construction Supervisor with job description

OHS Act Section/ Regulation	Subject	Requirements
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) & (2)	Agreement with Mandatories/ (Sub-)Contractors	• Written agreement with (Sub-)Contractors • List of Subcontractors 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 COLD 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.

OHS Act Section/ Regulation	Subject	Requirements
Construction. Regulation 9	Working on dolomite land	- Competent Person appointed to compile a Dolomite Risk Management Plan (DRMP); - Stormwater management measures, including dealing with stormwater, prevention of stormwater entering excavations and trenches, etc.; - Excavation procedures, including measures to keep excavations dry; - Dealing with wet and dry subsurface engineering services; - Temporary services for construction; - Dealing with abandoned services; - Dealing with overburden or disturbance of soil surfaces and reinstating areas of disturbance; - Dealing with ground instability incident notifications and preparation of an emergency reaction plan relating to sinkhole/ subsidence formation; - Delineation of restricted access areas; - Dealing with the occurrence of a sinkhole or subsidence; - Monitoring of areas of suspected instability.
Construction. Regulation 8	Fall Prevention & Protection	- Competent person appointed to draw up 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 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

OHS Act Section/ Regulation	Subject	Requirements
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 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)

OHS Act Section/ Regulation	Subject	Requirements
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
General Safety Regulation 13A	Inspection of Ladders	- Competent person appointed in writing to inspect Ladders - Ladders inspected at arrival on site and weekly thereafter. 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

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.
- 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.
- 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.

16. THE PRINCIPAL CONTRACTOR'S SPECIFIC DUTIES

The Principal Contractor's specific duties in terms of these specifications are detailed in the Construction Regulations as published under government notice 07 August 2014, stipulated in Section 7.

17. THE PRINCIPAL CONTRACTOR'S SPECIFIC RESPONSIBILITIES WITH REGARD TO HAZARDOUS ACTIVITIES

The following examples of activities are identifiable as hazardous in terms of the Construction Regulations. The contractor shall execute the activities in accordance with the following Construction Regulations and other applicable regulations of the Act:

- Working on dolomite land
- Fall protection

- Structures
- Excavation work
- Demolition work
- Scaffolding
- Construction vehicles & mobile plant.
- Water environments
- Housekeeping on construction sites
- Fire precautions on construction sites.

This list must not be taken to be exclusive or exhaustive! All of the above requirements will be read in conjunction with the relevant regulations and health and safety standards as required by the Act. All documents and records required by the Construction Regulations will be kept in the Health and Safety File and will be made available at any time when required by the client or his representative, or on request to an interested party.

18. GENERAL NOTES TO THE PRINCIPAL CONTRACTOR

Legal Framework

Part of legal obligations

The more important Acts and relevant subordinate/secondary legislation as well as other (inter alia Local Government) legislation that also apply to the State as well as to State owned buildings and premises: -

- a. The latest issue of SABS 0142: "Code of Practice for the Wiring of Premises"
- b. The Local Government Ordinance 1939 (Ordinance 17 of 1939) as amended and the municipal by-laws and any special requirements of the local supply authority
- c. The Fire Brigade Services Act 1987, Act 99 of 1987 as amended
- d. The National Building Regulations and Building Standards Act 1977 (Act 103 of 1977) as amended and relevant proclaimed Regulations (SABS 0400)
- e. The Post Office Act 1958 (Act 44 of 1958) as amended
- f. The Electricity Act 1984, Act 41 of 1984
- g. The Regulations of Local Gas Board(s), including Publications of the SABS Standards and Codes of Practice, with specific reference to GNR 17468 dated 4th October 1997
- h. Legislation pertaining to water usage and the environment

- i. Legislation governing the use of equipment, which may emit radiation (e.g. X-Rays etc.)
- j. Common Law

19. HOUSEKEEPING

Good housekeeping will be maintained at all times as per Construction Regulation No. 25. 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.

