SOUTH AFRICAN POLICE SERVICE

DESIGN, SUPPLY, DELIVERY, INSTALLATION, MAINTENANCE, AND COMMISSIONING OF WATER BOREHOLE SYSTEMS

Engineering Contract: 2 years

COMPILED BY: SUPPLY CHAIN DIVISION

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DESIGN, SUPPLY, DELIVERY, INSTALLATION, MAINTENANCE, TESTING AND COMMISIONING OF WATER BOREHOLE SYSTEM

1. INTENT

This specification calls for:

1.1. Geohydrology and report survey.
1.2. Drilling of a borehole.
1.3. Supply, delivery, installation, and commissioning of submersible pump including all the required accessories to ensure a functional borehole system.
1.4. Design, supply, delivery, installation, and commissioning of a water pipe network system.
1.5. Design, supply, delivery, and installation of 32 000 / 65 000 / 87 000 litres sectional pre-selected galvanized steel storage water tank, and reinforced foundation to support the water tank.
1.6. Supply, delivery, installation, and commissioning of water booster pump set with the steel lockable cage.
1.7. Supply, delivery, and installation of standard three-stage water filters including maintenance for the 24-month duration.
1.8. Design, supply, and installation of electrification on all installations related.

This requirement is for a two (2) -year term contract for various Police Stations. Bidders shall bid for all equipment and all accessories specified within this document to ensure a fully functional system. Bidders must fully comply with all mandatory requirements. Failure to comply with this requirement below shall be regarded as non-compliance and may cause immediate disqualification. The South African Police Service reserves the right to award the Bid in totality to one or more supplier(s). This part contains the engineering specification and schedule of rates for the Engineering Work which shall be read in conjunction with the balance of the contract document, including the conditions of the contract.

The successful bidder(s) shall be required to conduct an assessment to determine the need per site (Police Station) to the type of system required as well as conditions on sites. The successful bidder shall develop and submit the program of works (Project Plan) prior to the commencement of work. **It is the responsibility of the Bidder to evaluate site-specific conditions at the mentioned stations.**

A checklist, job card, and service certificate for each installation must be completed by the bidder and countersigned by the appointed official or Station Commander.

2. SCOPE OF WORKS

To conduct a Geohydrology survey to determine the underground water available, supply, delivery, and installation including the commissioning of a submersible pump, steel caged booster pump set, water piping network, construct 32 000 / 65 000 / 87 000 litres sectional pre-stressed galvanized steel rectangular tank and constructing the reinforced concrete foundation for support the steel water tank including all electrification. All equipment within this document shall have a minimum guarantee period of 12 months on all components and workmanship after completion of the construction work. The contractor shall also provide the proper yield, drawdown, and step tests as per the contractual agreement.

DESIGN, SUPPLY, DELIVERY, INSTALLATION, MAINTENANCE, TESTING AND COMMISIONING OF WATER BOREHOLE SYSTEM

The works comprise the following sub-sections:

2.1 GEOHYDROLOGY SURVEY OF THE SITE.

The appointed contractor shall provide all equipment, labour, materials, transportation, and accommodation to Police Station. The Geo-hydrologist shall be appointed by the contractor to survey the site.

The Geo-hydrologist is to conduct the survey drill and all necessary tests to determine the yield, water quality, and suitability for human consumption, and make recommendations regarding the pump and borehole equipment, subject to the approval of the Project Manager. At least, three alternative (3) positions shall be identified for the most desirable yield. However, in the event of the first site borehole being considered dry; the South African Police Service (SAPS) shall approve the movement.

2.2. DRILLING OF THE NEW BOREHOLE

Upon determining the suitable area, the contractor shall arrange for the drilling of the borehole. The contractor shall make his/her own arrangements for obtaining, storing, transporting, and pumping of water, required for drilling purposes and use by the drilling crew at their campsite.
All necessary machinery, equipment, and materials to carry out the drilling, test, pumping, and headwork construction are to be mobilized for the works. The contractor must supply, PVC casing, gravel pack, bentonite seal, concrete plinth, and marker plate.

The Basic methods of drilling are indicated below as a basic guide, mostly to maintain a few-dimensional specification. Dry boreholes are defined as:

- A borehole has no water-bearing zones/aquifers.
- A Borehole that has insufficient discharge (less than 0.25 litres/second).
- A borehole with stabilized Dynamic Water Levels of more than 45 meters at a minimum acceptable discharge of 0.25 litres/second or a drawdown of more than 30 meters.
- A borehole that has failed the verticality test.
- The pumping facility is unable to provide a discharge of 0.25 litres per second.

2.2.1 Borehole Depth:

The contractor shall drill to the total appropriate depth depending on the Geological formation and to the diameter that shall allow a minimum borehole nominal diameter of 103 mm at the completion of the borehole including casing installation. For pricing purposes, the average depth should be 100m. However, the actual depth will be dependent on the geohydrology studies outcomes.

The contractor shall supply detailed borehole Geo-log data, in which all the relevant information and drilling velocity, well casing, and other well construction operations shall be recorded. The contractor shall also annotate all information pertaining to the appearance of water filtrations and aquifer, types of rock found, and sampling details.

The contractor shall be required to complete the log forms for the borehole. The contractor shall collect samples in a clean plastic container from the borehole for reference to a competent Water Testing Authority or recognized Water Testing Laboratory for full physical, chemical, and bacteriological analysis of the water to ascertain its suitability for human consumption.

The contractor shall provide the Borehole Completion Record Certificate immediately upon completion of the drilling work. The Borehole Completion Record shall also be accompanied by Water quality certificates capturing bacteriological, chemical, and physical water qualities.

It shall be the duty of the contractor to inform the Project Manager at least seven working days in advance as to when the commencement of the drilling shall be, so as to organize supervision.

2.2.2 Borehole Pump Testing

The contractor is required to test the new boreholes which have not been equipped to establish the performance and yield of the borehole. The type of borehole test methods required include:

- Slug test
- Calibration discharge test
- Stepped discharge test
- Constant discharge test
- Recovery test

2.2.3 Water quality analysis

The contractor shall be required to undertake the two water quality analyses (**Hydraulic testing, and chemical testing**) to comply with SANS 121:2006 (edition 6.1) drinking water since the water shall be used for domestic purposes. The analysis should be performed by the SANS-accredited laboratory. The report of the below test SANS 121 (Water Testing) should be provided to the project manager.

SANS 121(Water testing)

- pH level
- Electrical conductivity
- TDS (TOTAL DISSOLVED SOLID)
- ICP –OES analysis
- E.coli
- Total Organic Carbon
- Nitrogen-Nitrate
- Fluoride

2.2.4 Concrete Cage for Borehole

The contractor shall supply the cage to safeguard the borehole and the submersible pump, and other components necessary for the borehole operation.

2.2.5 Borehole monitoring equipment and operational equipment

The borehole system shall be provided with equipment to monitor the pump, borehole, and aquifer performance. The main components required are:

- Water meter
- Hour meter
- Water level depth measuring device- a conduit pipe (20-25 mm diameter) next to the riser in the borehole through which a measuring cable can be lowered is preferred, however, an electrical transducer or pressure pipe is an alternative.
- Operational equipment

The following operational equipment is required:

- Non-return valve
- Isolating valve, to prevent backflow into the borehole
- Scour valve
- Valves placed to enable removal/replacement of meter in exceptional circumstances.
- Pressure release valve upstream of all isolating valves.
- Pressure cut-out with manual control and pressure cut-out switch with 1 to 2 hours timed reset in auto control.
- Delivery pressure gauge
- The low water level in the borehole cut-out relay with manual control and low water level in the borehole cut-out relay with 1-2 hr timed reset in auto control (since the submersible pump is electrically operated).

2.2.6 Borehole Design

The final design is to be confirmed by Project Manager/Civil Engineer in consultation with the contractor during the drilling process, or immediately after drilling is complete.

Three types of standard borehole designs are given below:

Type A-open hole:

i. Percussion, air rotary, or mud rotary through overburden (alluvial, laterite, weathered, or soft bedrock), minimum final drilling diameter is 6" (152mm) in the overburden.
ii. Percussion or rotary/percussion ("down the hole hammer"), using stabilizers (foam) where necessary, in consolidated hard rock, minimum final diameter is 4"1/2 (115mm).
iii. Boreholes should be drilled at least 6 meters below any water-bearing fractures to allow sufficient space for a sedimentation sump.
iv. Fractured bedrock is considered not collapsing and left open.
v. Installation of the casing for overburden: minimum diameter 5"1/2(140mm), sealing of casing with grouting, back-filling, cementation of top 5 meters.

