

SCOPE OF WORK FOR SECURITY UPGRADE AT INGOGO POLICE STATION: KWAZULU-NATAL PROVINCE

3.4.5. Cables:

- Multi-conductor video cable shall be used for wiring the system. The cable shall consist of the following on the minimum:
- 75 Ohm shielded coaxial cable of 3 mm diameter
- 3 coloured conductors of 1mm² cross section area
- 7 coloured conductors of 0.5mm² cross section area
- PVC protection gray jacket.

4. AREA LIGHTING

- All area/street lighting must be done with 3.6 m Glass Fibre Reinforced (GRP) when within 80 kilometer from the coast line alternatively hot dipped galvanized steel poles that comply with the requirements of SANS 10225 (The design and construction of lighting masts). The poles will be planted at a distance of 10 m from one another, depth of 600 mm below the natural ground level, and about 1 m away from the fence or walkway.

Table 5.1: Typical Single Step Pole

Typical Single Step Pole

HT MH D1 D2 D3

3.6m 3m 1.5m X 114 OD X 3mm 2m X 76 OD X 3mm 600mm

4.1m 3.5m 1.5m X 114 OD X 3mm 2.6m X 76 OD X 3mm 600mm

4.6m 4m 2m X 114 OD X 3mm 2.6m X 76 OD X 3mm 600mm

5.2m 4.5m 2.2m X 114 OD X 3mm 3m X 76 OD X 3mm 700mm

Figure 5.1: Typical Step Pole

- The luminaires will be post-top and shall comply with SANS 60598 and SABS 1277. The luminaires shall have a minimum class protection rating of IP 66 and shall operate 38 W LED lights. Control gear shall be fully housed within the body of the luminaire and shall be suitable for operating 38 W LED lights. The 38 W lights must have an integral igniter that

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comply with SANS IEC 60927 and SANS IEC 61347-2-1 and shall bear the SABS bench mark. The control gear shall be mounted so that the control gear for repair or replacement may be carried out without removing the luminaire from its mounting.

- The SAPS LED Post Top Police version (Blue Light) luminaire will be mounted on the external wall of the guardhouse, next to the pedestrian entrance. The SAPS version has a blue protector and is of 22 Watt power rating for the specific purpose of indicating the public entrance to the premises to passers-by. The SAPS blue version will also be of a-symmetrical configuration.
- Where building on the premises are within a distance of 12 from the perimeter structure bulkhead lighting on external building walls will provide lighting towards the perimeter. If bulkhead lighting is deemed as not being sufficient, perimeter lighting will also be provided in such areas to complement the existing lighting.
- All luminaires to be connected to emergency power supply.
- The area lighting circuit will be housed in a separate ground mounted street lighting (SL) kiosk.
- The area lighting circuit must be a single phase that complies with SANS 1799 in protective ground mounted kiosks.
- The supply to the lighting circuit shall be by means of 2.5 mm x 3 Core, 600/1000 V, copper,SWA cable, and protected by 20 A MCB complying with SANS 60947-2.
- 3C x 2.5 mm², PVC-insulated SWA copper conductors is to be used for lighting installations.
- All wiring passing through metal shall have suitable grommets or otherwise protected to avoid abrasion of the insulation.
- Luminaires shall be earthed in accordance with SANS 60598-2-3. The body of the lamp holder shall be connected to the supply earth. The neutral and earth shall be interconnected in the luminaire.
- A 10A or 5kA MCB shall be used for each luminaire connection at the base of the pole.
- All the internal wiring of the luminaires shall comply with SANS 60598-2-3. All internal wiring must be Teflon coated and sleeved where required to prevent damage by abrasions.

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- Wiring between the luminaire and the cable connection at the bottom of the pole shall consist of two 2.5 mm² PVC-insulated copper conductors and 1.5 mm² bare copper earth wire.
- Bulkhead luminaires will be mounted on the internal side of the perimeter wall and at a height of 2.3m (Top luminaire). Spacing will generally be 6 m between luminaires. Where a perimeter wall forms the rear boundary of covered parking, the spacing of luminaires will coincide with the Centre of every group of two parking bays (approximate spacing of 4.8m between luminaires).

6. LOW VOLTAGE DISTRIBUTION CABLES

Low voltage distribution cables to be supplied and installed shall comply with SANS1507 Specification for low voltage insulated wire, power and multi-core control cables. The standard distributor cable size shall be 2.5 mm² x 3C CU PVC.

The following estimated cable length is to be installed from the distribution kiosks to the poles:

Table 6.1: LV distributor cable length estimate

Description	Cable length
-------------	--------------

Cable, 600/1000 V, 2.5 mm ² . 3 core stranded copper conductor, flame retardant, PVC insulated, bedded and sheathed with galvanised steel wire armour.	400 m
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NB: The contractor shall check cable lengths on site and shall order the cables accordingly to ensure that no joints have to be made and that there are no cable off-cuts after the installation of the cables.

7. LOW VOLTAGE TERMINATIONS

All low voltage terminations to be supplied and installed shall comply with SANS 10198 specification for LV accessories.

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8. CABLE TRENCHING AND INSTALLATIONS

The Contractor shall ensure that the cable trenches are excavated to the specified depth and that the cables are laid with the specified distances between the cables (See table below). Where the cables cross other services, the clearances as specified in the relevant section shall be maintained. Where the cables cross other services a concrete slab shall be installed above the cable at the point of crossing of the two services.

The following are the cable trench widths and depths and spacing between cables as specified in SANS 009.

Table 8.1: Cable trench depths, width and spacing

Cable Type Depth below final
ground level

Typical Trench
Dimensions

Min. Cable Spacing

LV cables 600 mm 450 mm 0

SL cables 600 mm 450 mm 0

NB: Where larger of no's of cables are to be installed the trench width shall be determined by no. of cables and spacing between them.

- Where site constraints dictate it is necessary to install services within common trench, it is imperative that the minimum horizontal separation of 600 mm is maintained between Municipal services and any other services.
- The length of the cable that must be excavated at the time must not exceed 300 m, following which a length of cable must be laid, inspected and the cable trench backfilled before further excavations are carried out (i.e. Standardize on the drum length).
- Rocks removed from excavations shall not be used for backfilling.

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- Cables shall be laid in accordance with manufacturer's recommendations and SANS 10198.
- Cables shall only be laid in trenches having smooth flat bottom surfaces. Where the surfaces are irregular, they shall first be smoothed off before installing the cables.
- Where cables are installed in trenches cut in rock, a 75 mm layer of fine sifted earth must be placed on the bottom of the trench to serve as bedding for the cables. Final depth of the cable shall still be in accordance with the table below.
- All cables shall be installed in straight lines as far as possible and excessive distortion and weaving in the cable length is not accepted.
- After the cable has been installed it must be covered with a 200 mm layer of well-compacted earth. In the case of a trench cut into rock, this layer is to consist of fine sifted earth.
- The spoil shall be removed and adequate bedding soil obtained for backfilling.
- Cables, which have been laid, must be energized as soon as possible to limit the possibility of theft of cable.
- An embossed, yellow-coloured plastic marker tape 150 mm wide by 0.1 mm thick and complying with SANS 1186-1 shall be laid in a continuous strip above all cable at a depth of 150 mm.
- The minimum requirements of SANS 10198 shall be complied with, when back filling cable trenches. Also, adhere to code of practice.
- Danger tape to be installed 300mm below natural ground level in cable trench.

9. CABLE SLEEVE PIPES

- At road crossings, both MV and LV cables shall be laid at a depth of 1 m below the road surface. These cables shall be laid in black corrugated flexible PVC sleeves, 110 mm in outer diameter and must be supplied with pilot strings. The protective sleeves shall comply with SANS 791 specification for flexible protective PVC sleeves. The low voltage cables shall be ramped up and down at each side of these crossings points accordingly.
- Sleeves must protrude by a minimum of 1 m beyond the kerbstone.
- All sleeves must have a draw wire and be suitably sealed at both ends. As a standard each crossing shall consist of 3 sleeves in trefoil configuration.

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- The location of the sleeves shall be marked with an 'E' embossed into the kerb at both ends.
- The protective sleeves are to be installed by way of directional operated trenchless technology. Other installation methods are to be approved by the SAPS engineer.
- Sleeves positions are indicated onto the electrical construction layout.

10. POST TOP LED LUMINAIRES TECHNICAL SPECIFICATION

- HOUSING: Spigot & Heat sink – LM 6 die cast aluminum Roof injected moulded Polypropylene Hail resistant.
- REFLECTOR: Injection moulded – Acrylonitrile butadiene styrene.
- LIGHT SOURCE: The fitting is designed to operate a range of LEDs up to 54W. The LED is an Osram high powered LED mounted onto an aluminium circuit board, 19 or 27 LED option, NTC point, Push in connector for ease of maintenance. Recommended LED 4000 kelvin Natural white with CRI > 70. Ambient temperatures 36° C. designed for 55 000 hours.
- DIFFUSER: UV stabilized clear acrylic. Injection moulded – Poly (methyl methacrylate)
- FINISH: Powder coated.
- MOUNTING: Post mounted. Recommended mounting height 3.5m to 6m. Spigot entry 76mm O at a depth of 40mm. For detailed mounting specifications refer to pole and accessories section.
- CONTROL GEAR: The electronic power supply is suitable for operation with a 220-240 volts 50 hertz single phase.
- Incorporating an electronic trip connector protector with surge protection 6kV. Additional removable inline surge arrester 10kV.
- FASTENERS: All external screws are stainless steel.
- GASKET: Gaskets are manufactured from post cured silicone wrubber material. Silicone gaskets perform in a wide temperature range - 40° C to +200° C.
- INGRESS PROTECTION: IP 66

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- MECHANICS: Ambient Temperature: t 36° C. Weight 5kg including control gear. Wind age: Max projected areas for mounting 0.09m²

- ADDITIONAL OPTIONAL FEATURES

Thermal monitoring of the LED PC board and Daylight switch.

Post Top: Beka Zela LED Light SAPS LED Post Top Police version (Blue Light)

11. 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 SAPS electrical engineer for approval.
- Routine factory tests reports shall accompany all equipment supplied and shall be given to the SAPS Electrical Engineer, prior to the equipment being installed and commissioned.
- Prior to handover, on site final test reports as listed in SANS 1029, SANS 10198 and SANS 10142 for all equipment shall be given to the relevant SAPS electrical engineer.
- Contractor to provide COCs and pressure test certificates to SAPS electrical engineer prior to energizing of equipment.

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MECHANICAL ENGINEERING WORKS

4.1. INTENT

This specification calls for the provisioning, installation, commissioning, and servicing of gate motor at Ingogo SAPS Kwa Zulu Natal occupied by the South African Police Station (SAPS) Bidders shall be responsible for the supply, delivery, and installation of all equipment, accessories, and work specified within this document. All equipment within this document shall have a minimum guarantee period of one year (12 months) on all components and workmanship.

Bidders must fully comply with all mandatory requirements. Failure to comply with this requirement below will be regarded as mandatory non-performance and may cause immediate disqualification. This part contains the engineering specification and schedule of quantities for the Engineering Work which shall be read in conjunction with the balance of the contract document, including the conditions of the contract.

4.2. DETAILS REQUIREMENTS

This particular specification must be read with and shall form part of the Technical Specification contained in this document. Bidders may submit quotes for standard equipment which comply as closely as possible with the specification. Any deviation from the specification must be fully defined. All connections, installations, and terminations of the required cabling and switch gear will form part of this contract.

Full particulars, technical specifications, performance curve, and illustration of the equipment offered must be handed in together. All equipment shall be intergraded with existing infrastructure and therefore additional care should be taken to protect all equipment in terms of excessive voltage spikes, over-current protection, and voltage drops.

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4.3. STANDARD SPECIFICATION AND REGULATIONS

The entire installation shall be carried out to the satisfaction of the Chief Engineer, SAPS, Facility, Programme and Project Management and shall be carried out in accordance with the following Standard Specifications and Regulations.

- All electrical work is to be carried out in accordance with SANS code of Practice for Wiring Premises, SANS 10142, and the SANS Code of Practice for Identification Color Marking, SANS 10140.
- All low voltage switchgear and control gear assemblies are to comply with SANS 60947.
- Electrical Installation Ducting and Trucking Systems on walls and ceiling to conform to SANS 61084 Part 1 to 2.
- Electrical Installation Conduit Fittings to conform to SANS 61035 Part 1 to 2.4.
- Electrical Earth Leakage Protection units to conform to SANS 767 Part 1 to 2.
- Occupational Health and Safety Act No. 85 of 1993 as amended.

