

ITEM	DESCRIPTION	UNIT	QTY	RATE (E)	AMOUNT	
					E	Cts
1.0	<u>BILL 1 PRELIMINARY AND GENERAL</u>					
1.1	FIXED-CHARGE AND VALUE-RELATED ITEMS					
1.1.1	CONTRACTUAL REQUIREMENTS					
a	Allow for initial cost for providing all contractual requirements; Sum include providing all sureties, insurance of works and plant, workers compensation policy for all workers and any initial financing obligation of a preliminary and general nature.	Sum	1			
1.1.2	ESTABLISHMENT OF FACILITIES ON SITE					
	<i>Sum shall cover the contractor's initial costs for providing, establishing and commissioning the site these facilities adequately equipped to allow for work to commence and to proceed to completion as required by the contract</i>					
a	Allow for providing storage sheds for materials and equipments	Sum	1			
b	Allow for providing tools and equipment	Sum	1			
c	Allow for designated plant for executing of the electrical works	Sum	1			
d	Allow for living accomodation for the duration of the contract	Sum	1			
e	Allow for providing electrical power (generator/main power line)	Sum	1			
f	Allow for transport of staff to and from site	Sum	1			
g	Allow for removal of site establishment at the end of the contract	Sum	1			
1.2	TIME RELATED COST					
1.2.1	CONTRACTUAL REQUIREMENTS					
a	Allow for time related cost for providing all contractual requirements; Sum include providing all sureties, insurance of works and plant, workers compensation policy for all workers and any initial financing obligation of a preliminary and general nature.	Sum	1			
1.2.2	ESTABLISHMENT OF FACILITIES ON SITE					
	<i>Sum shall cover the contractor's costs for the period started for site rentals, repair to and depreciation of buildings and the wages of staff operating and maintaining this facilities in accordance with the contract.</i>					
a	Allow for providing storage sheds for materials and equipments	Sum	1			
b	Allow for providing tools and equipment	Sum	1			
c	Allow for designated plant for executing of the electrical works	Sum	1			
d	Allow for living accomodation for the duration of the contract	Sum	1			
e	Allow for providing electrical power (generator/main power line)	Sum	1			
f	Allow for transport of staff to and from site	Sum	1			
g	Allow for removal of site establishment at the end of the contract	Sum	1			
1.2.3	SITE SUPERVISION FOR DURATION OF COSTRUCTION					
a	Allow sum for cost of on-site supervision and such local administration as the contractor considers necessary for proper completion of works and it shall cover the cost of salaries, wages and allowances paid to site agent, general forman, technicians, and of transport incurred in connection with such staff	Sum	1			
1.2.4	COMPANY AND HEAD OFFICE OVERHEAD COSTS					
a	Allow sum for contractor's company and head office overhead costs	Sum	1			
TOTAL CARRIED TO MAIN SUMMARY				<i>Sub-Total</i>		

ITEM	DESCRIPTION	UNIT	QTY	RATE (E)	AMOUNT	
					E	Cts
2.0	BILL 2 - MV & LV DISTRIBUTION NETWORK					
	<u>SECTION 2.1 DISTRIBUTION BOARDS/KIOSKS</u>					
	Supply Distribution Boards/Kiosks complete with all switchgear,Circuit breakers, accessories, sheet metal and all frames, sub-frames, busbars, fixtures and fittings as specified in the wiring diagrams. All Distribution Boards to be fitted in the factory and tested in accordance to specifications. Rate shall include delivery, off loading and storage to site.					
2,1	Supply, connect and install the main metering distribution kiosk, fibre kiosk with two lockable doors with padlocks including 300A copper busbars, cable glands plate, earth bar, all non-current carrying metals and equipment shall be suitably bonded to the earth bar free standing on concrete base, to accommodate three phase meter and the following circuit breakers, switch gear heineman type on the LV Cubicle:	No	1			
a	Supply and install a shelter cage for free standing kiosk mounted on concrete base, with IBR roof sheet, painted, with two lockable doors including two medium padlocks, cage dimension must be; height 1.9m x length1.7m x width1.4m.	No	1			
b	Main Breaker 200A TP MCB 25kA CBI	No	1			
c	150A TP MCB 25kA CBI Switch disconnecter (JSN150)	No	1			
d	125A TP MCB 25kA (CBI black)	No	2			
e	80A 3 Phase 6kA MCB CBI (Black).	No	4			
2.2	Supply, connect and install SU3X24way +SU3 tray distribution board flush mounted with lockable doors complete with busbars, neutral and earth bars, labels, blank covers, provision for future circuit breakers etc to accommodate the switchgear as shown in the drawing shown:	No	1			
a	Main Breaker 100A 3 Phase 10kA CBI (Black).	No	1			
b	63A earth leakage unit 3kA without overload CBI (Black).	No	3			
c	40A SP 3kA CBI (Black).	No	1			
d	30A SP 3kA CBI (Black).	No	1			
e	20A SP 3kA CBI (Black).	No	7			
f	10A SP 3kA CBI (Black).	No	10			
g	Lightning Arrester 400V TP 40kA CBI (Black).	No	1			
TOTAL CARRIED FORWARD SUMMARY OF SECTIONS IN PAGE 77				<i>Sub-Total</i>		