Type B-protected borehole in collapsing rocks:

i. Percussion, air rotary, or mud rotary through overburden (alluvial, laterite, weathered or soft bedrock), minimum final drilling diameter is (202mm) in the overburden.
ii. Down the borehole hammer in consolidated hard rock, the minimum final diameter is (165mm).
iii. Fractured bedrock-water-bearing- considered to be collapsing and needs to be protected with casing/screen(minimum inner diameter or (102 mm)
iv. If necessary to prevent collapsing of overburden, installation of casing minimum diameter (140mm), sealing of casing with grouting, backfilling, and cementation of top 5 meters.
v. Installation of the casing for overburden: minimum diameter (140mm), sealing of casing with grouting, back-filling, cementation of top 5 meters.

Type C-Screened borehole with artificial gravel pack:

i. Percussion, air rotary, or mud rotary through alluvial, or unconsolidated rocks, minimum final drilling diameter is (165mm). A final diameter of (203mm) is recommended.
ii. A minimum annular space of (38 mm) between the casing and borehole walls is required for gravel installation.
iii. Installation of the screen or slotted casing with a minimum inner diameter (102mm).
iv. Installation of gravel pack at least 3 meters above the top of the first screen, topped with a one-metre clay seal, with backfilling material and cementation of the top 5 meters.

2.2.7 Development and cleaning of borehole

The contractor shall develop and clean the boreholes upon completion of the drilling and installation of casing, screens, grouting, and filter pack are installed, in order to remove native silts, clays, loose rock particles, and drilling fluid residues deposited on the borehole wall during the drilling process.

2.2.8 Records and Reporting

The contractor shall keep daily activity records of the borehole. The records shall contain the information specified below.

Daily Record

- Site Name
- GPS Co-ordinates of the borehole (latitude/longitude)
- Date of reporting
- Method of drilling
- Diameter of the hole, and depth of changes in diameter
- Depth of hole at the start and end of the shift or working day
- Depth and size of the casing at the start and end of the shift or working day
- Description of strata drilled with a depth of transitions encountered
- Depth at which water is struck

- Depth intervals at which formation samples are taken
- Electric conductivity measurement during test pumping
- Problems encountered during drilling
- Depth, size, and description of good casing
- Depth, size, and description of good screens
- Aquifer depth and SWL after completion of well.

Borehole Completion Record

- Detailed driller's geological log
- Borehole design and installation details.

Registration of Borehole.

- The Geo-hydrologist must register the borehole with the relevant authority and complete all legislative requirements.

2.3. ELECTRICAL SUBMISERBLE BOREHOLE PUMP SPECIFICATION

The contractor shall also include the supply, delivery, installation, and commissioning of the one electrical submersible borehole pump at the Police Station. The contractor shall supply a submersible pump depending on the depth of the drilled borehole as indicated in paragraph 2.2.1. Depending on the borehole test results, the borehole shall be equipped upon the Engineer's approval. The nameplate must have the following information:

2.3.1 Information required on each nameplate

Borehole No. .....
Date Installed .....
Static Water Level (m) .....
Depth of Pump inlet (m) .....
Depth of Borehole (m) .....
Pumping Rate (L/s) .....
Recommended Pumping Time .....
Type and Pump name .....
Contractors Name .....

2.3.3 Submersible pump required Technical range

Pump	Specified
Medium pumped	Groundwater (clean)
Pump duty	**Specified**
Flow	1 000 L/Hour Min to 10 000 L/Hour Max
Static Head of the pump	180 meters Minimum
Minimum yield borehole	Above 0.25 L/ Minute to be in line with the pump size.
Borehole depth (depends)	Refer to paragraph 2.2.1
Motor	**Specified**
Rated Power	0.75 kW to 2.2 kW
Rated Voltage	220 V ~380 V
Frequency	50 Hz

The Pump system must be equipped with the following:

- ✓ Phase angle
- ✓ Overvoltage
- ✓ Phase loss protection
- ✓ Dry run protection

2.4. 32 000 / 65 000 / 87 000 LITRES SECTIONAL PRE-STRESSED GALVANISED STEEL WATER TANK INSTALLATION

2.4.1. Tank specification

- Supply and install sectional pre-stressed galvanized as per SANS 121(ISO 1461) steel water tank 32 000 litres (3.66m x 3.66m x 2.44m), 65 000 litres (3.66 x 3.66 x 4.88) and 87 000 litres (4.88m x 4.88m x 3.66m) panels standard 1.22m x 1.22m, to be fixed on a reinforced concrete foundation suitable for the dimensions above.
- Supply and install a caged external access ladder
- Internal access ladder
- Hinged lockable manhole
- External float pointer type water level indicator
- Screened ventilator
- Ball valve for the water level control
- Tank to be supplied overlapping roof sheet for optimum sealing
- Four (4) flanges (Drain, Inlet, Exit and overflow)
- Four (4) 90 ° elbows
- Four (4) valves (Between the water mains and the tank, between the tank and the pump, between the pump and the facility, and the tank drain valve.
- The 80mm diameter galvanised pipe must use for the connection.

2.4.2. Reinforced concrete foundation

The contractor shall ensure that the **raft foundation** is designed to support the specific water tank with a suitable apron, designed in accordance with the requirement of the structural engineer, and signed off by a **Registered Professional Structural Engineer (ECSA)** and the following must be taken into consideration:

- Sectional rectangular water tank foundations (±4m x± 4m) for 32 000 litre tank.
- Sectional rectangular water tank foundations (±4m x± 4m) for 65 000 litre tank.
- Sectional rectangular water tank foundations (±5.18m x± 5.18m) for 87 000 litre tank.
- The foundation of the reinforced concrete footing shall be site specific to support soil conditions, and site levels and use foundations such as strip/raft foundations.
- The size of the concrete footing must protrude by 150mm on either side of the tank.
- All reinforced concrete shall be 30MPa/19mm all control testing shall be carried out strictly.
- No concrete shall be placed prior for the verification of the reinforcement steel by SAPS Structural Engineer.

2.5. ELECTRIFICATION

The contractor shall ensure that the electrical installations are connected to the electrical essential Distribution Board and certified by a registered electrician with wireman's license and also issue certificate of competency.

2.6. WATER PIPING /RETICULATION SYSTEM

Supply and install pipe in metres length depending on the location of the borehole to 32 000 / 65 000 / 87 000 litres steel tank, UPVC pipe with 90° suitable elbows, non-return valve(s) with suitable flow reducer(s) / expander(s) and suitable T pieces, Valves (water inlet valve, butterfly valve).

2.6.1 Domestic Water Pressure Pump Set

Supply and install:

- Pump and motor that is designed to efficiently provide water to the police station.
- Motor control panel with pump protection for overload & HYDRO MULTI-E 2 CRE 5-4, 0.75-1.5 KW.
- The pump is to be fitted with a dry-run pump protection.
- Booster pump wiring.
- Pipes inclusive of all fittings and accessories required to bring the installations to the working order intended compliance, workmanship guarantee and manufacturer guarantee.
- In case there is no pump house the contractor shall build a galvanised lockable steel cage that can house a domestic water pressure pump set system.
- The cabinet for control gear and power supply must be manufactured from 3CR12 material and have IP rating of 65.
- The appointed contractor shall install, test, and commission the pumps and then issue the Certificate of Compliance (Plumbing and Electrical) in order to comply with the installation instructions.
- The Contractor must be conversant with the technical specification and applicable standards.

2.6.2 Water Pressure Pump Technical Specification

The system must be able to provide the following information:

- Speed of individual pumps.
- Power consumption of individual pump
- Energy consumption of individual pump
- Running hours of individual pump
- The operation mode of the system.
- Process value and set point of the system.
- Power consumption of the complete system.
- Energy consumption of the complete system.
- Fault readout in plain text.
- The Heads up to 41 m(max), resulting head of the pump at 23m and Flow rates from 8 m^3/h
- Stainless Pump Housing and Stainless-Steel Manifolds.
- Built-in check valve to protect the pump against water hammer.

2.6.3 Motors technical data

ELECTRICAL DATA:	
Description	**Specifications**
IE Efficiency class:	IE5
Power (P2) main pump:	0.75 -1.5 kW
Mains frequency:	50 Hz
Start. method:	Electronically

2.6.4 Control motors technical data

TECHNICAL DATA:	
Description	**Specifications**
Actual calculated flow:	8 m^3/h
Resulting head of the pump:	23 m
MATERIALS:	
Pump housing:	Cast iron
INSTALLATION:	
Maximum operating pressure:	10 bar
Maximum permissible inlet pressure:	PN 10 bar
Flange Standard:	DIN ISO 7/1

Manifold inlet:	R 2
Manifold outlet:	R 2
PRESSURE TANK:	
The volume of the pressure tank:	8 L
Diaphragm tank:	Yes
The Pressure tank has a capacity based on the following formula Minimum size of tank required in (litres) = 10% of the maximum flow rate (in litres/minute) of the pump in the pumpset	
OTHERS:	
Net weight:	82 kg
Gross weight:	88 kg
Shipping volume:	0.285 m³
Language:	Multi

2.6.5 Pump Maintenance and Service to be undertaken on a proven basis

- Dismantle the pump from the pipe and dissemble
- Make an inspection of the parts, replace if necessary: impellers, Wear rings /wear plates, O-rings, and shaft.
- Apply coating on un-machined surfaces

All the newly installed mechanical equipment shall have **one (1) year** warranty.