4.4. SCOPE OF SPECIFICATION

4.4.1. Vehicle Gate Motor Installation

The motor gate shall have the following and not limited functions

CONTROLLER FEATURES

Hardware features

- Fully-sealed plastic housing for controller to prevent ingress of dirt and insects
- Easy setup of controller using LCD user interface
- Removable connectors on controller for easy maintenance
- Watchdog IC ensures full and safe operation of controller
- Optional Backup Memory Module allows backing up of all the information that has been set up in the system.

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Electronic features

- Opening and closing safety beam inputs with beam circuit functional test1.
- High-security cleared-beam Auto close in conjunction with safety beam (PIRAC)
- Break-in and Ambush Alarm (patent pending) with configurable outputs via on-board buzzer, Pillar Light relay, etc.
- Multiple Modes of Operation: Standard Mode, Condominium Mode (multi-user), Reversing Mode, PLC 2, and Deadman

Control Mode.

- Automatic closing with adjustable time, pushbutton override, and selectable according to gate position
- Remote Gate Status Indicator (gate position, power failure, low battery, multiple collision detection, and Pillar Light status indication)
- Pedestrian opening (adjustable opening and Auto close time)
- Free-exit facility
- Emergency Stop functionality
- Courtesy / Pillar Light Timer with adjustable time
- Fully-configurable pre-delays with multi-modal pre-flash8
- Multiple Operating Profiles to suit region of installation– select within South Africa.
- Full configuration of gate operating parameters, including independent gate opening and closing speeds, ramp-up and ramp-down distances and crawl speed
- Positive Close Mode (e.g. ensure activation of electric fence contact switch)
- On-board multichannel code-hopping receiver with the ability to:
 - learn transmitter buttons to specific functions (e.g. Gate trigger,
 - Pedestrian opening, Free-exit, Pillar Light Control, Holiday Lockout)
 - selectively delete specific transmitters that have been lost or stolen
 - automatically learn transmitters into the system (Auto learn)
 - automatically delete transmitters that are no longer in use (Delete-Not-Present)
- Integrated Chrono Guard with Real Time Clock and Calendar timer offering multichannel time-activated and time-barring functionality

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- Auxiliary output can be configured via the Chrono Guard timer to provide timer functionality to external devices, such as security lights, entrance fountains, etc.

Multiple operating features

In Lockout Mode Once enabled gate should become totally immobilized

Easy access for simple installations

The unit shall be easy to install having an incorporated jacking system to enable leveling to be effortless with mounting points slotted allowing large adjustments to align the machine with the gate. The installation shall be in-conjunction with the architect drawing that provides the details (size, weight, etc) of the gate

Intelligent automatic setup

Motor should be able to Auto-Set-up once installed with the use of an LCD controller to follow an easy-to-use Q and A system that makes setting up things like gate End-of-travel Limits.

Minimum Technical Specifications	
Input voltage	220V - 240V AC +/-10% @ 50Hz
Motor voltage	24V DC
Motor power supply	Battery-driven (standard capacity - 2 x 7Ah)
Battery charger	2A @ 27.5V
Current consumption (mains supply)	170mA
Current consumption	(motor rated / peak load) 4A TO 8A
Operator push force	
Starting	40kgf 20kgf
Rated	30kgf 15kgf
Gate mass – maximum	1000kg varies with speed
Gate length -	maximum 100m 50m
Gate speed - m/min¾	22 - 26m/min - 40-50m/min
Maximum daily cycle	750 cycles/day
Collision sensing	Electronic
Operating temperature	-15°C to +50°C
Onboard receiver	yes

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Manual override	Lockable lever with key release
Receiver frequency	433MHz
Receiver code storage capacity	500 transmitter buttons
Mass of unit packed	13kg
Packaging dimensions	
Length:	355mm
Width:	288mm
High	485mm

The motor shall be of an industrial type which is able to pull a 1000 kg gate up 750 plus cycles in a day.

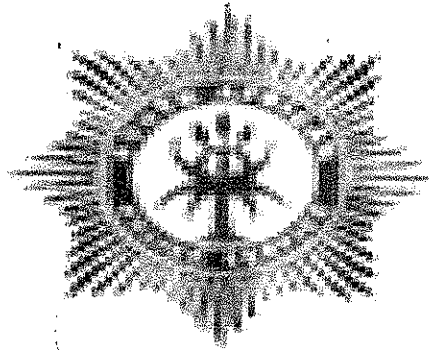
6. QUALITY SPECIFICATIONS FOR MATERIALS AND EQUIPMENT OF ELECTRICAL INSTALLATIONS

The latest edition, including all amendments up to date of tender of the following specifications, publication and codes of practice shall be read in conjunction with this specification and shall be deemed to form part thereof.

General	Distribution and meter boards	LV cables and conductors	Small power installation	
			Power outlets	Conduits, power skirting, cable trays and ducting
SABS 0142	SABS 152	SABS 0150	SABS 152	SABS 763
SABS 0160	SABS 156	SABS 0198	SABS 163	SABS 764
SABS 0400	SABS 171	SABS 1411	SABS 164	SABS 950
SABS 1222	SABS 172	SABS 1507	SABS 1084	SABS 1065
	SABS 173		SABS 1239	SABS 1085
	SABS 763			SABS 1197
	SABS 1092			
	SABS 1180			

SCOPE OF WORK FOR SECURITY UPGRADE AT INGOGO POLICE STATION:
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HEALTH AND SAFETY
(Please see the attached specification)



HEALTH AND SAFETY SPECIFICATION

FOR

NEW POLICE STATIONS AND MAINTENANCE OF BUILDINGS

MANAGED ON BEHALF OF

SOUTH AFRICAN POLICE SERVICE

Revision 1

1. PURPOSE

This document describes the procedure that Principal Contractor and Contractors or suppliers of professional services (consultants) have to comply with before they are allowed to work on any SAPS premises.

2. SCOPE

This Specification applies to all SAPS principal contractors and suppliers of professional services to take note of the requirements and ensure they budget for stipulated safety requirements.

3. REFERENCE DOCUMENTS

The Occupational Health and Safety Act 85 of 1993 and its regulations.

4. DEFINITIONS**5. ROLES AND RESPONSIBILITIES****SHE MANAGEMENT**

- Ensure the procedure for evaluation of contractors is established, implemented and maintained.
- Report to Section Head: Programme and Project Management on the safety performance of contractors.
- Investigate all section 24 incidents.
- Stop any activity which may cause injury to employees and visitors.

PROJECT MANAGER

- Prepare contractor agreement {37(2)} and ensure it is signed.
- Prepare and issue letter of award
- Ensure compliance with Occupational Health and Safety Act, 85 of 1993
- Report on contractors SHE compliance.
- Obtain contractor SHE plan before commencement of work.
- Ensure all safety and legal appointments are issued.
- All contractor employees and Visitors must be inducted before they are allowed on site.
- The contractor employees shall have a valid medical certificate of fitness specific to the construction work being performed.

6. No contractor will be allowed on site until the following documents are in place:

- Valid proof of letter of good standing

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- Health and Safety plan
- Risk Assessments
- Medical Certificate of fitness
- Appointments
- Registers
- Training Certificates and CV

7. SHE REQUIREMENTS

The level of SHE requirements is dependent on:

- Scope of work
- Construction Regulation , 2014 {3(1) and (4)}

8. PROJECT SPECIFICATIONS

8.1 Health and Safety Plan

- The Principal Contractor must ensure that the Health and Safety Plan is drafted and submitted to SHE Management, before the contractor is allowed on site. The Plan must be based on the client's documented health and safety specification that is not generic but site specific.

8.2 Appointments

ITEM	REGULATION	APPOINTMENT
1	5(1)(k)	Principal Contractor appointment
2	7(1)(v)	Contractor appointment
3	8 (1)	Construction Manager (Full time competent person) one site only
4	8(2)	Assistant Construction Managers for different sections
5	8(5)	Registered Construction Health and safety officer
6	8(7)	Construction Supervisor
7	8(8)	Assistant Construction Supervisor
8	9(1)	Competent Risk assessor
9	10(1)	Competent Fall Protection planner
10	12(1)	Temporary works designer
11	12(2)	Supervisor of Temporary works

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12	12(3)(f)	Competent Temporary works inspector
13	13(1)(a)	Competent Excavation supervisor
14	14(1)	Competent Demolition supervisor
15	16(1)	Competent Scaffold supervisor
16	17(1)	Competent Suspended platform supervisor
17	18(1)(a)	Competent Rope Access Work supervisor
18	19(8)(a)	Competent Material hoists inspector
19	20(1)	Competent Bulk mixing plant supervisor
20	21(2)(b)	Competent examiner of Explosive actuated fastening device
21	21(2)(i)	Issuer and collector of Explosive actuated fastening device cartridges
22	23 (a)	Competent Tower crane supervisor
23	23(1)(d)	Competent Construction and mobile plant operator
24	24(c)	Competent Temporary Electrical installation controller
25	28(a)	Competent Stacking and Storage supervisor

OTHER APPOINTMENTS

ITEM	SECTION	APPOINTMENT
1	16(1)	CEO
2	16(2)	Assistant 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

8.3 Site Management

- The Principal Contractor shall appoint competent person as the construction manager.
- No work may commence without the construction manager being present on site
- The construction manager must appoint the construction supervisors responsible for construction activities and ensuring occupational health and safety compliance on the construction site.
- The Principal Contractor must comply with all the sub regulations stipulated in CR 8.

8.4 Safety Meetings

- Monthly Safety meeting must be held on site and minutes must be made available for inspection.
- The meeting must consist of the construction manager, Safety representatives and other technical members that are present on site.

8.5 Personal Protective Equipment

All employees working on SAPS sites must wear the following

- Overall
- Hard hat
- Steel toe cap boots
- Steel toe cap gumboots if working in water environment or concrete
- Suitable safety goggles for the activity performed
- Ear plugs
- Ear Muffs, depending on noise level
- Respirator or Dust mask
- PVC gloves
- Pig skin or leather gloves
- Apron (welding and grinding)
- Welding Helmet
- Long welding gloves

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- Spats

8.6 Induction

- Before any person is allowed on site, induction training must be conducted on both employees and visitors.
- Attendance list must be kept on file for all members who have attended induction

8.7 Medical Examinations

- The contractor employees shall have a valid medical certificate of fitness specific to the construction work being performed.
- The contractor shall ensure systems are in place to assist employees with medical conditions that are not work related.
- The contractor must ensure that exit medicals are conducted when the project is completed, Employee is dismissed or retrenched.

8.8 Risk Assessment

- Risk assessments must be conducted by a competent person for each activity and must be handed in to the SAPS SHE Management before the start of the work. The risk assessment must be approved by the 16(2) appointee, risk assessor, SHE Management and the Project Manager.
- SHE Management must provide contractors with at least a baseline risk assessment for all activities.

The risk assessment must at least address the following:

- Name of activity.
- What can go wrong?
- What will the impact be (e.g. hand injuries, hearing loss).
- How will you control the risk (e.g. machine guard will be in place supervisor will monitor). See CR 9 for reference.

The risk assessment must also have a schedule attached of:

- When you plan to monitor if the risk assessment is applicable to an activity.
- And when you plan to revise the plan (compulsory three monthly or after an incident or if the work conditions have changed).

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8.9 Safety Representatives and Safety Committees

- Principal Contractor must appoint at least 1 safety representative for every 20 employees.
- Safety representative must be trained by an accredited training provider and proof kept in the safety file.
- Safety committee meetings will be held on a monthly basis.
- Health and Safety representatives' monthly report must be discussed during this meeting.
- Inspection Report must be submitted to the Project Manager.

8.10 Vehicles/Transportation (CR 23)

- All vehicles driven on SAPS premises must be in a roadworthy condition.
- Drivers must be in possession of a valid driver's licence.
- No passengers are allowed at the back of the utilities.
- Transport only the amount of people as mentioned on the licence disk.
- Vehicles must have seatbelts and must be worn at all times.
- All plant (tlb, excavators, etc.) must be equipped with a reverse hooter. All vehicles must have a fire extinguisher and a first aid box. All tools and equipment must be properly secured. No vehicle must be left with the engine running or the keys in the ignition.

8.11 Construction Facilities

The Contractor must provide clean, hygienic and well maintained facilities such as:

- One shower facility for every 15 persons
- One sanitary facility for each gender and for every 30 workers
- Changing facilities for each gender
- Sheltered eating areas
- Suitable living accommodation for workers who are far from their homes.

8.12 Drinking water

- Contractors must ensure fresh drinking water is available at the site.
- There must be at least 5 litres of drinking water available per person per day.
- Containers used for water must be clearly marked.
- Containers used for water must be kept cleaned at all times.

8.13 Smoking areas

- The contractor must designate smoking areas in accordance with the Tobacco Control Act.

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- The applicable warning notices must also be displayed at the designated smoking area.