ITEM	DESCRIPTION	UNIT	QTY	RATE (E)	AMOUNT	
					E	Cts
2,2	<u>SECTION 2.2 LV CABLING (600/1000V)</u>					
2.2,1	CABLES					
	PVC insulated, PVC bedded, SWA armoured, PVC Sheathed Cable manufactured to SANS 1507-3 including armour glands, shrouds, lugs and connections.					
a	70 sq. mm 4 core cable.	m	78			
b	25 sq. mm 4 core cable.	m	82			
2.2,2	EARTHING					
a	25 sq. mm	m	68			
b	16 sq. mm	m	88			
2.2,2	CABLE TRENCHING					
	"Rates for trenching shall be inclusive of re-instatement of excavated materials. All sleeves shall be laid on a 150 mm thick bedding of sifted river sand as well as a covering of an equal thickness of the same material where required."					
	All trenches for LV cable shall be excavated to a minimum depth of 500mm below the finished ground level irrespective of the size of sleeve installed.					
	Trenching and re-instatement for 450mm x 500mm measured in linear length.					
a	In hand-pickable soil.	m	35			
b	In soft rock.	m	80			
c	In hard rock.	m	10			
d	PVC danger warning tape installed 150mm above cable.	m	80			
e	Concrete breaking in walls, floors neatly using angle grinder, making good all chases (all chases to be approved by Engineer). Proper plastering and paintwork using existing colour to be undertaken by your skilled labour. All conduits to be neatly installed (flush mounted) and correctly saddled to the satisfaction of Engineer. Ensure to have all occupant's belongings covered up prio to commencement.	Sum	1			
TOTAL CARRIED FORWARD TO NEXT PAGE				<i>Sub-Total</i>		

ITEM	DESCRIPTION	UNIT	QTY	RATE (E)	AMOUNT	
					E	Cts
	<i>Balance brought forward from previous page</i>					
	CABLE SLEEVES					
a	Supply and install 110mm diameter sleeves type NEXTUBE or similar including sealing of sleeve ends excluding excavation.	m	114			
b	Supply and install 75mm diameter sleeves type NEXTUBE or similar including sealing of sleeve ends excluding excavation.	m	65			
c	Supply and install 50mm diameter sleeves type NEXTUBE or similar including sealing of sleeve ends excluding excavation.	m	55			
2.2,3	MANHOLES					
a	Supply and install in ground 450mm x 600mm x 600mm manhole for electrical services complete Light duty steel cover.	No	5			
TOTAL CARRIED TO SUMMARY OF SECTION PAGE 77			<i>Sub-Total</i>			

ITEM	DESCRIPTION	UNIT	QTY	RATE (E)	AMOUNT	
					E	Cts
	SECTION 2.3: TESTING & COMMISSIONING					
a	Test and Commission the complete installation as included in bill 2.	Sum	1			
b	Issue a Certificate of Compliance (CoC) in accordance with the SANS 0142-1 (2001) requirements per installation.	Sum	1			
TOTAL CARRIED TO SUMMARY OF SECTION PAGE 77				<i>Sub-Total</i>		