2.7 Water Filtration System

The borehole water system is to be fitted with the three-stage water filtration system as per the water quality results. The water filtering system filters water to human consumption level.

- ✓ Maintenance and Service on every six months after the new installation for a period of two years.

2.8 REGULATIONS, STANDARDS, AND REFERENCES

The sectional pre-stressed galvanized steel rectangular water tank, reinforced concrete foundation, and water pressure pump set installations shall comply with the following specifications:

- SANS 121(ISO 1461) Hot Dip Galvanizing Certification.
- SANS 10142-1: The wiring of premises.
- SANS 10400: The application of the National Building Regulations.
- SANS 10252: Water Supply and Drainage for Buildings Part 1: Water Supply Installations for Buildings.
- All municipal regulations pertaining to building codes and health and safety requirements.
- South African Occupational Health and Safety Act (Act 85 of 1993).

2.9 SITE LOCATIONS

Locations and Police Stations shall be determined as and when the need arises within the 2 years period.

3. TENDER CONDITIONS

3. GENERAL REQUIREMENT

This Bid entails a 2 year term contract for the design, supply and installation, maintenance, testing and commissioning of water borehole system which includes all related water reticulation and storage infrastructure within identified police stations within Limpopo province. Works shall include but not limited to:

- Assessments of site specific needs (applicable).
- Design, supply and install of borehole system and related infrastructure (where applicable).
- Supply and install submersible pump (where applicable).
- Design, supply and install of 32 000 / 65 000 / 87 000 litre sectional pre-stressed galvanized steel rectangular water tank with reinforced concrete foundation (where applicable).
- Design, supply and installation water pipe network and supply and installation of the caged water pressure pump set (where applicable).
- The testing of water quality; supply and installation of water treatment system including maintenance (where applicable).

The contractor shall be obligated in terms of this contract to ensure the first delivery of all installations within a specified period, in terms of the approved Program of Works. The contractor shall fully acquaint themselves with the nature of the work carried out, the locality of the facility, and any possible hindrances in the execution of the installation, services, and maintenance and to allow for these entire factors in their price, as any later claim based on unforeseen events or knowledge shall not be entertained.

The contract shall be entirely responsible for referencing all relevant Standard specifications of the SAPS and SANS or other applicable published standards whether such standard is referenced in this document or not and ensuring compliance with the Engineering Works therewith. The references in this document to Standard specification shall not be construed as limiting, and are given merely as a guide for basic reference. Where SABS is stated, the applicable SANS shall apply.

The SAPS further reserves the right to accept or decline such variations. Any equipment or part of the equipment shall not be removed from the facility for repairs or otherwise unless permission is granted by the police station in consultation with Division Supply Chain Management: Facility Management Programme and Project Management. If it happens that such equipment or part of the equipment is removed without permission, such equipment or part of the equipment shall be returned to where it was taken at no cost to SAPS.

4. GENERAL REQUIREMENTS AND SPECIFICATION

4.1 General requirement

All clauses shall be answered. It is the responsibility of the Bidders to ensure that all the clauses are answered. If a clause is not answered, it shall be regarded as non-compliance with that clause (please **do not** make a √ or X on the clauses below)

4.1.1	**Completion of Bid Documentation** Bidders shall explicitly state either **"comply" or "Do not Comply"** Regarding all the requirements outlined in this document except where otherwise stated. Bidders shall avoid term such as "yes", "no ", "noted", "accepted", "as specified", " see attached letter" etc.	**STATE:**_____
4.1.2	Whenever a technical parameter is specified as a requirement, Bidders should state numerical value(s). The numerical value should be listed in the same unit of the technical parameter specified.	**STATE:**_____
4.1.3	Bidders shall make sure that the value specified is not in conflict with the technical documentation accompanying the Bid	**STATE:**_____
4.1.4	**Test according to Standards** The equipment offered shall comply with SANS, SABS, and /or equivalent accredited test reports and must be handed over to SAPS during the first delivery of Borehole Pumps and Booster Pumps	**STATE:**_____
4.1.5	The SAPS shall inspect all equipment to verify compliance with the specification within this document.	**STATE:**_____
4.1.6	**Configuration of Tender reply** Offers submitted by Tender shall be neatly bound in a file folder, complete with an index page to enable the SAPS to ensure that all information was received.	**STATE:**_____
4.1.7	**The assumption made by Tenderers** No assumption shall be made by Bidders in their Tender reply	**STATE:**_____

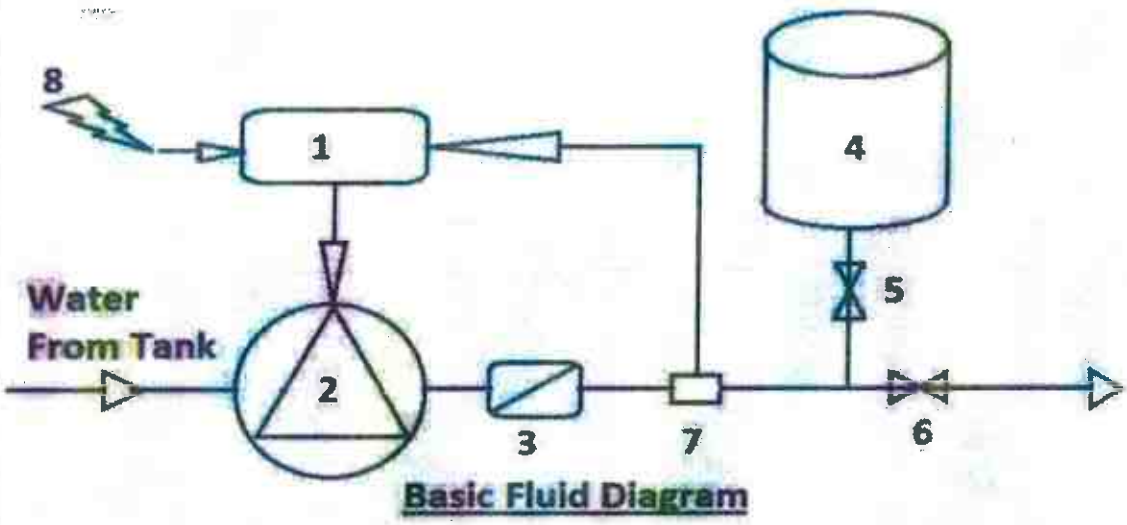
All clauses shall be answered. It is the responsibility of the Bidders to ensure that all the clauses are answered. If a clause is not answered, it shall be regarded as non-compliance with that clause (please **do not** make a √ or X on the clauses below)

DESIGN, SUPPLY, DELIVERY, INSTALLATION, MAINTENANCE, TESTING AND COMMISIONING OF WATER BOREHOLE SYSTEM

4.2 Requirement of the Specification

	STATE UNDER PARTICULAR OF TENDER AGAINST EACH REQUIREMENT WHETHER THE TENDER COMPLY OR NOT COMPLY WITH THE REQUIREMENT OF THE SPECIFICATION	COMPLY / NOT COMPLY
4.2.1	This tender is for the geohydrology survey, drilling of a borehole, design, supply, delivery, installation, and commissioning of a submersible pump for the borehole, laying of a water pipe network system, construction of 32 000 /65 000 /87 000 litres sectional pre-stressed galvanized steel rectangular water tank and reinforced foundation to support the water tank, water pressure pump set with the steel lockable cage, standard three-stage water filters, and electrification occupied by the South African Police Services (SAPS). Decommissioned outmoded equipment shall remain the property of the SAPS. They should be left at the Station for the Station Commander to apply SAPS official disposal processes. (as specified in this document)	
4.2.2	The bidders are required to sign all the pages of this document as provided at the bottom of each page, failure to comply shall invalidate the bid. (Specification and bill of rates).	
4.2.3	The Bidder shall fully acquaint themselves with the nature of the work to be carried out, the locality of the facility, and any possible hindrances in the execution of the installations, services, and maintenance, and allow for all of these factors in their pricing, as any later claim based on unforeseen events or knowledge shall not be entertained. (as specified in this document)	
4.2.4	**Delivery Period** The bidder shall be obligated, in terms of this contract, to ensure practical completion for each installation within a period of 4 months from the award of the contract. Should a bidder have concurrent orders, the duration shall run concurrently. Failure to comply shall result in non-performance.	
4.2.5	The bidder shall provide a detailed program for the execution of the engineering works, maintenance works, and installation works for the whole of the contract period, listing each facility, its location, and fixed dates of maintenance.	
4.2.6	Service, Maintenance, and Repairs. A service certificate or job card should be issued after every completed service. **The service should include but not be limited to the following.** The following is a minimum requirement for servicing Borehole pumps, Three-stage water filters, and Booster Pumps. Some items are only applicable to particular units. We've included a list of some of the key areas to assess in a submersible pumping station below. • Check the physical condition of the system to ensure it is secure and undamaged • Specifically examine the condition of the pump including its impeller, seals, bearings, valves, and volute. • Assess the condition of pipework for wear or damage • Ensure the sump and floats are clean	