8.14 Excavations

- A competent supervisor must be appointed as an excavation supervisor.
- All excavations must be properly barricaded with barrier netting (barrier tape is not accepted).
- Barrier netting must be maintained on a daily basis.
- Excavations must be inspected by the competent person before persons are allowed to work in the excavation.
- Excavation inspection register must be completed daily.
- Signs must be displayed warning people of danger.
- Soil must be stacked at least 1m from the edge of any excavation.
- Ensures compliance with construction regulation 13.

8.15 Contingency planning

- Contractors must submit their contingency plan to SHE management within one month of the start of a project.

The plan must identify at least the following:

- Name the type of emergencies (e.g. scaffold or building collapse).
- What is the procedure's that must be followed in case of an emergency?
- Who is responsible to take action?
- What type of alarm system will be used?

The plan must also consist of a;

- Evacuation plan (Indicate assembly points, fire extinguishers, first aid box etc.)
- Emergency numbers must be displayed in every office (Ambulance provincial and private, hospitals provincial and private, Department of Labour, Municipality, Eskom etc.).
- Evacuation plan must be tested at least every 6 months and record must be kept on file.
- Evacuation plans must be displayed on notice boards and other places as may be required.

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8.16 First Aid

- A qualified first aider must be appointed for each construction site. The ratio of 1 first aider for every 50 employees must be maintained.
- A first aid box must be available where five or more employees are working.
- The first aid box must be fully stocked in compliance with the OHS Act, relevant signs to indicate location of first aid boxes must be in place.
- First aid boxes must be kept locked.
- Dressing registers must be completed.

8.17 Incidents

- SHE Management and the SAPS Project Manager must immediately be notified of all incidents, near misses, first aid cases in his area of jurisdiction.
- An incident notification form (Annexure 1) must be completed and sent to SHE Management.
- All Section 24 incidents must be reported to the Department of Labour immediately.
- SHE management have to ensure that all incidents are investigated and preventative measures are implemented.
- The SHE Management commander will then decide whether it is necessary to appoint a board of inquiry from the National office or not.

8.18 Housekeeping and general safeguarding on construction sites

- Material and equipment must comply with the OHS Act-General Safety Regulation 8 and Construction Regulation 27 and 28.
- Stores and yard must always look neat and safe.
- Same items must be stored together.
- Oil and chemicals must be stored in a bunded wall able to handle 110% of the capacity of the specific product.

8.19 Waste management (NEMA-Waste Act)

- Waste should be managed in compliance with NEMA (Waste Act 59 OF 2008) with regards to their types/classifications and licencing of service providers.
- Waste generated on site must be stored in waste bins fully covered with lids or netting.
- Waste must be separated according to general waste, hazardous waste, steel or building rubble.
- In conjunction with the Provincial SHE co-ordinator a specific area must be demarcated and barricaded where waste can be stored.

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8.20 Scaffolding/Working at heights

- The Contractor must comply with construction regulations 10,11,12,16 and 17.
- All people working on heights must be in possession of a valid medical certificate.
- Contractors have to submit a fall protection plan before they start working on heights.
- When work is performed from a height of 1.8m double lanyard safety harness must be worn.
- All opening must be properly barricaded to prevent people from falling.

8.21 Flammable storage

- All flammable material must be stored in a well-ventilated area.
- All oxygen, acetylene and LPG cylinders must be stored in fenced and shaded area.
- Oxygen, acetylene and LPG gas cylinders must be stored separately in an upright position.
- The storage should be marked clearly full or empty.
- Cylinder not in storage facility must be in a trolley, properly secured and with a 9kg dry powder fire extinguisher.
- An alphabetical list of all chemicals must be kept on site.
- Material Safety Data sheets must be available and proof of training must be available.
- Symbolic safety signs must be displayed.
- The quantity of flammable material that can be stored must also be displayed.
- Sufficient serviceable fire extinguishers must be available.
- The local fire brigade must inspect the area to confirm that it comply with local municipality bylaws.
- No flammable material must be stored in closed proximity of flammable store.
- No welding or grinding to take place within 10m of flammable store.
- Permit must be obtained to store fuel in excess of the legal limit.

8.22 Safety Officer

- The contractor's health and safety officer is responsible to assist the 16(2) appointee with Legal compliance. Where a contractor is busy performing building work a safety officer will be appointed in the following ratio 49 or less people on site - Part time safety officer spending 2 full days per week on site. Scope of work included.
- 50 people on site and up to and including 300 people – Full time Safety Officer.

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- The safety officer must be registered as the construction health and safety officer (CHSO) with the South African Council for the Project and Construction Management Professions (SACPCMP).

8.23 Audit

- SHE audits must be conducted by the contractor on a monthly basis and the results must be kept on file.
- Monthly inspections will be conducted by SHE Management on each project.
- During SAPS Legal compliance audits 100% must be achieved.

8.24 Lockout

- Red tag must be placed on door indicating lockout in place.
- Safety representative must be notified before electrician performs electrical work.
- Electrician to ensure locks are in place before work is performed on any electrical equipment.

8.25 Intoxication

- The contractor must ensure that personnel under his control and authority are not under the influence of any alcohol or drugs other than for prescribed medication.

8.26 Electricity

- All electrical installations must be carried out by an appointed and qualified electrician registered with the Department of Labour.
- The contractor must ensure he is issued with a certificate of compliance.
- All electrical equipment must be numbered.
- Monthly inspection is conducted on all electrical installations.

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Abbreviations

SHE: Safety, Health, Environment

CR: Construction Regulations

SAPS: South African Police Service

NEMA: National Environmental Management Act

APPROVED/ NOT APPROVED


R.S. PILLAY
MAJOR GENERAL

MAJOR GENERAL

ACTING DIVISIONAL COMMISSIONER: SUPPLY CHAIN MANGEMENT

RS PILLAY

DATE:

2016/11/26

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DEFINITIONS

1 A1 DEFINITIONS AND INTERPRETATION

Clause 1.0 Clause

1.1 Definition of "**Commencement Date**" is added:

"**COMMENCEMENT DATE**" means the date that the **agreement**, made in terms of the Form of Offer and Acceptance, comes into effect

Clause 1.1 Definition of "**Construction Guarantee**" is amended by replacing it with the following:

"**CONSTRUCTION GUARANTEE**" means a guarantee at call obtained by the **contractor** from an institution approved by the **employer** in terms of the **employer's** construction guarantee form as selected in the **schedule**

Clause 1.1 Definition of "**Construction Period**" is amended by replacing it with the following:

"**CONSTRUCTION PERIOD**" means the period commencing on the commencement date and ending on the date of practical completion

Clause 1.1 Definition of "**Corrupt Practice**" is added:

"**CORRUPT PRACTICE**" means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution.

Clause 1.1 Definition of "**Fraudulent Practice**" is added:

"**FRAUDULENT PRACTICE**" means a misrepresentation of facts in order to influence a procurement process in the execution of a contract to the detriment of any tenderer and includes collusive practice among tenderes (prior to or after the tender submission) designed to establish tender prices at artificial non-competitive levels and to deprive the tenderer of the benefits of free and open competition.

Clause 1.1 Definition of "**Interest**" is amended by replacing it with the following:

"**INTEREST**" means the interest rates applicable on this contract, whether specifically indicated in the relevant clauses or not, will be the rate determined by the Minister of Finance, from time to time, in terms of section 80(1)(b) of the Public Finance Management Act, 1999 (Act No. 1 of 1999).

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Clause 1.1 Definition of "**Principal Agent**" is amended by replacing it with the following:

"**PRINCIPAL AGENT**" means the person or entity appointed by the **employer** and named in the **schedule**. In the event of a **principal agent** not being appointed, then all the duties and obligations of a **principal agent** as detailed in the **agreement** shall be fulfilled by a representative of the **employer** as named in the **schedule**.

Clause 1.1 Definition of "**Security**" is amended by replacing it with the following:

"**SECURITY**" means the form of security provided by the **contractor**, as stated in the **schedule**, from which the **employer** may recover expense or loss

Clause 1.6 is amended by replacing the words "prepaid registered post, telefax or e-mail" with "prepaid registered post or telefax"

Clause 1.6.4 is amended by replacing it with the following:

No clause

Fixed: _____ Value related: _____ Time related: _____

Item

OBJECTIVE AND PREPARATION

2 A2 OFFER, ACCEPTANCE AND PERFORMANCE

Clause 2.0

Fixed: _____ Value related: _____ Time related: _____

Item

3 A3 DOCUMENTS

Clause 3.0

Clause 3.2.1 is amended by replacing "14.1" with "14.0"

Clause 3.7 is amended by the addition of the following:

The **contractor** shall supply and keep a copy of the JBCC Series 2000 Principal Building Agreement and Preliminaries applicable to this contract on the **site**, to which the **employer**, **principal agent** and **agents** shall have access at all times

Clause 3.10 is amended by replacing the second reference to "**principal agent**" with the word "**employer**"

Fixed: _____ Value related: _____ Time related: _____

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4	A4 DESIGN RESPONSIBILITY Clause 4.0 Clause 4.3 is amended by replacing it with the following: No clause Fixed:_____ Value related:_____ Time related:_____	Item
5	A5 EMPLOYER'S AGENTS Clause 5.0 Clause 5.1.2 is amended to include clauses 32.6.3, 34.3, 34.4 and 38.5.8 Fixed:_____ Value related:_____ Time related:_____	Item
6	A6 SITE REPRESENTATIVE Clause 6.0 Fixed:_____ Value related:_____ Time related:_____	Item
7	A7 COMPLIANCE WITH REGULATIONS Clause 7.0 Note: A separate clause has been included in Section C : Specific Preliminaries of the bills of quantities / lump sum document for the contractor to have the opportunity to price for all the requirements of the Occupational Health and Safety Act, Construction Regulations and Health and Safety Specification Fixed:_____ Value related:_____ Time related:_____	Item
8	A8 WORKS RISK Clause 8.0 Fixed:_____ Value related:_____ Time related:_____	Item
9	A9 INDEMNITIES Clause 9.0 Fixed:_____ Value related:_____ Time related:_____	Item
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10 **A10 WORKS INSURANCES**

Clause 10.0

Clause 10.0 is amended by the addition of the following clauses:

10.5 Damage to the Works

- (a) Without in any way limiting the **contractor's** obligations in terms of the contract, the **contractor** shall bear the full risk of damage to and/or destruction of the **works** by whatever cause during construction of the **works** and hereby indemnifies and holds harmless the **employer** against any such damage. The **contractor** shall take such precautions and security measures and other steps for the protection and security of the **works** as the **contractor** may deem necessary
- (b) The **contractor** shall at all times proceed immediately to remove or dispose of any debris arising from damage to or destruction of the **works** and to rebuild, restore, replace and/or repair the **works**
- (c) The **employer** shall carry the risk of damage to or destruction of the **works** and material paid for by the **employer** that is the result of the excepted risks as set out in 10.6
- (d) Where the **employer** bears the risk in terms of this contract, the **contractor** shall, if requested to do so, reinstate any damage or destroyed portions of the **works** and the costs of such reinstatement shall be measured and valued in terms of 32.0 hereof

10.6 Injury to Persons or loss of or damage to Properties

- (a) The **contractor** shall be liable for and hereby indemnifies the **employer** against any liability, loss, claim or proceeding whether arising in common law or by statute, consequent upon personal injuries to or the death of any person whomsoever arising out of or in the course of or caused by the execution of the **works** unless due to any act or negligence of any person for whose actions the **employer** is legally liable
- (b) The **contractor** shall be liable for and hereby indemnifies the **employer** against any liability, loss, claim or proceeding consequent upon loss of or damage to any moveable or immovable or personal property or property contiguous to the **site**, whether belonging to or under the control of the **employer** or any other body or person, arising out of or in the course of or by reason of the execution of the **works** unless due to any act or negligence of any person for whose actions the **employer** is legally liable

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- (c) The **contractor** shall, upon receiving a **contract instruction** from the **principal agent**, cause the same to be made good in a perfect and workmanlike manner at his own cost and in default thereof the **employer** shall be entitled to cause it to be made good and to recover the cost thereof from the **contractor** or to deduct the same from amounts due to the **contractor**
- (d) The **contractor** shall be responsible for the protection and safety of such portions of the premises placed under his control by the **employer** for the purpose of executing the **works** until the issue of the **certificate of practical completion**
- (e) Where the execution of the works involves the risk of removal of or interference with support to adjoining properties including land or structures or any structures to be altered or added to, the **contractor** shall obtain adequate insurance and will remain adequately insured or insured to the specific limit stated in the contract against the death of or injury to persons or damage to such property consequent on such removal or interference with the support until such portion of the **works** has been completed
- (f) The **contractor** shall at all times proceed immediately at his own cost to remove or dispose of any debris and to rebuild, restore, replace and/or repair such property and to execute the **works**