ITEM	DESCRIPTION	UNIT	QTY	RATE (E)	AMOUNT	
					E	Cts
	<u>BILL 3 - LOWER GROUND FLOOR</u>					
3.1.1	LIGHTING OUTLETS					
a	Allow for disconnecting the existing light fittings and hand over to the client.	No.	69			
b	Allow for reconnecting the light fittings after rewiring has been done.	No.	69			
c	Supply, connect and install the lighting points, conduiting to be complete with 20mm PVC flexible conduit from trunking to lighting fitting, 1.5mm ² wiring and 1.5mm ² insulated earth wire. Rate to include 16A single dedicated socket on installed on trunking	No.	150			
3.1.2	<i>Supply and deliver, accept and store, erect, fix and connect the following light fittings including accessories:</i>					
a	Type F2, 2X18W LED 1228mmX328mm 4ft surface mounted perforated flourescent light fitting complete with 18W T5 LED tubes (Voltex/Lascon M95-228/54-ELB similar or equal approved)	No.	55			
b	5W LED 230V GU10 cool white downlight light fitting with lamp, WACO S65 steel white (J0000104 or equal approved).	No.	73			
c	230V with no ballast round die cast bulkhead alluminium base Black complete with 2X11W LED Lamp all accessories LASCON / VOLTEX or equal approved.	No.	12			
3.1.3	SWITCHES, SOCKETS AND ACCESSORIES					
a	Allow for disconnecting the existing light switches and hand over to the client.	No.	31			
b	Allow for reconnecting the light switches after ceiling has been fixed.	No.	31			
c	Supply and install the lighting switch points, conduiting to be complete with 20mm PVC conduit, 4x2 gem box and accessories, 1.5mm ² wiring and 1.5mm ² insulated earth wire.	No.	44			
	<i>Supply, connect and install the following light switches of crabtree manufacture with white coverplate, craddles, screws, labelling as shown on drawings:</i>					
d	16 Ampere, one lever, one way crabtree.	No.	6			
e	16 Ampere, one lever, two way.	No.	2			
f	16 Ampere, two lever, one way.	No.	2			
g	16 Ampere, two lever, two way.	No.	1			
h	16 Ampere, three lever, one way	No.	1			
i	230V National Daylight Switch	No.	1			
TOTAL CARRIED TO SUMMARY OF SECTIONS PAGE 84			<i>Sub-Total</i>			

ITEM	DESCRIPTION	UNIT	QTY	RATE (E)	AMOUNT		
					E	Cts	
	SECTION 3.2: CHANELLING SYSTEMS						
3.2,1	FLOOR BOXES						
a	Cabstrut access floor box 140mm x 150mm x 75mm with modular outlet plate, epoxy coated, complete with accessories and the following power. 2 x 16Amp 3 pin single S.S.O	No.	2				
3.2,2	SKIRTING TRUNKING						
a	Supply and install aesthetic textured powder coating to hospital grey finish multiskirt power skirting complete with cover plates and rate to include all accessories including bends etc. Cabstrut P801 two Compartment Power Skirting fixed to brick work with cover plates.	m	0				
3.2,3	WIRING TRUNKING						
a	Supply and install pregalvanized steel wiring trunking complete with accessories such as support fixtures, fittings, bends, covers etc. but excluding wiring. 76 x 63 x 0.8 mm wiring duct with 5A knockouts and c/w cover.	m	17				
b	41 x 41 x 1.0 mm wiring trunking (P2000) with 5A knockouts and c/w cover.	m	4				
3.2,5	CABLE TRAYS						
a	Supply and install Medium duty hot dip galvanized welded wire mesh cable tray complete with all accessories and detailed on the drawings. Rate to include all accessories including bends, clamps, support fixtures etc: 300 mm wide, 50 mm high cable tray.	m	5				
TOTAL CARRIED TO SUMMARY OF SECTIONS PAGE 84			<i>Sub-Total</i>				