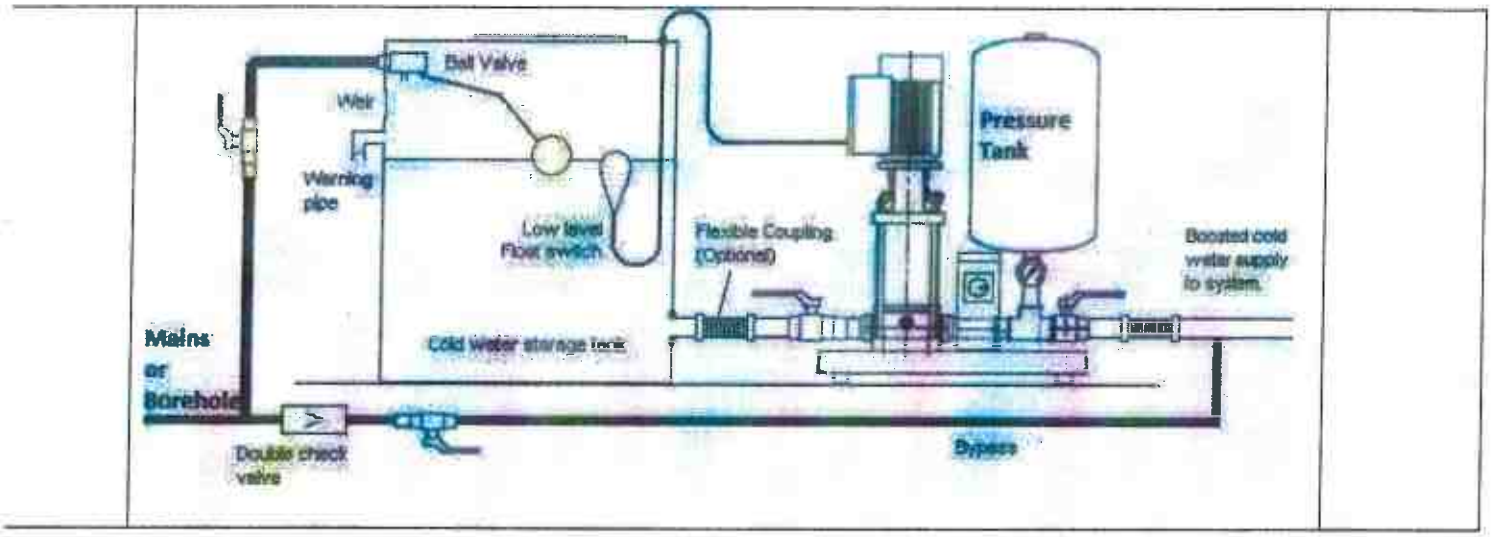
	• Check electrical components to ensure insulation is intact, fuses are in good condition and bulbs and heaters are working properly • Finally, check that all safeguards are operating correctly and that alarm beacons and buzzers are functional.	
4.2.7	The operation, maintenance manuals, and Training for the end user (2x officials as stated on the BoQ) – The bidder shall hand over operating and maintenance manuals for all equipment supplied and installed by them as part of the works. A complete description of all operating procedures and safety measures should be included in the manual.	
4.2.8	Electrical Connections – Electrical connections to the distribution panel form part of this contract. Wiring must be designed and installed as prescribed by SABS 10142 wiring of buildings by a competent person. It is the responsibility of the bidder to ensure all electrical safety regulations have been adhered to and all Electrical equipment is kept and maintained in accordance with the relevant installation rules. It is the bidder's responsibility to ensure the load balancing after the installation of installed equipment (as specified in this document).	
4.2.9	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 judgment, are not in full accordance therewith. All condemned material and workmanship shall be replaced or rectified as directed and approved by the SAPS Mechanical Engineer. Qualified tradesmen shall execute all work in a first-class manner. The Bidder shall warrant that the materials and workmanship shall be of the highest grade and that the equipment shall be installed in a practical and first-class manner by the best practices, ready, and complete for full operation as per the scope of the contract document.	
4.2.10	The Bidder shall comply with the requirements of the Health & Safety Specification and applicable regulations. The bidder shall refer to the site information, and the specification describing the scope of the Engineering Works, for information about the type of environment in which the work is to be executed. Notwithstanding anything stated in this document, the bidder shall be responsible for determining the safety requirements of the site and this should be included in the safety file. (As specified in this document).	
4.2.11	All the equipment shall be supplied with a written guarantee confirming a defects liability period as stated in the applicable GCC document attached to the bid. These guarantees shall be furnished in favour of the SAPS. The guarantee shall include any latent defects in the facility, equipment, fittings, and installation thereof and any labour or other costs inherent in repairing any defects and ensuring that the facility, equipment, and fittings remain free of defects and in good working order to the satisfaction of the SAPS.	
4.2.12	New equipment and material installed shall be new and unused.	
4.2.13	All installations shall comply with the National Building Regulation SANS 10400 on energy efficiency Part XA; read in conjunction with SANS 204.	
4.2.14	It is imperative that the Booster pump should be equipped with Variable Speed Controller and the Pressure Vessel as illustrated in the drawing below.	



Basic Fluid Diagram

1) VSC (Variable Speed Controller)
2) Pump
3) Non-Return Valve
4) Pressure Tank
5) Valve
6) Valve
7) Pressure Transducer
8) Power Supply

4.2.15	Simplified Water System with the compulsory Bypass line	



5. PREAMABLES TO SCHEDULE OF RATES

Price Schedule

General – The Schedules of Rates define the scope of the Engineering Works in terms of the measurement and payment parameters specified. The Schedules shall be read in conjunction with the General Conditions of the Contract, the Special Conditions, and the Conditions of Tender; the Rates stated on the schedules are provisional and are subject to re-measurement upon completion. Rates cannot be guaranteed. Bidders shall quote for all equipment and all accessories specified within this document. The procurement of this equipment shall take place as and when needed, spread over one year. Servicing and maintenance of all newly installed equipment and components and guaranteed free of defects for the full maintenance period of two years shall form part of this contract.

Descriptions & Measured Items – The Schedule of Rates consists of Descriptions followed by measured items (Item lines) which specify the items of differing dimensions, ratings, etc. which comply with the overall requirements of such Description.
The measured items may add, subtract or in any other way vary the Description. Below each item line, the measured Rates applicable to each of the applicable sections of the Works appear under the relevant column heading, the total of which is shown under the Quantity column. The terms used and Schedule layout is defined in the *Schedule of Rates* Legend which is presented in this Preamble. The Schedule of Rates is based upon the Standard system of measurement and modified as necessary.

The descriptions and item lines are of necessity abbreviated summaries of the specifications and unless otherwise stated or elsewhere measured, shall include all necessary components and accessories required or necessary for the correct functioning or performance of the item when incorporated into the Engineering Works. The rates and prices shall support the nature of the Engineering Work and any restrictions which apply to the Works Environment and the Site of the Works, shall include all the costs and expenses that may be required in and for the construction of the Works described and shall include the cost of all general obligations, risks and liabilities stated or implied in the contract documents.

Such rates and prices shall, however, exclude Value Added Tax (VAT), which shall be applied only where specified.

Rates – The Rates set out in the Schedule are intended for measurement and payment purposes only. The schedule of Rates is for budget and Bid Evaluation purposes and is subject to amendment, based on site conditions.

Rates Provisional – The Rates set out in the schedules are measured provisionally and shall be subject to re-measurement on completion.

6. TRAINING

After installation and commissioning are complete, a training session shall be provided by the contractor for two assigned SAPS employees.

7. TESTING AND COMMISSIONING

- All installed equipment shall be commissioned and tested as per the manufacturer's recommendations. The results of all tests must be recorded and submitted to the SAPS engineer for approval.