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.

a) Facilities

The site establishment plan shall make provision for:

i. Dining room facilities

The contractor shall make provision for adequate dining room facilities for his employees on site.

ii. Change rooms

The contractor shall make provision for adequate change rooms for his employees on site.

iii. Ablution facilities

The contractor shall make provision for adequate ablution facilities for his employees on site.

These facilities shall be maintained by the contractor.

iv. Smoking Areas

Designated smoking areas shall be established by Department of Public Works.

v. **Drinking Water Facilities**

The provision of drinking water facilities shall be negotiated between the Contractor and Department of Public Works.

b) Equipment Compliance Certificates

Before equipment is brought on site valid certificates of compliance issued by a competent person shall be presented. The equipment includes but shall not be limited to:

- i. lifting equipment and lifting tackle
- ii. power driven machinery
- iii. electrical equipment
- iv. testing and monitoring equipment

c) Barricading

All barricading shall be of the rigid type unless the use of non-rigid barricading has been approved in writing by the Department of Public Works Project Manager. The contractors' barricading standard shall be included in the Health and Safety Plan.

Where more than one contractor is working on a site, the fixed barricading shall be clearly marked with the company's name, site contact person as well as the contact number/s.

d) Erection of Structures for Logistic Support

Prior to site establishment Department of Public Works shall approve the contractor's site plan.

Department of Public Works shall approve all structures erected for logistical support by the contractor. These structures include fences, workshops, tool sheds, offices, ablution facilities, etc.

e) Salvage Yard Management

Depending on the site specific arrangements and procedures, Department of Public Works may provide the salvage yard and the resources to manage it.

The salvage yard management shall conform to safety, health and environmental requirements. The contractors are required to move the equipment from the place of work to the salvage yard.

f) Fall Arrest and Prevention Equipment

Approved fall prevention equipment shall be used at heights of less than 2.0 metres. Above heights of 2.0 metres fall prevention equipment shall include fall arrest Equipment. Users of fall arrest equipment shall, amongst other things be trained in what an appropriate load bearing point is for connecting fall prevention equipment. Any deviation from this requirement shall be negotiated and agreed with Department of Public Works in writing.

g) Hazardous Chemical Substances Waste Removal

Department of Public Works shall provide a facility to collect all hazardous chemical waste material.

The contractor shall provide adequately marked and sealable containers to transport. The hazardous chemical waste from the source to the approved Department of Public Works disposal point.

h) Personal Protective Equipment (PPE)

Personal protective equipment issued shall be specific to the risks associated with the work to be performed and specific to conditions on site and shall comply with South African National Standards (SANS) or similar.

20. LOCKOUT SYSTEMS

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. IMPORTANT LISTS AND RECORDS TO BE KEPT

The following are lists of several records that are to be kept in terms of the Construction Regulations. The lists are:

- i. List of appointments
- ii. List of record keeping responsibilities
- iii. Inspection checklist

a) Contractor Risk Assessment Process

The risk assessment process shall include:

- 1) an evaluation of the method of the work to be conducted
- 2) the method statement on the procedure to be followed in performing the task shall be developed
- 3) the risk assessment will also include activities like:
 - i. Transportation of passengers and goods to and from site
 - ii. Site establishment

- iii. Physical and mental capabilities of employees
 - iv. Others as may be specified.
- 4) the hazards as listed in the paragraph – Site Specific Health and Safety Hazards
- 5) a review plan for risk assessments shall provide for:
- i. the quarterly review of all applicable risk assessments
 - ii. the review of an assessment if there is reason to believe that the previous assessment is no longer valid, or there has been a change in a process, work methods, equipment or procedures and working conditions
 - iii. Risk assessment/s to be reviewed if the outcome of incident investigations and audits etc. requires such action.

A pre-task risk assessment shall be conducted in writing on every task and be facilitated by the team leader. All risk assessments and pre-task risk assessments shall be filed and be available on site.

b) Risk Profile

All contractors shall submit a risk profile of the work to be conducted with their Health and Safety Plan.

c) Risk Based Inspection Program

The inspection programme shall be risk based. The inspection plan shall form part of the Health and Safety Plan.