10.7 High risk insurance

In the event of the project being executed in a geological area classified as a "High Risk Area", that is an area which is subject to highly unstable subsurface conditions that might result in catastrophic ground movement evident by sinkhole or doline formation the following will apply:

10.7.1 Damage to the works

The **contractor** shall, from the commencement **date** of the **works** until the date of the **certificate of practical completion** bear the full risk of and hereby indemnifies and holds harmless the **employer** against any damage to and/or destruction of the **works** consequent upon a catastrophic ground movement as mentioned above. The **contractor** shall take such precautions and security measures and other steps for the protection of the **works** as he may deem necessary

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When so instructed to do so by the **principal agent**, the **contractor** shall proceed immediately to remove and/or dispose of any debris arising from damage to or destruction of the **works** and to rebuild, restore, replace and/or repair the **works**, at the **contractor's** own costs

10.7.2 Injury to persons or loss of or damage to property

The **contractor** shall be liable for and hereby indemnifies and holds harmless the **employer** against any liability, loss, claim or proceeding arising at any time during the period of the contract whether arising in common law or by statute, consequent upon personal injuries to or the death of any person whomsoever resulting from, arising out of or caused by a catastrophic ground movement as mentioned above

The **contractor** shall be liable for and hereby indemnifies the **employer** against any and all liability, loss, claim or proceeding consequent upon loss of or damage to any moveable or immovable or personal property or property contiguous to the **site**, whether belonging to or under the control of the **employer** or any other body or person whomsoever arising out of or caused by a catastrophic ground movement, as mentioned above, which occurred during the period of the contract

10.7.3 It is the responsibility of the **contractor** to ensure that he has adequate insurance to cover his risk and liability as mentioned in 10.7.1 and 10.7.2. Without limiting the **contractor's** obligations in terms of the contract, the **contractor** shall, within twenty one (21) **calendar days** of the **commencement date** but before commencement of the **works**, submit to the **employer** proof of such insurance policy, if requested to do so

10.7.4 The **employer** shall be entitled to recover any and all losses and/or damages of whatever nature suffered or incurred consequent upon the **contractor's** default of his obligations as set out in 10.7.1; 10.7.2 and 10.7.3. Such losses or damages may be recovered from the **contractor** or by deducting the same from any amounts still due under this contract or under any other contract presently or hereafter existing between the **employer** and the **contractor** and for this purpose all these contracts shall be considered one indivisible whole

Fixed:_____ Value related:_____ Time related:_____

11 A11 LIABILITY INSURANCES

Clause 11.0

Fixed:_____ Value related:_____ Time related:_____

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12 **A12 EFFECTING INSURANCES**

Clause 12.0

Fixed: _____ Value related: _____ Time related: _____

A13.0 *No clause*

13 **A14 SECURITY**

Clause 14.0

Clauses 14.1 - 14.8 are amended by replacing them with the following:

14.1 In respect of contracts with a **contract sum** up to R1 million, the **security** to be submitted by the **contractor** to the **employer** will be as a payment reduction of five per cent (5%) of the value certified in the **payment certificate** (excluding VAT)

14.1.1 The payment reduction of the value certified in a **payment certificate** shall be *mutatis mutandi* in terms of 31.8(A)

14.1.2 The **employer** shall be entitled to recover expense and loss from the payment reduction in terms of 33.0 provided that the **employer** complies with the provisions of 33.4 in which event the **employer's** entitlement shall take precedence over his obligations to refund the payment reduction **security** or portions thereof to the **contractor**

14.2 In respect of contracts with a **contract sum** above R1 million, the **contractor** shall have the right to select the **security** to be provided in terms of 14.3, 14.4, 14.5, 14.6, or 14.7 as stated in the **schedule**. Such **security** shall be provided to the **employer** within twenty one (21) **calendar days** from **commencement date**. Should the **contractor** fail to select the **security** to be provided or should the **contractor** fail to provide the **employer** with the selected **security** within twenty one (21) **calendar days** from **commencement date**, the **security** in terms of 14.7 shall be deemed to have been selected.

14.3 Where **security** as a cash deposit of ten per cent (10%) of the **contract sum** (excluding VAT) has been selected:

14.3.1 The **contractor** shall furnish the **employer** with a cash deposit equal in value to ten per cent (10%) of the **contract sum** (excluding VAT) within twenty one (21) **calendar days** from **commencement date**

14.3.2 Within twenty one (21) **calendar days** of the date of **practical completion** of the **works** the **employer** shall reduce the cash deposit to an amount equal to three per cent (3%) of the **contract value** (excluding VAT), and refund the balance to the **contractor**

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14.3.3 Within twenty one (21) **calendar days** of the date of **final completion** of the **works** the **employer** shall reduce the cash deposit to an amount equal to one per cent (1%) of the **contract value** (excluding VAT) and refund the balance to the **contractor**

14.3.4 On the date of payment of the amount in the final **payment certificate**, the **employer** shall refund the remainder of the cash deposit to the **contractor**

14.3.5 The **employer** shall be entitled to recover expense and loss from the cash deposit in terms of 33.0 provided that the **employer** complies with the provisions of 33.4 in which event the **employer's** entitlement shall take precedence over his obligations to refund the cash deposit **security** or portions thereof to the **contractor**

14.3.6 The parties expressly agree that neither the **employer** nor the **contractor** shall be entitled to cede the rights to the deposit to any third party

14.4 Where **security** as a variable construction guarantee of ten percent (10%) of the **contract sum** (excluding VAT) has been selected:

14.4.1 The **contractor** shall furnish the **employer** with an acceptable variable construction guarantee equal in value to ten per cent (10%) of the **contract sum** (excluding VAT) within twenty one (21) **calendar days** from **commencement date**

14.4.2 The variable construction guarantee shall reduce and expire in terms of the Variable Construction Guarantee form included in the invitation to tender

14.4.3 The **employer** shall return the variable construction guarantee to the **contractor** within fourteen (14) **calendar days** of it expiring

14.4.4 Where the **employer** has a right of recovery against the **contractor** in terms of 33.0, the **employer** shall issue a written demand in terms of the variable construction guarantee

14.5 Where **security** as a fixed construction guarantee of five per cent (5%) of the **contract sum** (excluding VAT) and a five per cent (5%) payment reduction of the value certified in the payment certificate (excluding VAT) has been selected:

14.5.1 The **contractor** shall furnish a fixed construction guarantee to the **employer** equal in value to five per cent (5%) of the **contract sum** (excluding VAT)

14.5.2 The fixed **construction guarantee** shall come into force on the date of issue and shall expire on the date of the last certificate of **practical completion**

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14.5.3 The **employer** shall return the fixed **construction guarantee** to the **contractor** within fourteen (14) **calendar days** of it expiring

14.5.4 The payment reduction of the value certified in a **payment certificate** shall be in terms of 31.8 (A) and 34.8

14.5.5 Where the **employer** has a right of recovery against the **contractor** in terms of 33.0, the **employer** shall be entitled to issue a written demand in terms of the fixed **construction guarantee** or may recover from the payment reduction or may do both

14.6 Where **security** as a cash deposit of five per cent (5%) of the **contract sum** (excluding VAT) and a payment reduction of five per cent (5%) of the value certified in the **payment certificate** (excluding VAT) has been selected:

14.6.1 The **contractor** shall furnish the **employer** with a cash deposit equal in value to five per cent (5%) of the **contract sum** (excluding VAT) within twenty one (21) **calendar days** from **commencement date**

14.6.2 Within twenty one (21) **calendar days** of the date of **practical completion** of the **works** the **employer** shall refund the cash deposit in total to the **contractor**

14.6.3 The payment reduction of the value certified in a **payment certificate** shall be *mutatis mutandi* in terms of 31.8(A)

14.6.4 Where the **employer** has a right of recovery against the **contractor** in terms of 33.0, the **employer** may issue a written notice in terms of 33.4 or may recover from the payment reduction or may do both

14.7 Where **security** as a payment reduction of ten per cent (10%) of the value certified in the **payment certificate** (excluding VAT) has been selected:

14.7.1 The payment reduction of the value certified in a **payment certificate** shall be *mutatis mutandi* in terms of 31.8(B)

14.7.2 The **employer** shall be entitled to recover expense and loss from the payment reduction in terms of 33.0 provided that the **employer** complies with the provisions of 33.4 in which event the **employer's** entitlement shall take precedence over his obligations to refund the payment reduction or portions thereof to the **contractor**

14.8 Payments made by the guarantor to the **employer** in terms of the fixed or variable **construction guarantee** shall not prejudice the rights of the **employer** or **contractor** in terms of this **agreement**

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14.9 Should the **contractor** fail to furnish the **security** in terms of 14.2, the **employer**, in his sole discretion and without notification to the **contractor**, is entitled to change the **contractor's** selected form of **security** to that of a ten per cent (10%) payment reduction of the value certified in the **payment certificate** (excluding VAT), whereafter 14.7 shall be applicable

Fixed: _____ Value related: _____ Time related: _____

EXECUTION

14 A15 PREPARATION FOR AND EXECUTION OF THE WORKS

Clause 15.0

Clause 15.1.1 is amended by replacing it with:

No Clause

Clause 15.1.2 is amended by replacing it with:

The **security** selected in terms of 14.0

Clause 15.1 is amended by the addition of the following clause:

15.1.4 An acceptable health and safety plan, required in terms of the Occupational Health and Safety Act, 1993 (Act 85 of 1993), within twenty one (21) **calendar days of commencement date**

Clause 15.2.1 is amended by replacing it with the following clause:

Give the **contractor** possession of the **site** within ten (10) **working days** of the **contractor** complying with the terms of 15.1.2 and 15.1.4

Fixed: _____ Value related: _____ Time related: _____

15 A16 ACCESS TO THE WORKS

Clause 16.0

Fixed: _____ Value related: _____ Time related: _____

Item

Item

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16 A17 CONTRACT INSTRUCTIONS

Clause 17.0

Clause 17.1.11 is amended by deleting the words "and the appointment of **nominated** and **selected subcontractors**"

Fixed: _____ Value related: _____ Time related: _____

Item

17 A18 SETTING OUT OF THE WORKS

Clause 18.0

Fixed: _____ Value related: _____ Time related: _____

Item

18 A19 ASSIGNMENT

Clause 19.0

Fixed: _____ Value related: _____ Time related: _____

Item

19 A20 NOMINATED SUB-CONTRACTORS

Clause 20.0

Clause 20.1.3 is amended by replacing it with the following:

No Clause

Note: See item B9.1 hereinafter for adjustment of attendance on **nominated subcontractors** executing work allowed for under provisional sums

Fixed: _____ Value related: _____ Time related: _____

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20 **A21 SELECTED SUBCONTRACTORS**

Clause 21.0

Clause 21 is amended by replacing it with:

No Clause

Fixed: _____ Value related: _____ Time related: _____

Item

21 **A22 EMPLOYER'S DIRECT CONTRACTORS**

Clause 22.0

Fixed: _____ Value related: _____ Time related: _____

Item

22 **A23 CONTRACTOR'S DOMESTIC SUBCONTRACTORS**

Clause 23.0

Fixed: _____ Value related: _____ Time related: _____

Item

COMPLETION

23 **A24 PRACTICAL COMPLETION**

Clause 24.0

Fixed: _____ Value related: _____ Time related: _____

Item

24 **A25 WORK'S COMPLETION**

Clause 25.0

Fixed: _____ Value related: _____ Time related: _____

Item

25 **A26 FINAL COMPLETION**

Clause 26.0

Clause 26.1.2 is amended by inserting "#" next to 26.1.2

Fixed: _____ Value related: _____ Time related: _____

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26 **A27 LATENT DEFECTS LIABILITY PERIOD**

Clause 27.0

Fixed: _____ Value related: _____ Time related: _____

Item

27 **A28 SECTIONAL COMPLETION**

Clause 28.0

Fixed: _____ Value related: _____ Time related: _____

Item

28 **A29 REVISION OF DATE FOR PRACTICAL COMPLETION**

Clause 29.0

Clause 29.2.5 is amended by replacing it with:

No clause

Fixed: _____ Value related: _____ Time related: _____

Item

29 **A30 PENALTY FOR NON-COMPLETION**

Clause 30.0

Fixed: _____ Value related: _____ Time related: _____

Item

PAYMENT

30 **A31 INTERIM PAYMENT TO THE CONTRACTOR**

Clause 31.0

31 Clause 31.5.2 is amended by replacing "14.7.1" with "14.0"

Clause 31.8 is amended by replacing it with the following two alternative clauses:

Alternative A

31.8(A) Where a **security** is selected in terms of 14.1; 14.5 or 14.6, the value of the **works** in terms of 31.4.1 and **materials and goods** in terms of 31.4.2 shall be certified in full. The value certified shall be subject to the following percentage adjustments:

31.8(A).1 Ninety five per cent (95%) of such value in interim **payment certificates** issued up to the date of **practical completion**

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31.8(A).2 Ninety seven per cent (97%) of such value in interim **payment certificates** issued on the date of **practical completion** and up to but excluding the date of **final completion**

31.8(A).3 Ninety nine per cent (99%) of such value in interim **payment certificates** issued on the date of **final completion** and up to but excluding the final **payment certificate** in terms of 34.6

31.8(A).4 One hundred per cent (100%) of such value in the final **payment certificate** in terms of 34.6 except where the amount certified is in favour of the **employer**. In such an event the payment reduction shall remain at the adjustment level applicable to the final **payment certificate**

Alternative B

31.8(B) Where **security** is a payment reduction in terms of 14.7 the value of the **works** in terms of 31.4.1 and **materials and goods** in terms of 31.4.2 shall be certified in full. The value certified shall be subject to the following percentage adjustments:

31.8(B).1 Ninety per cent (90%) of such value in interim **payment certificates** issued up to the date of **practical completion**

31.8(B).2 Ninety seven per cent (97%) of such value in interim **payment certificates** issued on the date of **practical completion** and up to but excluding the date of **final completion**

31.8(B).3 Ninety nine per cent (99%) of such value in interim **payment certificates** issued on the date of **final completion** and up to but excluding the final **payment certificate** in terms of 34.6

31.8(B).4 One hundred per cent (100%) of such value in the final **payment certificate** in terms of 34.6 except where the amount certified is in favour of the **employer**. In such an event the payment reduction shall remain at the adjustment level applicable to the final **payment certificate**

Clause 31.12 is amended by deleting the following:

32 Payment shall be subject to the **employer** giving the **contractor** a tax invoice for the amount due

Fixed: _____ Value related: _____ Time related: _____

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33 **A32 ADJUSTMENT TO THE CONTRACT VALUE**

Clause 32.0

Clauses 32.5.1, 32.5.4 and 32.5.7 are amended by the addition of the following at the end of the sentence:

"due to no fault of the **contractor**"

Fixed: _____ Value related: _____ Time related: _____

Item

34 **A33 RECOVERY OF EXPENSE AND LOSS**

Clause 33.0

Fixed: _____ Value related: _____ Time related: _____

35 **A34 FINAL ACCOUNT AND FINAL PAYMENT**

Clause 34.0

Clause 34.1 is amended by removing "#" next to 34.1

Clause 34.2 is amended by removing "#" next to 34.2

Clause 34.8 is amended by deleting the words "where **security** as a fixed **construction guarantee** in terms of 14.4 has been selected or where payment reduction has been applied in terms of 14.7.1"

Clause 34.13 is amended by replacing "seven (7) **calendar days**" with "twenty one (21) **calendar days**" and deleting the words "subject to the **employer** giving the **contractor** a tax invoice for the amount due"

Fixed: _____ Value related: _____ Time related: _____

Item

36 **A35 PAYMENT TO OTHER PARTIES**

Clause 35.0

Fixed: _____ Value related: _____ Time related: _____

Item

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CANCELLATION

A36 CANCELLATION BY EMPLOYER - CONTRACTOR'S DEFAULT

Clause 36.0

Clause 36.1 is amended by the addition of the following clauses:

36.1.3 refuses or neglects to comply strictly with any of the conditions of contract

36.1.4 estate being sequestrated, liquidated or surrendered in terms of the insolvency laws in force within the Republic of South Africa

36.1.5 in the judgement of the **employer**, has engaged in **corrupt** or **fraudulent practices** in competing for or in executing the contract

Clause 36.3 is amended by removing the reference to "No clause" and replacing the words "**principal agent**" with "**employer**"

Clause 36.0 is amended by the addition of the following clause:

36.7 Notwithstanding any clause to the contrary, on cancellation of this **agreement** either by the **employer** or the **contractor**; or for any reason whatsoever, the **contractor** shall on written instruction, discontinue with the **works** on a date stated and withdraw himself from the **site**. The **contractor** shall not be entitled to refuse to withdraw from the **works** on the grounds of any lien or right of retention or on the grounds of any other right whatsoever

Fixed: _____ Value related: _____ Time related: _____

Item

37 A37 CANCELLATION BY EMPLOYER - LOSS AND DAMAGE

Clause 37.0

Clauses 37.3.5 is amended by replacing "ninety (90) with "one hundred and twenty (120)"

Clause 37.0 is amended by the addition of the following clause:

37.5 Notwithstanding any clause to the contrary, on cancellation of this **agreement** either by the **employer** or the **contractor**; or for any reason whatsoever, the **contractor** shall on written instruction, discontinue with the **works** on a date stated and withdraw himself from the **site**. The **contractor** shall not be entitled to refuse to withdraw from the **works** on the grounds of any lien or right of retention or on the grounds of any other right whatsoever

Fixed: _____ Value related: _____ Time related: _____

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38 **A38 CANCELLATION BY CONTRACTOR - EMPLOYER'S DEFAULT**

Clause 38.0

Clauses 38.5.4 is amended by replacing "ninety (90) with "one hundred and twenty (120)"

Clause 38.0 is amended by the addition of the following clause:

38.7 Notwithstanding any clause to the contrary, on cancellation of this **agreement** either by the **employer** or the **contractor**; or for any reason whatsoever, the **contractor** shall on written instruction, discontinue with the **works** on a date stated and withdraw himself from the **site**. The **contractor** shall not be entitled to refuse to withdraw from the **works** on the grounds of any lien or right of retention or on the grounds of any other right whatsoever

Fixed: _____ Value related: _____ Time related: _____

Item

39 **A39 CESSATION - CANCELLATION OF THE WORKS**

Clause 39.0

Clauses 39.3.5 is amended by the addition of the following at the end of the sentence "within one hundred and twenty (120) **working days** of completion of such a report"

Fixed: _____ Value related: _____ Time related: _____

Item

40 **A40 DISPUTE SETTLEMENT**

Clause 40.0

Clause 40.2.2 is amended by replacing "one (1) year" with "three (3) years"

Clause 40.6 is amended by removing the reference to:

No clause

Clause 40.7.1 is amended by replacing "(10)" with "(15)" and by the addition of the following:

Whether or not mediation resolves the dispute, the parties shall bear their own cost concerning the mediation and equally share the costs of the **mediator** and related costs

Fixed: _____ Value related: _____ Time related: _____

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SUBSTITUTE PROVISIONS

41 **A41 STATE CLAUSES**

Clause 41.0

Fixed: _____ Value related: _____ Time related: _____

Item

CONTRACT VARIABLES

THE SCHEDULE

42 **A42 PRE-TENDER INFORMATION**

Clause 42.0

Tenderers are referred to the Contract Data

Fixed: _____ Value related: _____ Time related: _____

Item

SECTION B: JBCC PRELIMINARIES

1: DEFINITIONS AND INTERPRETATION

43 ***Definitions and interpretation***

See also clause A1.0 of Section A for additional an/or amended definitions which shall apply to this Section

Fixed: _____ Value related: _____ Time related: _____

Item

2: DOCUMENTS

44 ***Checking of documents***

Fixed: _____ Value related: _____ Time related: _____

Item

45 ***Provisional bills of quantities***

Fixed: _____ Value related: _____ Time related: _____

Item

46 ***Availability of construction documentation***

Fixed: _____ Value related: _____ Time related: _____

Item

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47	Interests of agents Fixed:_____ Value related:_____ Time related:_____	Item
48	Priced documents Fixed:_____ Value related:_____ Time related:_____	Item
49	Tender submission Clause 2.6 is amended by replacing "JBCC Form of Tender" with "Invitation to Bid: (PA-32)" Fixed:_____ Value related:_____ Time related:_____	Item
<u>3: THE SITE</u>		
50	Defined works area Fixed:_____ Value related:_____ Time related:_____	Item
51	Geotechnical investigation Fixed:_____ Value related:_____ Time related:_____	Item
52	Inspection of the site Fixed:_____ Value related:_____ Time related:_____	Item
53	Existing premises occupied Fixed:_____ Value related:_____ Time related:_____	Item
54	Previous work - dimensional accuracy Fixed:_____ Value related:_____ Time related:_____	Item
55	Previous work - defects Fixed:_____ Value related:_____ Time related:_____	Item
56	Services - known Fixed:_____ Value related:_____ Time related:_____	Item

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57	Services - known Fixed:_____ Value related:_____ Time related:_____	Item
58	Protection of trees Fixed:_____ Value related:_____ Time related:_____	Item
59	Articles of value Fixed:_____ Value related:_____ Time related:_____	Item
60	Inspection of adjoining properties Fixed:_____ Value related:_____ Time related:_____	Item
<u>4: MANAGEMENT OF CONTRACT</u>		
61	Management of the works Fixed:_____ Value related:_____ Time related:_____	Item
62	Programme for the works Fixed:_____ Value related:_____ Time related:_____	Item
63	Progress meetings Fixed:_____ Value related:_____ Time related:_____	Item
64	Technical meetings Fixed:_____ Value related:_____ Time related:_____	Item
65	Labour and plant records Fixed:_____ Value related:_____ Time related:_____	Item
<u>5: SAMPLES, SHOP DRAWINGS AND MANUFACTURERS' INSTRUCTIONS</u>		
66	Samples of materials Fixed:_____ Value related:_____ Time related:_____	Item
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67 **Workmanship samples**
Fixed: _____ Value related: _____ Time related: _____

Item

68 **Shop drawings**
Fixed: _____ Value related: _____ Time related: _____

Item

69 **Compliance with manufacturer's instructions**
Fixed: _____ Value related: _____ Time related: _____

Item

6: TEMPORARY WORKS AND PLANT

70 **Deposits and fees**
Fixed: _____ Value related: _____ Time related: _____

Item

71 **Enclosure of the works**
Fixed: _____ Value related: _____ Time related: _____

Item

72 **Advertising**
Fixed: _____ Value related: _____ Time related: _____

Item

73 **Plant, equipment, sheds and offices**
Fixed: _____ Value related: _____ Time related: _____

Item

74 **Main notice board**
Fixed: _____ Value related: _____ Time related: _____

Item

75 **Subcontractors' notice board**
Fixed: _____ Value related: _____ Time related: _____

Item

7: TEMPORARY SERVICES

76 **Location**
Fixed: _____ Value related: _____ Time related: _____

Item

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77	Water Fixed: _____ Value related: _____ Time related: _____	Item
78	Electricity Fixed: _____ Value related: _____ Time related: _____	Item
79	Telecommunication facilities Fixed: _____ Value related: _____ Time related: _____	Item
80	Ablution facilities Fixed: _____ Value related: _____ Time related: _____	Item
<u>8: PRIME COST AMOUNTS</u>		
<u>9: ATTENDANCE ON N/S SUBCONTRACTORS</u>		
81	General attendance Fixed: _____ Value related: _____ Time related: _____	Item
82	Special attendance Fixed: _____ Value related: _____ Time related: _____	Item
83	Commissioning - fuel, water and electricity Fixed: _____ Value related: _____ Time related: _____	Item
<u>10: FINANCIAL ASPECTS</u>		
84	Statutory taxes, duties and levies Fixed: _____ Value related: _____ Time related: _____	Item
85	Payment for preliminaries Fixed: _____ Value related: _____ Time related: _____	Item

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86 **Adjustment of preliminaries**

Clauses B10.3.1 and B10.3.2 are amended by replacing "within fifteen (15) **working days** of taking possession of the **site**" with "when submitting his priced **bills of quantities / lump sum document**"