- Prior to handover, on-site final test reports as listed in SANS 10142 and issue COCs for installation to the relevant SAPS engineer.
- The contractor is to provide water pressure test certificates to the SAPS engineer.
- Concrete strength and compaction test results must be provided.

8. CLEANING OF SITE

After completion of construction activities, the contractor shall remove all his equipment and site facilities from the site and leave the site in a tidy condition. The cost thereof must be included in the P & G's.

9. Defect Liability Period.

The bidder shall be responsible for the initial maintenance for the Defects Liability Period of 12 months from Practical Completion on all new equipment that is installed. The Defects Liability Period shall commence concurrently with the guarantee period. All cost of servicing and maintenance during this period is to be included in the bid price. A guarantee of work done should also be in place.

10. CONDITIONS OF CONTRACT

The Bidder shall comply with the obligations and requirements of the Agreement and Contract Data documents contained in this document, including the applicable General Conditions of Contract (GCC).

The Bidder shall allow for all the responsibilities and obligations in terms of the conditions of the contract and contract data, including:

- Risks, costs, and obligations in terms of the General Conditions of the Contract, the Contract Data, and the Standardized specifications, except where provision is made in the Project Specifications to cover compensation for any of these items.
- Head office and site overheads and supervision.
- Profit and financing costs.
- Sureties, employment-related expenses, statutory expenses.
- Indemnities & insurances: The bidder shall only be permitted to perform work on the site if a valid insurance policy document and proof of cover or premium payment have been submitted and approved.
- The Bidder shall maintain current registration and have paid the necessary fees to the Compensation Commissioner in compliance with the Compensation for Occupational Injuries and Diseases Act, 1993 (COIDA). The bidder shall only be permitted to perform work on any site if a valid Letter of Good Standing issued by the Compensation Commissioner has been submitted and approved.
- A detailed program for the execution of the engineering works, maintenance works, and Installation works for the whole contract period. The bidder shall be required to comply with the program at all times.

11. Storage of equipment

On delivery to the site or storage area, the contractor shall be responsible for safeguarding his/her material or equipment. Damage or defects of any kind shall be repaired by the contractor of such items to the satisfaction of the SAPS. Where damage is such that in the opinion of the SAPS satisfactory repairs are not practicable, the damaged item shall be repaired at no cost to the SAPS. The SAPS shall not accept responsibility for any loss or damage that may be suffered as a result of delays in obtaining the necessary replacements.

12. SCHEDULES OF RATES

SAPS

CONDUCT A GEO-HYDROLOGY STUDY, DRILL A BOREHOLE, SUPPLY AND INSTALL A SUBMERSIBLE BOREHOL PUMP, A WATER PIPE NETWORK, A GALVARNISED RECTANGULAR 32 000 / 65 000 / 87 000 LITRE CAPACITY GROUND LEVEL WATER TANK, WITH REINFORCED CONCRETE FOUNDATION AND A CAGED WATER PRESSURE PUMP SET: Schedule Of Rates.

No	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	NOTE: The following work is to be carried out by an approved specialist: geohydrology survey, drill a borehole, supply and install a submersible borehole pump, a water pipe network, a galvanized rectangular 32000/65 000/87 00 litres capacity ground level water tank, with reinforced concrete foundation and a caged water pressure pump set. T following systems include all components and sundries, tests, etc. Required to bring the installations to the workin order intended, compliance, and guarantee.				
1	**Preliminary & General**				
	Site handover	Rate	1		Per site
	Practical Completion	Rate	1		Per site
	Prepare & submit Health & Safety Plan	Rate	1		Per site
	Site Camp; Ablution and Water	Rate	1		Per site
	Security, Storage, and Insurance	Rate	1		Per site
	Borehole registration with the local authority	Rate	1		Per site
	As-built drawings where a complete borehole water system is designed	Rate	1		Per site
	Maintenance of a water filtration system	Rate	1		Per site
	2. The geo-hydrologist study, drilling including the construction of a borehole and accessories.				
2.1	**Establishment of the Contractor**				
	Fixed charges	sum	1		Per site
	Time-related charges	sum	1		Per site
	Health and safety obligations	sum	1		Per site
	Environmental management	sum	1		Per site
2.2	**Setting out and survey**				
	Relocation of standing boundary pegs by the land surveyor	sum	1		Per site
	Survey of new Borehole area to incorporate it to existing site	sum	1		Per site
	Geohydrology study in and around the site	sum	1		Per site
2.3	**Provision of rigs and equipment**				
	Core drilling rigs	no.day	1		Rate only
	Percussion drilling rigs	no.day	1		Rate only
	Drilling barges	sum	1		Rate only
2.4	**Setting up**				
	Mobile setups/ site establishment	sum	1		Per site
	Core drill	no.	1		Rate only
	Percussion drill	no.	1		Rate only
	Skid setups				
	Normal skid setups	no.	1		Rate only
	Difficult setups	no.	1		Rate only

DESIGN, SUPPLY, DELIVERY, INSTALLATION, MAINTENANCE, TESTING AND COMMISIONING OF WATER BOREHOLE SYSTEM

	Very difficult setups	no.	1		Rate only
	Movement between boreholes	m	1		Rate only
2.5	**Percussion drilling (Allow for measurable 2 No. x 100m deep boreholes)**				
	Percussion drill	m	1		Rate only
	Percussion drilling	m	1		only
	165mm (6 1/2 inch) diameter	m	1		Rate
	216mm (5 1/2 inch) diameter	m	1		Rate only
	Backfilling hole	m^3	1		Rate only
	Cement plug in uppermost 2m for decommissioning a drilled borehole	m	1		Rate only
	Percussion casing	m	1		Rate only
	Steel casing (200mm/8 inch) in-and-out	m	1		Rate only
	Casing left in hole	m	1		Rate only
	Permanent casing (150mm PVC)	m	1		Rate only
	Supply of casing	m	1		Rate only
	Non-slotted	m	1		Rate only
	Slotted	m	1		Rate only
	Installation (including sand annulus)	m	1		Rate only
	Addition of foam	liter	1		Rate only
2.6	**Piezometers**				
	Supply (63mm diam. PVC standpipe)	no	1		Rate only
	Installation	m	1		Rate only
2.7	**Water sampling and borehole water rest level**				
	Recording water rest levels	no	1		Rate only
	Water samples	no	1		Rate only
	uPVC tubing (19mm)	m	1		Rate only
2.8	**Marking of holes**				
	Standpipe and cap	no	1		Rate only
2.9	**Standing time**				
	Percussion drilling rigs	rate	1		Per site
	Pumping test equipment	rate	1		Per site
2.10	**Logging and Profiling**				
	Logging boreholes	rate	1		Per site
	Interpretation of results	rate	1		Per site
2.11	**Pumping Tests**				
	Step test	rate	1		Per site
	Constant Discharge test	rate	1		Per site
	Recovery	rate	1		Per site
2.12	**Reporting**				
	Report	Rate	1		Per site
Subtotal No 1					

DESIGN, SUPPLY, DELIVERY, INSTALLATION, MAINTENANCE, TESTING AND COMMISIONING OF WATER BOREHOLE SYSTEM

No	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
3	Supply, install and commission a submersible Borehole pump including accessories i.e. Control box with Dry-run protection and Thermal Protection with external manual reset, Male adaptors that can withstand a working pressure of 16bar, 6mm Nylon safety rope, Base plate with integrated cable gland, circuit breaker, Electrical connecting cables, and non-return valve. Q=1 m³/hour, H=100m, and Submersible Electric Motor Single Phase, 230/240V. 0.75Kw, 50 Hz, supply motor control panel of **0.75 Kw**, 230V (Grundfos) or Similar approved (Including labour and transport)	Sum	1		Rate only
4	Supply install commission a submersible Borehole pump including accessories i.e. Control box with Dry-run protection and Thermal Protection with external manual reset, Male adaptors that can withstand a working pressure of 16bar, 6mm Nylon safety rope, Base plate with integrated cable gland, circuit breaker, Electrical connecting cables, and non-return valve. Q=1 m³/hour, H=150m, and Submersible Electric Motor Single Phase, 230/240V. 1.1Kw, 50 Hz, supply motor control panel of **1.1 Kw**, 230V (Grundfos) or Similar approved (Including labour and transport)	Sum	1		Rate only
5	Supply install commission a submersible Borehole pump including accessories i.e. Control box with Dry-run protection and Thermal Protection with external manual reset, Male adaptors that can withstand a working pressure of 16bar, 6mm Nylon safety rope, Base plate with integrated cable gland, circuit breaker, Electrical connecting cables, and non-return valve. Q=1 m³/hour, H=200m, and Submersible Electric Motor Single Phase, 230/240V. 1.5Kw, 50 Hz, supply motor control panel of **1.5 Kw**, 230V (Grundfos) or Similar approved (Including labour and transport)	Sum	1		Rate only
Subtotal No 2					
Tank and its accessories					
6	Supply and install 32 000 litre capacity tank with its accessories i.e.;	Sum	1		Rate only
	· Caged external and Internal access ladder				
	· Hinged lockable manhole				
	· Float pointer type water level indicator, cat and mouse				
	· Screened ventilator				
	· Float switch Ball valve				
	· Four suitable galvanized steel (4) flanges				
	· 80 mm diameter galvanised steel pipe for tank connection and 90 ° elbows				
7	Supply and install 65 000 litter capacity tank with its accessories i.e.;	Sum	1		Rate Rate only
	· Caged external and Internal access ladder				
	· Hinged lockable manhole				
	· Float pointer type water level indicator, cat and mouse				
	· Screened ventilator				
	· Float switch Ball valve				
	· Four suitable galvanized steel (4) flanges				