IMPORTANT CONTACT DETIALS

(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		

ADD OTHER IMPORTANT HEALTH & SAFETY CONTACT DETAILS AS MAY BE FOUND NECESSARY.

SECTION 37(2) AGREEMENTS

CONCLUDED BETWEEN

DEPARTMENT OF PUBLIC WORKS

(Hereinafter referred to as Department of Public Works)

AND

.....
(Name of contractor/supplier/Agent/)

I,
(name) representing [Insert name of contractor/supplier], do hereby acknowledge that
[insert name of contractor/supplier] is an employer in his/her own right, with duties as prescribed in the Occupational Health and Safety Act No. 85 of 1993 ("the Act"), as amended, and agree to ensure that all work will be performed and/or machinery or plant used in accordance with the provisions of the Act.

I undertake that [insert name of contractor/supplier]
shall strictly adhere to, and ensure that his/her employees adhere to, the provisions of the Occupational Health and Safety Act, 1993 (Act 85 of 1993).

I have been provided with SHE specifications for project/service [insert brief details of project/service, for example, name, contract/project number]
and will comply with the requirements set out in these.

I accept and agree that the SHE specifications constitute arrangements and procedures between [Insert name of contractor/supplier/Agent
Safety Manager/Safety Officer] and Department of Public Works, which will ensure compliance by [Insert name of contractor/supplier] with the provisions of the Act, as contemplated in section 37(2) of the Act.

This agreement constitutes the sole agreement between the parties, and no variation, modification, or waiver of any of the provisions of this agreement or consent to any departure from these shall, in any manner, be of any force or effect, unless confirmed in writing and signed by both parties, and such variation, modification, waiver, or consent shall be effective only in the specific instance and for the specific purpose and to the extent for which it was made or given.

This agreement is signed on behalf of the parties, each signatory to this warranting that he/she has the requisite authority to do so.

Signed this day of 20 at

..... (Place)

(Full name)..... (Signature)on

behalf of (Supplier/contractor/Agent)

Contractor Responsible Manager (responsible for signing the Department of Public Works'
contract on behalf of the contractor)

Witnesses

1.

2.

Signed this day of20.....

at (Place)

(Full name)..... (Signature).....on

Behalf of **Department of Public Works.**

(Contracts and/or Project Manager or Department of Public Works representative)

Witnesses

1.

2.

PROJECT: _____
(full name AND site address of project)
(and full or proper description of project)

WCS NO: _____ (works control system number)

SUPERVISION BY THE DEPARTMENT OF PUBLIC WORKS:

Mr /Ms/Me - **CONSTRUCTION PROJECT MANAGER**
(add full details of the project manager)

.....
.....

Mr /Ms/Me - **CONSTRUCTION MANAGER**
(add full details)

.....
.....

Mr /Ms/Me **AGENT**
(full particulars of agent)

.....
.....

SUPERVISION BY THE PRINCIPAL CONTRACTOR:

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

Mr /Ms/Me - **CONSTRUCTION HEALTH & SAFETY OFFICER**
(add full details and contact of this officer)

.....
.....

Mr /Ms/Me - **CONSTRUCTION HEALTH & SAFETY MANAGER**
(add full details of this officer)

.....
.....

Mr /Ms/Me - **CONSTRUCTION HEALTH & SAFETY AGENT**
(add full details of this officer)

.....
.....

Mr /Ms/Me - **CONSTRUCTION MANAGER**
(add full details of the head of the project)

.....
.....

Mr /Ms/Me - **COMPETENT PERSON (DOLOMITE)**
(add full details of the competent person)

.....
.....

PART C4: Site Information

C4 Site Information

PG-03.1 (EC) SITE INFORMATION – GCC 3rd Edition (2015)

Project title:	<i>Various Magistrate's Office: Hardach, Kwa Thema, Dunnottar and Fochville Installation of Backup Generator</i>			
Tender no:	JHB 26/03	WCS no:	056808	Reference no:

C4 Site Information

Supply and installation of backup generators at Hardach, Kwa Thema, Dunnottar and Fochville Magistrate Courts.