Fixed: _____ Value related: _____ Time related: _____

Item

87 **Payment certificate cash flow**

Fixed: _____ Value related: _____ Time related: _____

Item

11: GENERAL

88 **Protection of the works**

Fixed: _____ Value related: _____ Time related: _____

Item

89 **Protection / isolation of existing / sectionally occupied works**

Fixed: _____ Value related: _____ Time related: _____

Item

90 **Security of the works**

Fixed: _____ Value related: _____ Time related: _____

Item

91 **Notice before covering work**

Fixed: _____ Value related: _____ Time related: _____

Item

92 **Disturbance**

Fixed: _____ Value related: _____ Time related: _____

Item

93 **Environmental disturbance**

Fixed: _____ Value related: _____ Time related: _____

Item

94 **Works cleaning and clearing**

Fixed: _____ Value related: _____ Time related: _____

Item

95 **Vermin**

Fixed: _____ Value related: _____ Time related: _____

Item

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96	Overhand work	Fixed: _____ Value related: _____ Time related: _____	Item
97	Instruction manuals and guarantees	Fixed: _____ Value related: _____ Time related: _____	Item
98	As built information	Fixed: _____ Value related: _____ Time related: _____	Item
99	Tenant installations	Fixed: _____ Value related: _____ Time related: _____	Item
<u>12: SCHEDULE OF VARIABLES</u>			
100	Schedule of Variables	Fixed: _____ Value related: _____ Time related: _____	Item
<p>This schedule contains all variables referred to in this document and is divided into pretender and post tender categories. The pre-tender category must be completed in full and included in the tender documents. Both the pre-tender and post tender categories form part of these Preliminaries.</p> <p>Spaces requiring information must be filled in, shown as "not applicable" or deleted and not left blank. Where choices are offered, the non-applicable items are to be deleted.</p> <p>Where insufficient space is provided the information should be annexed hereto and cross-referenced to the applicable clause of the schedule. Key cross reference clauses are italicised in [] brackets</p>			
12.1 PRE TENDER INFORMATION			
12.1.1 Provisional Bills of Quantities			
[2.2] The quantities are provisional		YES	
12.1.2 Availability of construction documentation			
[2.3] Construction of documentation is complete		NO	
12.1.3 Interest of agents			
[2.4] Details: None			
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12.1.4 Defined works area

[3.1] Details: As defined in the tender drawings issued

12.1.5 Geotechnical investigation

[3.2] Details: Not done

12.1.6 Existing premises occupied

[3.4] Specific requirements: The premise will not be occupied during construction

12.1.7 Previous work - dimensional accuracy

[3.5] Details: None

12.1.8 Previous work - defects

[3.6] Details: None

12.1.9 Services - known

[3.7] Details: As defined in the tender drawings issued

12.1.10 Protection of trees

[3.9] Specific requirements: None

12.1.11 Inspection of adjoining properties

[3.11] Specific requirements: None

12.1.12 Enclosure of the works

[6.2] Specific requirements: None

12.1.13 Offices

[6.4.3] Specific requirements:

The contractor shall provide, maintain and remove on completion of the works an office for the exclusive use of the principal agent, minimum size 4 x 3 x 3m high internally, suitably insulated and ventilated, provided with electric lighting and fitted with boarded floor, desk, chair, drawing stool, drawing board and lock-up drawers for drawings. The office shall be kept clean and fit for use at all times.

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12.1.14 Main notice board

[6.5] Specific requirements:

The contractor shall provide, erect where directed, maintain and remove on completion of the works a notice board size 3 x 3m as type Drawing GEN 063, constructed of suitable boarding with flat smooth surface and with edging bead 19mm thick round outer edges and projecting 12mm from face of boarding and rounded on front edge. The board shall be securely fixed to hoarding, where hoarding is provided, or fixed to and including a suitable supporting structure of timber or tubular posts and braces. The board is to be painted ivory white and the bead and 12mm wide dividing lines dark green. All wording shall be inscribed in dark green as per the coat of arms for SA. All wording shall be inscribed in dark green painted sans serif lettering.

12.1.15 **Subcontractors' notice board**

[6.6] A notice board is required

NO

Specific requirements:

12.1.16 **Water**

[7.2] Option A (by contractor)

YES

Option B (by employer - free of charge)

NO

Option C (by employer - metered)

NO

12.1.17 **Electricity**

[7.3] Option A (by contractor)

YES

Option B (by employer - free of charge)

NO

Option C (by employer - metered)

NO

12.1.18 **Telecommunications**

[7.4] Telephone

YES

Facsimile

NO

E-mail

YES

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12.1.19 Ablution facilities

[7.5] Option A (by contractor)

YES

Option B (by employer)

NO

12.1.20 Protection of existing/sectionally occupied works

[11.2] Protection is required

YES

12.1.21 Special attendance

[9.2] Subcontractor (1) details:

Subcontractor (2) details:

Subcontractor (3) details:

Subcontractor (4) details:

12.1.22 Protection of works

[11.1] Specific requirements:

12.1.23 Disturbance

[11.5] Specific requirements:

The contractor shall keep the site, structures, etc well watered during operations to prevent dust and shall provide and erect and remove on completion of the works all necessary temporary dust screens all to the satisfaction of the principal agent

12.1.24 Environmental disturbance

[11.6] Specific requirements:

12.2 POST TENDER INFORMATION

12.2.1 Payment of preliminaries

[10.2] Option A (prorated)

YES

Option B (calculates)

NO

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12.2.2 **Adjustment of preliminaries**

[10.3] Option A (three categories)

YES

Option B (detailed breakdown)

NO

12.2.3 **Additional agreed preliminaries items**

Details:

SECTION C: SPECIFIC PRELIMINARIES

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

101 **C1 CONTRACT DRAWINGS**

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

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

Fixed: _____ Value related: _____ Time related: _____

Item

102 **C2 PREAMBLES**

The document "Specification of Materials and Methods to be used (PW371)" is obtainable on the Department's website <<http://www.publicworks.gov.za/>> under "Consultants Guidelines", and shall be read in conjunction with the bills of quantities document and be referred to for the full descriptions of work to be done and materials to be used

The document "Construction Works: Specifications: Particular Specification (PW371 Edition 2.0)" is issued together with the drawings and shall be read in conjunction drawings and the **bills of quantities / lump sum document**

Fixed: _____ Value related: _____ Time related: _____

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103 **C3 TRADE NAMES**

Wherever a trade name for any product has been described in the **bills of quantities**, the tenderer's attention is drawn to the fact that any other product of equal quality may be used subject to the written approval of the **principal agent** being obtained prior to the closing date for submission of tenders

If prior written approval for an alternative product is not obtained, the product described shall be deemed to have been tendered for

Fixed: _____ Value related: _____ Time related: _____

Item

104 **C4 IMPORTED MATERIALS AND EQUIPMENT**

Where imported items are listed in the tender documents, the tenderer shall provide all the information called for, failing which the price of any such item, materials or equipment shall be excluded from currency fluctuations. (refer to Schedule of Imported Materials and Equipment to be completed by tenderer)

Notwithstanding any provisions elsewhere regarding the adjustment of contract prices, the price of any item, material or equipment listed in terms of this clause shall be excluded from the Contract Price Adjustment Provisions (if applicable)

Fixed: _____ Value related: _____ Time related: _____

Item

105 **C5 VIEWING THE SITE IN SECURITY AREAS**

The **site** is situated in a security area and the tenderer must arrange with the user department or other responsible person to obtain permission to enter the **site** for tendering purposes

Fixed: _____ Value related: _____ Time related: _____

Item

106 **C6 COMMENCEMENT OF WORKS IN SECURITY AREAS**

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

Fixed: _____ Value related: _____ Time related: _____

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107 **C7 ENTRANCE PERMITS TO SECURITY AREAS**

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

Fixed: _____ Value related: _____ Time related: _____

Item

108 **C8 SECURITY CHECK OF PERSONNEL**

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

In the event of the **principal agent** requesting the removal of a person or persons from

the **works** for security reasons, the **contractor** shall do so forthwith and shall thereafter ensure that such person or persons are denied access to the **works** and the **site** and/or to any document or information relating to the **works**

Fixed: _____ Value related: _____ Time related: _____

Item

109 **C9 PROHIBITION ON TAKING OF PHOTOGRAPHS**

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

The same prohibition is also applicable to all correctional institutions in terms of article

44.1(e) of the Correctional Services Act 8 of 1959

Fixed: _____ Value related: _____ Time related: _____

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**C10 HIV/AIDS AWARENESS**

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

The **contractor** must take note that compliance with the HIV/AIDS Specification is compulsory. In the event of partial or total non-compliance, the **principal agent**, notwithstanding the provisions of Clause A 31.0 of Section A or any other clause to the contrary, reserves the right to delay issuing any progress **payment certificate** until the **contractor** provides satisfactory proof of compliance. The **contractor** shall not be entitled to any compensation of whatsoever nature, including interest, due to such delay of payment

110 C10.1 AWARENESS CHAMPION

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

Fixed: _____ Value related: _____ Time related: _____

Item

111 C10.2 AWARENESS WORKSHOPS

Selection and appointment of a competent Service Provider approved by the **principal agent**, provision of a Service Provider Workshop Plan and a suitable venue, conducting of awareness workshops by means of traditional and/or modern multi-media techniques, including follow-up courses, making available all tuition material and performing assessment procedures, all in accordance with the HIV/AIDS Specification

Fixed: _____ Value related: _____ Time related: _____

Item

112 C10.3 POSTERS, BOOKLETS, VIDEOS, ETC.

Provision, displaying, maintaining and replacing when necessary of four plastic laminated posters, booklets and educational videos, etc. for the duration of the **construction period**, all in accordance with the HIV/AIDS Specification

Fixed: _____ Value related: _____ Time related: _____

Item

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113 **C10.4 ACCESS TO CONDOMS**

Provision and maintenance of condom dispensers fixed in position, including male and female condoms, replenishing male and female condoms on a daily basis as required for the duration of the **construction period**, all in accordance with the HIV/AIDS Specification

Fixed: _____ Value related: _____ Time related: _____

Item

114 **C10.5 MONITORING**

Monitoring HIV/AIDS awareness of workers, providing the **principal agent** with access to information including making available all reports, thoroughly completed and reflecting the correct information, for the duration of the **construction period** and close out, all in accordance with the HIV/AIDS Specification

Fixed: _____ Value related: _____ Time related: _____

Item

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115 **C11 : OCCUPATIONAL HEALTH AND SAFETY ACT**

The contractor shall comply with all the requirements set out in the Construction Regulation, 2014 issued under the Occupational Health and Safety Act, 1993. (Act no 85 of 1993) as amended.

It is required of the Contractor to thoroughly study the Health and Safety Specification that must be read together with and is deemed to be incorporated under the Section of the Bills of Quantities/lump sum document.

The Contractor must take note that compliance with the Occupational Health and Safety Act, Construction Regulations and Health and Safety Specification is compulsory. In the event of partial or total non-compliance, the Principal Agent, notwithstanding the provisions of Clause A 31 of "Section 1" or any other clause to the contrary, reserves the right to delay issuing any progress payment certificate until the Contractor provides satisfactory proof of compliance. The Contractor shall not be entitled to any compensation of whatsoever nature, including interest, due to such delay of payment.

The Contractor shall, in submitting his bid, demonstrate that he has made provision for the cost of compliance with the specified health and safety requirements, the Act and Construction Regulations.

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

Fixed: _____ Value related: _____ Time related: _____

Item

116 **C12 COMMUNITY LIAISON OFFICER (CLO)**

UTILISATION OF A COMMUNITY LIAISON OFFICER

The Contractor shall allow for and pay any and all costs necessary for the engagement of the services of a Community Liaison Officer (CLO) for the full duration of this contract.

A CLO will be identified by the local structures of the ward areas and appointed following fair and transparent interviewing process, to be conducted in the presence of local structures and the contractor representative, in order to assist the Contractor in the procurement of any local labour, etc. required for this project. The Contractor is to liaise with the CLO and afford him any assistance needed in ensuring sound working relations with the local community.

Key Responsibilities of the CLO are envisaged to include and not necessary be limited to:

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1. Assisting local leadership in conducting skills and resources audit which facilitates sourcing labour from within the ward or targeted areas for employment, as required by contractor
2. Assisting in sourcing labour-only domestic sub-contractors and the procurement of materials from local resources, as required by the Contractor.
3. Assisting the Contractor by identifying areas of potential conflict and or threats to the project or to stakeholders in the project and recommend appropriate action to the contractor.
4. Assisting Contractor and stakeholders in the project in the resolution of any conflict which may arise.
5. Establishing and ensuring that sufficient and open communication channels between the Contractor and the work force are maintained.
6. Establish and ensuring that efficient and open communication channels between the Contractor and the community are maintained.
7. Identifying and reporting to the Contractor regarding issues where communication between stakeholder is necessary, recommend courses of action and facilitate such communications.
8. Assisting the Contractor and the work force in the establishment of grievance procedures and necessary recommendation to the Contractor regarding the grievances and solution thereto.
9. Attending to site meetings and project implementation meetings as required by the Contractor and prepare periodic reports as may be required by the Contractor from time to time.
10. Attending to such other duties which are consistent with the functions of a CLO, as may be required by the Contractor from time to time.
11. Tenderers are to price twice the rate of skilled local labour rate against this item for any and all costs arising out of compliance with the foregoing and in the event of a Tenderer failing to price against this item or making inadequate financial provision against this item for compliance as aforesaid, then no claim for costs or additional cost incurred will be entertained by the Head: SAPS.

Fixed: _____ Value related: _____ Time related: _____

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117 C13 MONITORING

Monitoring Covid 19 awareness of workers, providing the principal agent with access to information including making available all reports, thoroughly completed and reflecting the correct information, for the duration of the construction period, all in accordance with the Covid 19 Regulations.