	· 80 mm diameter galvanised steel pipe for tank connection and 90 ° elbows				
8	Supply and install 87 000 litter capacity tank with its accessories i.e.;	Rate only	1		Rate only
	· Caged external and Internal access ladder				
	· Hinged lockable manhole				
	· Float pointer type water level indicator, cat and mouse				
	· Screened ventilator				
	· Float switch Ball valve				
	· Four suitable galvanized steel (4) flanges				
	· 80 mm diameter galvanised steel pipe for tank connection and 90 ° elbows				
Pipe, pipe accessories and trenching					
9	Supply and install in m length HDPE pipe with Ø 75mm with five (05) 90° suitable elbows, One (01) none-return valve with suitable four (4) flow reducer(s)/expander(s) and suitable T pieces,80mm Valves (water inlet valve, butterfly valve.)	Sum	1		Rate only
Subtotal No 3					
10	Trenching for pipework	m^3	1		Rate only
11	Excavation (excavate in all materials to correct levels and falls)	m^3	1		Rate only
12	Excavation of intermediate material	m^3	1		Rate only
13	Excavation of hard rock material	m^3	1		Rate only
14	Filling with G7 material, compacted to 93% Mod AASHTO in 150 mm thick layers	m^3	1		Rate only
15	Filling with G6 material, compacted to 95% Mod AASHTO in 150 mm thick layers	m^3	1		Rate only
16	Filling with G5 material, compacted to 97% Mod AASHTO in 150 mm thick layers	m^3	1		Rate only
17	Rip, scarify and compact the bottom of the excavation for a depth compact in-situ material to min 93% mod AASHTO density (Along excavated trenches)	m^2	1		Rate only
Reinforced concrete foundation					
18	Construct a reinforced sectional rectangular water tank foundation(±4 x± 4) with th strength of 30MPa/19 mm	m^3	1		Rate only
19	Welded reinforcement mesh ref 395	m^2	1		Rate only
20	Welded reinforcement mesh ref 617	m^2	1		Rate Only

21	Welded reinforcement mesh ref 888	m^2	1		Rate only
22	High tensile reinforcement Y10.	kg	1		Rate only
23	High tensile reinforcement Y12.	kg	1		Rate only
24	High tensile reinforcement Y16.	kg	1		Rate only
Water pressure pump set system					
25	Supply, install, and commission Water booster Pump: HYDRO MULTI-E 2 CRE 5-4(Grundfos) or Similar approved (Including labour and transport) to be fitted with the following. 1) VSC (Variable Speed Controller) 2) Non-Return Valves 3) Pressure Tank 4) Pressure Transducer 5) Low-level Float switch	No	2		Per site
26	Construct a galvanized lockable steel cage to house and secure the booster pump set system.	Sum	1		Per site
Water Filtration System (three-stage water filtration system)					
27	Supply, install, and commission three-stage water filtration system Including labour, transport and all accessories to ensure a complete function system.	No	1		Per site
28	Maintenance and Service every six months after the new installation	no	1		Per site
Electrical Cablings					
29	Supply and install a 4mm^2 3 core pvc/ swa /pvc (Including labour and transport)	m	1		Per site
30	Supply and install a 6 mm^2 3 core pvc/ swa /pvc (Including labour and transport)	m	1		Per site
31	Supply and install a 4mm^2 4 core pvc/ swa /pvc, inclusive of 1.5 mm^2 bcew (Including labour and transport)	m	1		Per site
32	Supply and install a 6mm^2 4 core pvc/ swa /pvc, inclusive of 2.5 mm^2 bcew (Including labour and transport)	m	1		Per site
33	Supply and install a 6 mm^2 3 core double insulated submersible pump cable (Including labour and transport)	m	1		Per site
34	Supply and install a 10 mm^2 3 core double insulated submersible pump cable (Including labour and transport)	m	1		Per site
35	Supply and install a 6 mm^2 4 core double insulated submersible pump cable (Including labour and transport)	m	1		Per site
36	Supply and install a 10 mm^2 4 core double insulated submersible pump cable (Including labour and transport)	m	1		Per site
37	Supply and install a 20 AMP 6KA, 1P, orange toggle circuit breaker (Including labour and transport)	No	1		Per site
38	Supply and install a 30 AMP 6KA, 1P, orange toggle circuit breaker (Including labour and transport)	No	1		Per site

DESIGN, SUPPLY, DELIVERY, INSTALLATION, MAINTENANCE, TESTING AND COMMISIONING OF WATER BOREHOLE SYSTEM

39	Supply and install a 20 AMP 6KA, 3P, orange toggle circuit breaker (Including labour and transport)	No	1		Per site
40	Supply and install a 30 AMP 6KA, 3P, orange toggle circuit breaker (Including labour and transport)	No	1		Per site
41	Training of end-user operating staff in the station and submitting proof thereof to the Project Manager	No	2		Per site
Subtotal No 4					
42	Electrical Certificate of Compliance (CoC), with regards to booster set connection to the Distribution Board (DB)	Sum	1		Per site
43	Plumbing Certificate of Compliance (CoC), with regards to Pump connections and pipefitting.	Sum	1		Per site
Subtotal No 5					
Sub-total per site (A)					
44	**Mobilization (B)**	**Unit**	**Qty**	**Rate**	**Amount**
45	Transport for drilling rigs trucks per site including the labour team	km	1		
46	Transport for light vehicle including the labour team	km	1		
TOTAL FOR PER SITE Incl. mobilization cost (A+B)					

13. FINAL SUMMARY OF THE SCHEDULE OF RATES

Details	Page	Amount (R)
Subtotal No 1	22	
Subtotal No 2	23	
Subtotal No 3	24	
Subtotal No 4	26	
Subtotal No 5	26	
Subtotal Exc. Mobilization	26	
Mobilization	26	
Total Incl. Mobilization	26	
Contingency @20%		
Overall SUB-TOTAL (ST)	Offer excluding VAT	
Add VAT: @ 15% of ST	VAT	
Total Tender Price: Overall ST + VAT	Total offer	

DESIGN, SUPPLY, DELIVERY, INSTALLATION, MAINTENANCE, TESTING AND COMMISIONING OF WATER BOREHOLE SYSTEM

JOB Cards of each service/installation must be completed by the bidder and countersigned by the Station Commander or appointed official.

JOB CARD

Service Date: ..... **Order Form No.** .....

Province.....**Police Station Name**.....

Service Description .....

Make	**Model**	**Serial/No**
_____	_____	_____

WORK EXECUTED DESCRIPTION

Use an addendum if additional space is required. Attach the following documents: 1. Completed & signed servicing checklists page and monthly travel log sheet.

Artisan's Name : .....

Date of arrival : ..... **Time:** .....

Completion date :..... **Time:** .....

Actual hours worked on site : .....

Signature of Artisan (Contractor) : .....

CONTRACTOR

I hereby declare that the maintenance and servicing as listed have been satisfactorily executed and that all records have been updated.

SIGNED BY THE CONTRACTOR

Date :..... **Name :** ..... **Signature :**.....

CLIENT DEPARTMENT (To be completed by the Station Commander/designated officer). I have personally checked that the contractor inspected the system or equipment on the date stated. (However, I do not certify technical correctness)

Remarks : .....

Name : ..... Rank : ..... Date : .....

Signature : ..... Telephone : .....