Fixed: _____ Value related: _____ Time related: _____

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SECTION 2: BUILDING WORKS



Item No		Quantity	Rate	Amount
	<u>SECTION 2</u>			
	<u>BILL NO. 1</u>			
	<u>ALTERATIONS</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	All old material from the demolitions /alterations, where described as to be removed, are to become the property of the Contractor, except where indicated that it should be handed over to the owner, who is to allow credit for same in the particular items			
	Old material from alterations except where described to be reused or handed over, as well as all rubbish, etc, must be regularly carted from the site and not be allowed to accumulate on or around the site			
	None of the old materials are to be used for new work except where specifically described as being set aside for re-use			
	<u>REMOVAL OF EXISTING WORK</u>			
	<u>Breaking down and removing brickwork etc</u>			
1	One brick wall	m ²	4	
	<u>Taking out and removing doors, windows, etc, including thresholds, sills, etc</u>			
2	Timber single door 900 x 2100mm high	No	1	
	<u>Taking out/off and removing glass and mirrors:</u>			
3	Glass panes not exceeding 0,1m ² from steel windows with putty, including cleaning out rebates and preparing for new glass	m ²	6	
4	Glass panes exceeding 0,1m ² and not exceeding 0,5m ² from steel windows with putty, including cleaning out rebates and preparing for new glass	m ²	6	
Carried Forward to Summary of Section No. 2				R
Section No. 2 Section 2: Building Works Bill No. 1 Alterations				

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Item No		Quantity	Rate	Amount
	<u>SECTION 2</u>			
	<u>BILL NO. 2</u>			
	<u>IRONMONGERY</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>DOOR CLOSERS</u>			
	<u>Door Closers</u>			
1	Door closer with variable adjustable closing force. Can be used for left / right handed door. Backcheck and latching speed range adjustable.	No	1	
Carried Forward to Summary of Section No. 2				R
Section No. 2 Section 2: Building Works Bill No. 2 Ironmongery				

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Item No	Quantity	Rate	Amount
<u>SECTION 2</u>			
<u>BILL NO. 3</u>			
<u>METALWORK</u>			
<u>Note</u>			
<u>All work according to the latest "FIVE STAR SPECIFICATION OF SAPS"</u>			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Descriptions of bolts, anchors, etc</u>			
Descriptions of bolts shall be deemed to include nuts and washers			
Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete			
Items described as "holed for bolt(s)" shall be deemed to exclude the bolts unless otherwise described			
Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres			
<u>Aluminium doors, windows, etc</u>			
Doors and windows shall comply with AAAMSA design criteria			
Glazing shall comply with SAGGA regulations. Glass shall be laminated performance glass as shown on the window schedules/drawings appended to these bills of quantities. Glass thickness shall comply with SAGGA regulations irrespective of thickness shown on the schedules/drawings			
Doors and windows shall be supplied with protective tape and plastic and shall be removed only once surrounding trades have been completed			
Carried to Collection		R	
Section No. 2			
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Bill No. 3			
Metalwork			

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For purpose made windows and doors, refer to drawings annexed to these bills of quantities

The following certificates shall be provided prior to commencement of site work:

1. A copy of the relevant AAAMSA Performance Test Certificate from the manufacturer/contractor supplying the architectural aluminium product
2. A Certificate of Conformance confirming that anodizing of powder coating has been processed in accordance with SANS 999 and SANS 1796 respectively
3. A powder guarantee of not less than 15 years issued by the powder manufacturer. The specific conditions contained in this guarantee shall form part of the powder coating process
4. A Certificate of Conformance confirming that glazing has been installed in accordance with SANS 0137, ensuring that safety glazing materials have installed in the mandatory areas and that each individual pane of safety glazing material been permanently marked
5. A warranty from the manufacturer of the laminated safety glass and/or hermetically sealed glazing units guaranteeing the products against de lamination and colour degradation for a period of not less than five years

GALVANISED STEEL GATES, SCREENS, ETC.

"Screenex"/ "Betafence 358 Doubleskin Zinclau or similar and approved steel mesh to ceiling laid into 50 x 50 x 5mm angle iron frames. Mesh to welded into frame and sandwiched into second frame. 40 x 40 x 3mm angle to be welded to mesh and main frame. Frames exceeding 1800mm in length to have additional 40 x 40 x 3mm angle T-support placed and welded centrally onto mesh. Frames are supported 90 x 90 x 6mm steel angle wall bracket bolted to wall with 2x M12 bolt for 200 x 100 IPE beam and 2x M16 bolt for a 254 x 146 IPE beam. (Refer to Drawing: POL2012/G1)

1	Galvanized steel mesh	m ²	10
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Carried to Collection

Section No. 2
Section 2: Building Works
Bill No. 3
Metalwork

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	<u>Burglar proofing with 30 x 6mm mild steel angle steel flat bar frame with 12mm diameter mid steel round bars fixed to of frame spaces max. 100mm c/c. with bars supported with horizontal 30 x 6mm flat bar for every 1m high spaced equally. Frame to be fixed to inside of window with M10 bolts max. every 300mm of height. Top and bottom of frame to be fixed inside of window frame max. every 350mm of width. Installation must comply with SANS 10400 (Refer to Drawing: Annexure 10)</u>			
2	Window 530 x 660mm high	No	2	
3	Window 600 x 700mm high	No	2	
4	Window 970 x 2500mm high	No	2	
5	Window 990 x 700mm high	No	1	
6	Window 1000 x 950mm high	No	1	
7	Window 1000 x 1200mm high	No	1	
8	Window 1450 x 1200mm high	No	4	
9	Window 1500 x 900mm high	No	1	
10	Window 1540 x 1570mm high	No	1	
11	Window 1550 x 700mm high	No	1	
12	Window 1550 x 1250mm high	No	6	
13	Window 2000 x 1200mm high	No	2	
	<u>Burglar proofing with 30 x 6mm mild steel angle steel flat bar frame with 12mm diameter mid steel round bars fixed to of frame spaces max. 100mm c/c. with bars supported with horizontal 30 x 6mm flat bar for every 1m high spaced equally. Frame to be fixed to inside of window with M10 bolts max. every 300mm of height. Top and bottom of frame to be fixed inside of door frame max. every 350mm of width. Installation must comply with SANS 10400</u>			
14	Door 900 x 2100mm high	No	3	
Carried to Collection				R
Section No. 2 Section 2: Building Works Bill No. 3 Metalwork				

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15	Door 1200 x 2100mm high	No	1
16	Door 3400 x 2100mm high	No	1

ALUMINIUM WINDOWS, DOORS, ETC

User Note:

A detail specification is to be inserted as necessary

Note: Tenderers are referred to architect's drawings numbered annexed to these bills of quantities/accompanying these bills of quantities for tender purposes

Anodised powder coated aluminium frame single door complete with subframes, ironmongery, glass, sealing, etc and fixing to brickwork or concrete as per Architects Specification.

17	Single door 900 x 2100mm high.	No	1
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Carried to Collection

R

Section No. 2
Section 2: Building Works
Bill No. 3
Metalwork

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Section No. 2

Bill No. 3

Metalwork

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Section 2: Building Works
Bill No. 3
Metalwork

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Item No	Quantity	Rate	Amount
<u>SECTION 2</u>			
<u>BILL NO. 4</u>			
<u>PLASTERING</u>			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>GRANOLITHIC</u>			
<u>Method</u>			
The method to be used shall be either the monolithic method or the bonded method			
<u>Preparation</u>			
For granolithic applied monolithically, the concrete floor shall be swept clean after bleeding of the concrete has ceased and the slab has begun to stiffen; any remaining bleed water shall be removed and the granolithic applied immediately thereafter. For granolithic to be bonded to the floor slab after it has hardened, the slab surface shall be hacked (preferably by mechanical means) until all laitance, dirt, oil, etc is dislodged and swept clean of all loose matter. The slab shall then be wetted and kept damp for at least six hours before applying the granolithic			
<u>Mix</u>			
Granolithic shall attain a compressive strength of at least 41MPa. The coarse aggregate shall comply with SANS 1083 and shall generally be capable of passing a 10mm mesh sieve. Where the thickness of the granolithic exceeds 25mm, the size of the coarse aggregate shall be increased to the maximum size compatible with the thickness of the granolithic			
Carried to Collection			
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Panels

Granolithic shall be laid in panels not exceeding 14m² for monolithic finishes, not exceeding 9.5m² for bonded finishes and not exceeding 6m² for all external granolithic. Wherever possible, panels shall be square but at no time should the length of the panel exceed 1.5 times its width

Where possible joints between panels shall be positioned over joints in the floor slab and shall be at least 3mm wide through the full thickness of the finish, separated by strips of wood or fibreboard and finished with V-joints

Laying

Monolithic granolithic shall be applied to the partially set slab and thoroughly compacted and lightly wood floated to the required levels

Bonded granolithic shall be applied to the slab after applying a 1:1 sand-and-cement slurry brushed over the surface and allowed to partially set before applying the granolithic. The granolithic shall be thoroughly compacted and lightly wood floated to the required levels

After wood floating, the monolithic and bonded granolithic shall remain undisturbed until bleeding has ceased and the surface has stiffened. Any remaining bleed water and laitance shall then be removed and the surface steel towelled or power floated

Curing, seasoning and protection

Granolithic shall be covered with clean hessian with waterproof building foil over and kept wet for at least seven days after laying

Colour

Coloured granolithic shall be tinted with an approved colouring pigment mixed into a true and even colour

INTERNAL PLASTER

Carried to Collection

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Section 2: Building Works
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Plastering

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Plastering

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Section 2: Building Works

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Plastering

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Item No		Quantity	Rate	Amount
<u>SECTION 2</u>				
<u>BILL NO. 5</u>				
<u>GLAZING</u>				
<u>GLAZING TO STEEL WITH PUTTY</u>				
<u>6.4mm Normal strength (NS) clear laminated safety glass:</u>				
1	Panes not exceeding 0.1m ²	m ²	6	
2	Panes exceeding 0.5m ² and not exceeding 2m ²	m ²	6	
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Item No	Quantity	Rate	Amount
<u>SECTION 2</u>			
<u>BILL NO. 6</u>			
<u>PAINTWORK</u>			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>PREPARATORY WORK TO EXISTING WORK</u>			
<u>Previously painted plastered surfaces</u>			
Surfaces shall be thoroughly washed down and allowed to dry completely before any paint is applied. Blistered or peeling paint shall be completely removed and cracks shall be opened, filled with a suitable filler and finished smooth			
<u>Previously painted metal surfaces</u>			
Surfaces shall be thoroughly rubbed and cleaned down. Blistered or peeling paint shall be completely removed down to bare metal			
<u>Previously painted wood surfaces</u>			
Surfaces shall be thoroughly cleaned down. Blistered or peeling paint shall be completely removed and cracks and crevices shall be primed, filled with suitable filler and finished smooth			
<u>General</u>			
Where a specific trade name is specified, the primer and/or undercoats must be of the same product or other approved. All coats and paints must be applied in accordance with the manufactures instructions.			
<u>MAKING GOOD EXISTING PAINTWORK</u>			
<u>ON INTERNAL FLOATED PLASTER SURFACES</u>			
Carried to Collection			
Section No. 2			
Section 2: Building Works			
Bill No. 6			
Paintwork			

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	<u>Make good damaged or chipped paint to match existing</u>		
1	On internal walls	m ²	
2	Cills, etc not exceeding 300mm girth	m	31
	<u>PAINTWORK ETC TO NEW WORK</u>		
	<u>ON METAL</u>		
	<u>"Plascon" or similar approved</u>		
	<u>Spot priming bare metal surface, one coat metal care galvanised iron primer (GIP1) and apply two coat super universal enamel paint (NY1)</u>		
3	Windows	m ²	65
4	On gates, grilles, burglar screens, balustrades, etc (both sides measured over the full flat area)	m ²	31

Carried to Collection

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Section No. 2
Section 2: Building Works
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Paintwork

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Paintwork

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Paintwork

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4	Plastering	49	
5	Glazing	50	
6	Paintwork	53	
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SECTION 3: EXTERNAL WORKS



Item No		Quantity	Rate	Amount
	<u>SECTION 3</u>			
	<u>BILL NO. 1</u>			
	<u>CONCRETE STORMWATER CHANNELS</u>			
	<u>EARTHWORKS</u>			
	<u>SITE CLEARANCE</u>			
	<u>Site clearance</u>			
1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush, etc. and trees not exceeding 200mm girth	m ² 100		
	<u>EXCAVATIONS ETC</u>			
	<u>Excavation in earth not exceeding 2m deep</u>			
2	Trenches	M3 25		
	<u>Extra over trench and hole excavations in earth for excavation in</u>			
3	Soft rock	M3 3		
4	Hard rock	M3 1		
	<u>Extra over all excavations for carting away</u>			
5	Surplus material from excavations and/or stock piles on site, to a dumping site to be located by the contractor	M3 25		
	<u>Keeping excavations free of water</u>			
6	Keeping excavations free of all water	Item		
	<u>SOIL POISONING</u>			
Carried to Collection				R
Section No. 3 Section 3: External Works Bill No. 1 Stormwater Drainage				

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	<u>Approved soil poisoning and ant poisoning mixed and applied in the proportion as per manufacturers specifications</u>		
7	To bottom and sides of trenches etc	m ²	100
	<u>Compaction of surfaces:</u>		
8	Compaction of ground surface under pavings, floors, etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 95% Mod AASHTO density	m ²	100
	<u>CONCRETE, FORMWORK AND REINFORCEMENT</u>		
	<u>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u>		
	<u>15mmMPa/19mm concrete</u>		
9	Surface blinding under surface beds	M3	5
	<u>REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u>		
	<u>30 Mpa/19mm Concrete.:</u>		
10	900mm Wide V-Drains cast in panels to falls.	M3	20
	<u>SMOOTH FORMWORK (DEGREE OF ACCURACY II)</u>		
	<u>Smooth Formwork to Sides.:</u>		
11	Edges, risers, ends, and reveals not exceeding 300mm high.	m	100
	<u>FINISHING TOP SURFACE OF CONCRETE</u>		
	<u>Finishing top surfaces of concrete smooth with a steel trowel.:</u>		
12	Aprons, stormwater channels, soak-away slabs, etc.	m ²	100

Carried to Collection

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Section 3: External Works
Bill No. 1
Stormwater Drainage

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MOVEMENT JOINTS ETC.