South African Police
STAMP
PLEASE

APPOINTMENT OF A CONTRACTOR FOR DESIGN, SUPPLY, DELIVERY, INSTALLATION, MAINTENANCE, TESTING AND COMMISSIONING OF WATER BOREHOLE SYSTEM IN FREE STATE PROVINCE FOR THE PERIOD OF TWO (02) YEARS

BID: 19/1/9/1/38TB (23)

PART C

CONTRACT

PART C 3

OCCUPATIONAL HEALTH AND SAFETY

HEALTH & SAFETY SPECIFICATION

FOR

CAPITAL WORKS AND PLANNED MAINTENANCE PROJECTS

MANAGED ON BEHALF OF

SOUTH AFRICAN POLICE SERVICE

(THE "CLIENT")

TABLE OF CONTENT

1. PREAMBLE

In terms of Construction Regulation 5(1) (*b*) of the Occupational Health and Safety Act, 1993 (Act 85 of 1993), South African Police Service, as the Client must prepare a suitable, documented and coherent site specific health and safety specification for the intended construction work based on the baseline risk assessment.

The Client's further duties are as described in The Act and the Regulations made there-under. The Principal Contractor shall be responsible for the Health & Safety Policy for the site in terms of Section 7 of the Act and in line with Construction Regulation 7 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 South African Police Service is tasked to provide accommodation and operational facilities to a very large proportion of it members. 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 South African Police Service. 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

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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 South African Police Service 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 South African Police Service. 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 site, activity or project documented plan in accordance with the clients health and safety specification

"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 clients 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;

Construction Work Permit – means a document issued by the Provincial Director of Department of Labour

"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.

"Practical Completion Certificates" A certificates issued in terms of a contract by the employer, signifying that the whole of the construction works have 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 containing the information in writing required by Construction 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 5(1)(k), 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 8 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.

5.1.2 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.	8(5)	Construction Safety Officer	Contractor
9.	8(7)	Construction Supervisor	Contractor
10.	8(8)	Responsible employee	Contractor
11.	9(1)	Competent risk assessor	Contractor
12.	10(1)	Fall protection planner	Contractor
13.	12(1)	Temporal work designer	Contractor
14.	12(2)	Supervisor of temporal work operation	Contractor
15.	12(3)(F)	Competent temporary works inspector	Contractor
16.	13(1)(a)	Excavation supervisor	Contractor
17.	13(2)(k)	Competent person in the use of explosive for excavations	Contractor
18.	14(1)	Competent demolition supervisor	Contractor
19.	14(11)	Explosives expert	Contractor
20.	16(1)	Scaffold supervisor	Contractor
21.	17(1)	Suspended platform supervisor	Contractor
22.	18(1)a	Rope access Supervisor	Contractor

23.	19(8)(a)	Material hoist inspector	Contractor
24.	20(1)	Bulk mixing plant supervisor	Contractor
25.	21(2)(b)	Explosive actuated fastening device inspector	Contractor
26.	21(2)(g)	Explosive actuated fastening device cartridge, nails and studs: issuer & collector	Contractor
27.	23 (1)	Operator: construction vehicle and mobile plant	Contractor
28.	28 (a)	Stacking and storage supervisor	Contractor
29.	29 (h)	Fire equipment inspector	Contractor
		OTHER APPOINTMENTS	
	ACT /REGULATION	APPOINTMENT	
1	16(1)	CEO	
2	16(2)	Deputy CEO	
3	17	Health and safety representatives	
4	19	Health and Safety committee members	
5	37(2)	Mandatory agreement	
6	GAR 9(2)	Incident investigator	
7	GSR 3	Competent First aider	
8	GSR 5(1)	Competent Confined space inspector	
9	DMR 18(5)(a)	Lifting machine inspector	
10	DMR 18(5)(a)	Lifting machine entity	
11	GMR 2	Supervisor of machinery	

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, verbally or in writing, as and when the need arises.

5.2.3 Consultation with the workforce on OH&S matters will be through their Supervisors and H&S Representatives ('SHE – Reps')

5.2.4 The Principal Contractor will be responsible for the dissemination of all relevant OH&S information to the other Contractors e.g. design changes agreed with the Client and/or its Agent on its behalf and the Designer, instructions by the Client and/or his/her agent, exchange of information between Contractors, the reporting of hazardous/dangerous conditions/situations etc.

6. INTERPRETATION

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.

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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 Construction Health & Safety Agent (SACPCMP)

The construction Health & Safety Agent act 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 carry 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.

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

9. 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; and
- 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.

(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, and
- 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; and
- 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(2) (b), keep a Health & Safety File on site at all times that must include all documentation required in terms of the Act and Regulations and must also include a list of all Contractors on site that are accountable to the Principal Contractor and the agreements between the parties and details of work being done. A more detailed list of documents and other legal requirements that must be kept in the Health & 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 Monthly 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 Audit to comply with Construction Regulation

5(1)(*n*) 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.

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.

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.

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(i) **Reporting Of Near-Misses**

- South African Police Service views the reporting of near misses as a critical component in creating a positive health and safety awareness culture on site.
- South African Police Service 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.

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.

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 & grabbling 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 and Demolition 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

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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 5 & 7(1)	H&S Specification & Programme	• H&S Spec received from Client and/or its Agent on its behalf • OH&S programme developed & Updated regularly
[illegible] Construction Regulation 3	Hazard Identification & Risk Assessment	• Hazard Identification carried out/Recorded • Risk Assessment and – Plan drawn up/Updated • RA Plan available on Site • Employees/Sub-Contractors informed/trained
Section 16(2)	Assigned duties (Managers)	• Responsibility of complying with the OH&S Act assigned to other person/s by CEO
Construction Regulation 8(1)	Designation of Person Responsible on Site	• Competent person appointed in writing as • Construction Supervisor with job description
Construction Regulation 8(2)	Designation of Assistant for above	• Competent person appointed in writing as • Assistant Construction Supervisor with job description
Section 17 & 18 General Administrative Regulations 6 & 7	Designation of Health & Safety Representatives	• More than 20 employees = one H&S Representative, one additional H&S Rep. for each 50 employees or part thereof. • Designation in writing, period and area of responsibility specified in terms of GAR 6 & 7 • Meaningful H&S Rep. reports. • Reports actioned by Management. •

Section 19 & 20 General Administrative Regulations 5	Health & Safety Committee/s	• H&S Committee/s established. • All H&S Reps shall be members of H&S Committees • Additional members are appointed in writing. • Meetings held monthly, Minutes kept. • Actioned by Management.
Section 37(1) & (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 COID Act Sec1.38, 39 & 41	Reporting of Incidents (Dept. of Labour)	• Incident Reporting Procedure displayed. • All incidents in terms of Sect. 24 reported to the Provincial Director, Department of Labour, within 3 days. (Annexure 1)(WCL 1 or 2) and to the Client and/or its Agent on its behalf • Cases of Occupational Disease Reported • Copies of Reports available on Site • Record of First Aid injuries kept
General Admin. Regulation 9	Investigation and Recording of Incidents	• All injuries which resulted in the person receiving medical treatment other than first aid, recorded and investigated by investigator designated in writing. • Copies of Reports (Annexure 1) available on Site • Tabled at H&S Committee meeting • Action taken by Site Management.
Construction, Regulation 10	Fall Prevention & Protection	• [illegible] Plan • [illegible] • Risk Assessment carried out for work at heights • Fall Protection Plan drawn up/updated • Available on Site
Construction, Regulation 20 Driven Machinery	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

Regulations 16		• Cranes & Lifting tackle identified/numbered • Register kept for Lifting Tackle • Log Book kept for each individual Crane • Inspection: - All cranes – daily by operator a. Tower Crane/s – after erection/6monthly b. Other cranes – annually by comp. person • - Lifting tackle(slings/ropes/chain slings etc.) – daily or before every new application
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 • [illegible] • One qualified First Aider appointed for every 50 employees. (Required where more than 10 persons are employed) • List of First Aid Officials and Certificates • Name of person/s in charge of First Aid box/es displayed. • Location of First Aid box/es clearly indicated. • Signs instructing employees to report all • injuries/illness including first aid injuries

General Safety Regulation 2	Personal Safety Equipment (PSE)	• PSE Risk Assessment carried out • Items of PSE prescribed/use enforced • Records of issue kept • Undertaking by Employee to use/wear PSE • PSE remain property of Employer, not to be removed from premises GSR 2(4)
General Safety Regulation 9	Inspection & Use of Welding/Flame Cutting Equipment	• [illegible] • 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 • [illegible] • [illegible]
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

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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 February 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:

- 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. 27. Poor housekeeping contributes to three major problems, namely, costly or increased accidents, fire or fire hazards and reduction in production. Good housekeeping will enhance production time.

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

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

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

20. FACILITIES

The site establishment plan shall make provision for:

20.1 Dining room facilities

The contractor shall make provision for adequate dining room facilities for his employees on site.

20.2 Change rooms

The contractor shall make provision for adequate change rooms for his employees on site.

20.3 Ablution facilities

The contractor shall make provision for adequate ablution facilities for his employees on site.

20.4 Smoking Areas

Designated smoking areas shall be established by Principal Contractor

20.5 Drinking Water Facilities

The provision of drinking water facilities shall be negotiated between the Contractor and client.

20.6 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

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20.7 Barricading

All barricading shall be of the rigid type unless the use of non-rigid barricading has been approved in writing by South African Police Service 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.

20.8 Erection of Structures for Logistic Support

Prior to site establishment South African Police Service shall approve the contractor's site plan.

South African Police Service shall approve all structures erected for logistical support by the contractor. These structures include fences, workshops, tool sheds, offices, ablution facilities, etc.

20.9 Salvage Yard Management

Depending on the site specific arrangements and procedures, South African Police Service 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.

20.10 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 South African Police Service in writing.

20.11 Hazardous Chemical Substances Waste Removal

South African Police Service 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 South African Police Service disposal point.

20.12 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).

21. 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.

22. 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		

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ADD OTHER IMPORTANT HEALTH & SAFETY CONTACT DETAILS AS MAY BE FOUND NECESSARY.

SECTION 37(2) AGREEMENTS

CONCLUDED BETWEEN

SOUTH AFRICAN POLICE SERVICE

(Hereinafter referred to as South African Police Service)

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 South African Police Service 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 South African Police Service contract on behalf of the contractor*)

Witnesses

1. .....

2. .....

Signed this ..... day of .....20.....

at ..... (*Place*)

(*Full name*..... (*Signature*).....on

Behalf of South African Police Service.

(Contracts and/or Project Manager or South African Police Service 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 SOUTH AFRICAN POLICE SERVICE:

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)

.....

.....

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Mr /Ms/Me - **CONSTRUCTION MANAGER**
(add full details of the head of the project)

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APPOINTMENT OF A CONTRACTOR FOR DESIGN, SUPPLY, DELIVERY, INSTALLATION, MAINTENANCE, TESTING AND COMMISSIONING OF WATER BOREHOLE SYSTEM FOR THE PERIOD OF TWO (02) YEARS

PART C

CONTRACT

PART C 3.1

FUNCTIONALITY EVALUATION CRITERIA AND POINTS ALLOCATION

FUNCTIONALITY CRITERION: MPUMALANGA PROVINCE: DESIGN, SUPPLY, DELIVERY, INSTALLATION, MAINTENANCE, TESTING AND COMMISSIONING OF WATER BOREHOLE SYSTEM.

No	Criteria	Evaluation Indicators	Applicable Value
1	**RELEVANT WATER-RELATED EXPERIENCE ON PREVIOUS CONTRACTS OF A SIMILAR NATURE, SCOPE AND COMPLEXITY.**		**15**
	Provide a descriptive list of all **completed** (Practical Completion) Water-related projects (**new works**) of similar nature, scope and value to this tender for the last 10 years in relation to: Name of Employer, Contact number, Contract sum, Practical certificate or final completion certificate. ***Projects will only be considered for scoring when there is a valid reference letter from consultants/clients submitted with the tender document stating the project nature and the project value.***	One (1) water related project of similar nature, scope, andcomplexity	3
		Two (2) to three (3) water related projects of similar nature, scope, andcomplexity	6
		Four (4) water related projects of similar nature, scope, andcomplexity	10
		Five (5) water related projects of similar nature, scope, andcomplexity	15

Portfolio of projects: Please provide documentation to support, i.e. project description; project value and services rendered (one page per project) of the projects listed below.

	Name of project	Client	Short Description of project	Value of Project (Final account)
1				
2				
3				
4				
5				
6				
7				
8				
9				

2	**LOCALITY**	**15**
	Full points for this functionality criterion will be allocated to tenders/ bidders operating within the borders of the bid/tender under consideration (Province) -Province based = 15 points -Non- Province = 0 points Physical business address to be provided and proof thereof submitted as indicated on CSD/SBD1 forms.	

No	Criteria	Evaluation Indicators		Applicable Value
3.	**FINANCIAL CAPACITY**			10
	Provide a valid Bank rating from your Banking Institution stating A, B and C bank code /rating, not older than 3 months.	Credit rating/code of D		2
		Credit rating/code of C		5
		Credit rating/code of B		7.5
		Credit Rating/code of A		10
		No information provided		0

No	Name of Bank	Contact Person	Contact Number	Date of letter
1				
2				

	Criteria	Evaluation Indicators		Applicable Value
4.	**COMPETENCE OF KEY PERSONNEL (S), PROFESSIONAL AND TECHNICAL PERSONNEL**			60
4.1	**Professional Civil Engineer (BSC, B Eng or BTech) Registered with ECSA**			15
	Provide the following information for the Engineering Professionals • A detailed CV, • Proof of professional registration with ECSA as a professional Engineer/Technologist	**0-2 years** post-registration relevant construction experience as a Professional Engineer/Technologist		5
		2-3 years post-registration relevant construction experience as a Professional Engineer/Technologist		10
		3 or more years post registration relevant construction experience as a Professional Engineer/Technologist		15

No	Name of the Key Person	Name of the Qualification(s)	Portfolio/Position	CVs and Qualifications attached	
				YES	NO

4.2	**Professional Hydrologist/Water Engineer (BSC, B Eng or BTech) Registered with ECSA or relevant council**			15
	Provide the following information for the Engineering Professionals • A detailed CV, • Proof of professional registration with ECSA or relevant council as a professional Engineer/Technologist.	**0-2 years** post registration relevant water-related projects experience as a Professional Engineer/Technologist		5
		2-3 years post registration relevant water-related projects experience as a Professional Engineer/Technologist		10
		3 or more years post registration relevant water-related projects experience as a Professional Engineer/Technologist		15

No	Name of the Key Person	Name of the Qualification(s)	Portfolio/Position	CVs and Qualifications attached	
				YES	NO

4.3	**Professional Electrical Engineer/Technician/Technologist (BSC, B Eng, BTech or National Diploma) Registered with ECSA**			10
	Provide the following information for the Engineering Professionals • A detailed CV, • Proof of professional registration with ECSA as a professional Engineer/Technologist	**1-2 years** post registration relevant construction experience as a Professional Engineer/Technologist/Technician		5
		2-3 years or more post registration relevant construction experience as a Professional Engineer/Technologist/Technician		10

No	Name of the Key Person	Name of the Qualification(s)	Portfolio/Position	CVs and Qualifications attached	
				YES	NO

4.4	**Professional Mechanical Engineer/Technologist (BSC, B Eng, BTech or National Diploma) Registered with ECSA**		10
	Provide the following information for the Engineering Professionals • A detailed CV, • Proof of professional registration with ECSA as a professional Engineer/Technologist	**0-2 years** post registration relevant water related projects experience as a Professional Engineer/Technologist	3
		2-3 years post registration relevant water related projects experience as a Professional Engineer/Technologist	5
		3 or more years post registration relevant water related projects experience as a Professional Engineer/Technologist	10

No	Name of the Key Person	Name of the Qualification(s)	Portfolio/Position	CVs and Qualifications attached YES	NO

4.5	**Professional Construction Health and Safety Officer**		5
	Provide the following information for the Construction Health and Safety Officer • A detailed CV • Proof of professional registration with SACPCMP as a professional Construction Health and Safety Officer	No Submission	0
		0-2 years post registration relevant construction experience as Professional Construction Health and Safety Officer	3
		2-3 years or more post registration relevant construction experience as Professional Construction Health and Safety Officer	5

No	Name of the Key Person	Name of the Qualification(s)	Portfolio/Position	CVs and Qualifications attached YES	NO

4.6	**Staff Capacity (Qualified Tradesman)**		5
	Provide the following information for the Qualified Tradesman • A detailed CV showing the experience of tradesman staff • Copy of Built-environment academic qualifications for each discipline (Trade Test Certificate, Red Seal)	No Submission	0
		Qualified Tradesman Team with Trade Certificates inclusive of 1 Electrician, 1 Mechanical Fitter & turner or Millwright, 1 civil/building tradesman.	3
		Qualified Tradesman Team with Trade Certificates inclusive of 1 Electrician, 2 Mechanical Fitter & turner or Millwright, 2 civil/building tradesman.	5

No	Name of the Key Person	Name of the Qualification(s)	CVs and Qualifications attached YES	NO
1				
2				
3				
4				
5				
5				
	TOTAL FUNCTIONALITY SCORE		100	

NB: *If a bidder fails to achieve the minimum qualifying score for the functionality of **Sixty Percent** 60% (60 points),*
It will automatically be regarded as non-compliant and shall be not considered any further in the evaluation process.