Saw cut joints.:

13	40 x 3mm Saw cut joint on top of concrete.	m	33
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REINFORCEMENT (PROVISIONAL)

Fabric reinforcement

User note

The following types of fabric reinforcement are normally specified:

Types 100, 193, 245, 311 and 395

Fabric reinforcement:

14	Type 193 fabric reinforcement in concrete aprons, channels, soak-away slabs, etc.	m ²	100
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WATERPROOFING

JOINT SEALANTS ETC.:

Two part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc including raking out expansion joint filler if necessary:

15	In 40 x 3 mm saw cut joints in floors.	m	33
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Carried to Collection

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Section No. 3
Section 3: External Works
Bill No. 1
Stormwater Drainage

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Ingogo - Security Upgrade (Kwa Zulu Natal)

Section No. 3

Bill No. 1

Stormwater Drainage

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Stormwater Drainage

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Item No	Quantity	Rate	Amount
<u>SECTION 3</u>			
<u>BILL NO. 2</u>			
<u>FENCING</u>			
NOTE: All trenches shall be backfilled with material selected from trench excavations and compacted to a minimum density of 100% Mod AASHTO			
NOTE: All sleeves to be laid in bedding class B			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Nature of the ground</u>			
The Tenderer shall acquaint himself or personal examination of the nature of the ground. Descriptions of excavations shall be deemed to include all ground conditions classifiable as "earth" and where conditions of a more difficult character are indicated these are separately measured			
<u>Subterranean water</u>			
No subterranean water is expected			
<u>Carting away of excavated material</u>			
Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stock piles situated on the building site			
No claim for rock excavation will be entertained unless the contractor has timeously notified the quantity surveyor thereof prior to backfilling "Soft rock" and "hard rock" shall be as defined in "Earthworks"			
<u>REMOVAL OF EXISTING</u>			
Carried to Collection			
Section No. 3 Section 3: External Works Bill No. 2 Fencing			

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Ingogo - Security Upgrade (Kwa Zulu Natal)

Taking down and removing fence with posts, droppers, gates, etc. complete with concrete post bases including backfilling and compaction of holes

1	2400mm High steel mesh fence	m	303
2	1200 x 1800mm High palisade pedestrian gate	No	1
3	5000m x 1800mm High motorised swinging palisade gate	No	2

EARTHWORKS

SITE CLEARANCE

Site clearance

4	Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush, etc. and trees not exceeding 200mm girth	m ²	24
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EXCAVATIONS ETC

Excavation in earth not exceeding 2m deep

5	Holes	M3	23
6	Trenches	M3	131

Extra over trench and hole excavations in earth for excavation in

7	Soft rock	M3	16
8	Hard rock	M3	8

Extra over all excavations for carting away

9	Surplus material from excavations and/or stock piles on site, to a dumping site to be located by the contractor	M3	94
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Carried to Collection

R

Section No. 3
Section 3: External Works
Bill No. 2
Fencing

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Ingogo - Security Upgrade (Kwa Zulu Natal)

	<u>Risk of collapse of excavations</u>		
10	Sides of trench and hole not exceeding 1,5m deep	m ²	385
	<u>Keeping excavations free of water</u>		
11	Keeping excavations free of all water		Item
	<u>FILLING ETC</u>		
	<u>Earth filling obtained from the excavations and/or prescribed stock pile on site, compacted to 95% Mod AASHTO density</u>		
12	Backfilling to trenches, holes, etc	M3	60
	<u>SOIL POISONING</u>		
	<u>Approved soil poisoning and ant poisoning mixed and applied in the proportion as per manufacturers specifications</u>		
13	To bottom and sides of trenches etc	m ²	388
	<u>Compaction of surfaces:</u>		
14	Compaction of ground surface under pavings, floors, etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density	m ²	24
	<u>CONCRETE, FORMWORK AND REINFORCEMENT</u>		
	<u>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u>		
	<u>15mmMPa/19mm concrete</u>		
15	Surface blinding under surface beds	M3	12
	<u>REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u>		

Carried to Collection

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Section No. 3
Section 3: External Works
Bill No. 2
Fencing

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	<u>25mmMPa/19mm concrete</u>		
16	Strip footings	M3	45
17	Bases	M3	13
18	Ramps	M3	6
	<u>SMOOTH FORMWORK (DEGREE OF ACCURACY II)</u>		
	<u>Smooth Formwork to Sides.:</u>		
19	Edges, risers, ends, and reveals not exceeding 300mm high.	m	8
	<u>FINISHING TOP SURFACE OF CONCRETE</u>		
	<u>Finishing top surfaces of concrete smooth with a steel trowel.:</u>		
20	Surface beds, slabs, etc	m ²	24
	<u>MOVEMENT JOINTS ETC.</u>		
	<u>Saw cut joints.:</u>		
21	40 x 3mm Saw cut joint in top of concrete.	m	1
	<u>REINFORCEMENT (PROVISIONAL)</u>		
	<u>Mild steel reinforcement to structural concrete work</u>		
22	8mm Diameter bars	t	0.04
	<u>High tensile steel reinforcement to structural concrete work</u>		
23	10mm Diameter bars	t	0.19
24	12mm Diameter bars	t	0.17

Fabric reinforcement

Carried to Collection

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Section No. 3
Section 3: External Works
Bill No. 2
Fencing

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User note

The following types of fabric reinforcement are normally specified:

Types 100, 193, 245, 311 and 395

Fabric reinforcement:

- 25 Type 395 fabric reinforcement in concrete surface beds etc

m²

24

MASONRY

BRICKWORK

Sizes in descriptions

Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick

User note

The following preamble generally applies for works in hot and humid coastal areas

Bagged and sealed walls

Walls in two skins described as "bagged and sealed" shall be deemed to include having the outer face of the inner skin bagged with 1:6 cement and sand mixture and sealed with two coats bitumen emulsion waterproofing coating

Face bricks

Bricks shall be ordered timeously to obtain uniformity in size and colour

Pointing

Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc

BLOCKWORK

Carried to Collection

R

Section No. 3
Section 3: External Works
Bill No. 2
Fencing

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Concrete masonry units

Blocks are to be either solid or hollow modular dense concrete masonry units having a compressive strength of 7MPa

Wall ties for blockwork

Wall ties shall be polypropylene ties complying with BS 76377. Ties for hollow walls shall be of sufficient length to allow not less than 75mm of each end to be built into the blockwork. Ties are to be spaced at intervals of not more than 1m in the horizontal direction and not more than 400mm staggered in the vertical direction except at openings, vertical joints or ends of walls where they are to be placed vertically above each other

Blockwork

Blockwork shall comply with SANS 10145 "Concrete Masonry Construction"

Surfaces to be plastered shall have joints raked out to a depth of at least 10mm to provide a key. Cavities of hollow walls shall be kept free of mortar droppings or other undesirable matter. Every second perpend of the bottom course of the external skin of hollow walls shall be left open as a weep hole

Standard complementary blocks

Descriptions of blockwork shall be deemed to include standard complementary blocks such as corner, three-quarter, half and quarter blocks required in the construction of corners, reveals, jambs, ends, etc to solid and hollow walls and for bonding as necessary

DECORATIVE BLOCKS

Blocks shall be of approved manufacture, sound, well burnt or cured and uniform and true in size, shape and colour

FOUNDATIONS

BRICKWORK

Carried to Collection

Section No. 3
Section 3: External Works
Bill No. 2
Fencing

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R



	<u>Brickwork of NFX bricks in class II mortar</u>		
26	One brick walls	m ²	114
	<u>Mass brickwork of NFP bricks in class II mortar</u>		
27	Rectangular shaped piers	M3	11
	<u>SUPERSTRUCTURE</u>		
	<u>BRICKWORK</u>		
	<u>Brickwork of NFP bricks in class II mortar</u>		
28	One brick walls	m ²	451
	<u>Mass brickwork of NFP bricks in class II mortar</u>		
29	Rectangular shaped piers	M3	53
	<u>Brick-on-edge header course copings, sills, etc of "Terracotta colour" or similar approved face bricks, pointed with recessed joints on all exposed faces</u>		
30	220mm Brick-on-edge on top of one brick walls	m	267
31	220mm Brick-on-edge on top of mass brickwork	m	107
32	Forming toothings and bonding new brickwork to existing	m ²	7
	<u>BRICKWORK SUNDRIES</u>		
	<u>'Jointex' joint forming material in movement joint.:</u>		
33	10mm Expanded polysulphide joint former with sendor strip vertically between brick skins not exceeding 300mm wide.	m	146
Carried to Collection			
Section No. 3 Section 3: External Works Bill No. 2 Fencing			

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Ingogo - Security Upgrade (Kwa Zulu Natal)

<u>2,5mm Brickwork reinforcement</u>		
34	150mm Wide reinforcement built in horizontally, in foundations	m 621
35	150mm Wide reinforcement built in horizontally	m 1,942
<u>Weep holes</u>		
36	50mm Diameter uPVC weep hole drilled through one brickwall	No 185
<u>WATERPROOFING</u>		
<u>JOINT SEALANTS ETC.:</u>		
<u>Two part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc including raking out expansion joint filler if necessary:</u>		
37	In 40 x 3 mm saw cut joints in floors.	m 1
38	In 10 x 10mm expansion joints vertically between bricks skins not exceeding 300mm deep.	m 146

FENCING

User notes

In high corrosion areas fence posts, stays, gates, etc are to be galvanised

Carried to Collection

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Section No. 3
Section 3: External Works
Bill No. 2
Fencing

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Ingogo - Security Upgrade (Kwa Zulu Natal)

Galvanised and carbon hardened steel mesh panels with 85mm tapered to 45mm mild steel post space painted (top coat finish of marine fusion bond coat in dove grey colour) at 3390mm c/c. Post shall include locking recess mechanism to secure panel. Fence panel to have 70° flanges along the sides, 90° along the top and 30° flange along the bottom. Mesh strand to have 3mm minimum diameter, cut resistance and with an aperture not exceeding 12 x 12mm, etc, site clearance and preparation of ground (Refer Annexure 12 - Perimeter Fence Detail 1)

39 1800mm High fence on-top of 620mm boundary wall

m 113

40 Extra over for 85mm tapered to 45mm mild steel post 3.9m long

No 33

Galvanised minimum 600mm high tensile steel flat wrap razor wire, installed in accordance to SANS 10400

41 On top of 2420mm high fence

m 113

42 On top of 2465mm high boundary wall

m 261

43 On top of 2400mm high gate

m 5

Galvanised 2mm thick toughened steel with 100mm electro-galvanised spikes, installed in accordance to SANS 10400

44 On top of 2420mm high fence

m 113

45 On top of 2465mm high boundary wall

m 261

GATE

Pedestrian gate to match fence

46 Self-closure and electronic magnetic locking system for 1200m x 2400m high existing gate

No 2

Carried to Collection

R

Section No. 3
Section 3: External Works
Bill No. 2
Fencing

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