ITEM	DESCRIPTION	UNIT	QTY	RATE (E)	AMOUNT	
					E	Cts
3.3,1	SECTION 3.3: POWER - GENERAL PURPOSE OUTLETS					
a	Allow for disconnecting the socket outlet switch and hand over to the client.	No.	23			
b	Allow for reconnecting the socket outlet switch after rewiring has been done.	No.	23			
	All socket outlets and isolators to be of crabtree manufacture					
a	Supply, connect and install the socket outlet points of crabtree manufacture. Rate to include conduiting to be complete with 20mm PVC conduit, 40x40 gem box, adaptors, couplings, screws, other accessories and wiring 2.5mm ² conductors and 2.5mm ² insulated earth wire.	No.	29			
3.3,2	SOCKET OUTLETS					
a	220V, 16A, standard 3 pin flush mounted, single switched socket outlet complete with cover	No	9			
b	220V, 16A, standard 3 pin flush mounted, double switched socket outlet complete with cover.	No	4			
c	220V, 16A, red standard 3 pin mounted in wall box or floor box conduit system with shaved earth socket single S.S.O for essential circuits complete with cover.	No	3			
d	Floor box system 208mm x 288mm complete with modular outlets plate, PVC carpet frame, lid, Condiut box. Rate to include 220V 16A, standard 3 pin, socket single S.S.O for essertial socket, data outlet and telephone outlet with cover.	No	0			
e	Wall box 275mm x 66mm complete with 220V, 16A, standard 3 pin, socket single S.S.O for essertial socket, data outlet and telephone outlet with cover.	No	7			
3.3,3	HAND DRIER ISOLATORS					
a	Supply, connect and install the isolator outlet points of crabtree manufacture. Rate to include complete conduiting with 20mm PVC conduit, adaptors, couplings, screws and accessories, wiring 2.5mm ² conductors and 2.5mm ² insulated earth wire and switch socket with white coverplate.	No	5			
b	220V, 30A, single pole isolator, flush mounted.	No	5			
TOTAL CARRIED TO NEXT PAGE				<i>Sub-Total</i>		

ITEM	DESCRIPTION	QTY	UNIT	RATE (E)	AMOUNT	
					E	Cts
	TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE					
3.3,4	HOT WATER BOILER ISOLATORS					
a	Supply, connect and install the isolator outlet points of crabtree manufacture. Rate to include complete conduiting with 20mm PVC conduit, adaptors, couplings, screws and accessories,wiring 4.0mm ² conductors and 2.5mm ² insulated earth wire and switch socket with white coverplate.	No	1			
b	220V, 30A, single pole isolator, flush mounted.	No	1			
3.3,5	FIRE ALARM ISOLATOR					
a	Supply, connect and install the isolator outlet points of crabtree manufacture. Rate to include complete conduiting with 20mm PVC conduit, adaptors, couplings, screws and accessories,wiring 2.5mm ² conductors and 2.5mm ² insulated earth wire and switch socket with white coverplate.	No	1			
b	220V, 30A, single pole isolator, flush mounted.	No	1			
3.3,6	AIRCONDITIONING AND EXTARCTOR FAN ISOLATORS					
a	Supply, connect and install the isolator outlet points of crabtree manufacture. Rate to include complete conduiting with 20mm PVC conduit, adaptors, couplings, screws and accessories,wiring 2.5mm ² conductors and 2.5mm ² insulated earth wire and switch socket with white coverplate.	No	10			
b	220V, 16A, single pole isolator, flush mounted.	No	10			
3.3,5	THREE PHASE ISOLATORS					
a	Supply, connect and install the socket outlet points of crabtree manufacture. Rate to include complete conduiting with 25mm PVC conduit, adaptors, couplings, screws and accessories,wiring 3x6.0mm ² conductors and 4.0mm ² insulated earth wire and switch socket with orange coverplate.	No	1			
b	400V, 30A, triple pole socket outlets, flush mounted.	No	1			
TOTAL CARRIED TO SUMMARY OF SECTIONS PAGE 84		<i>Sub-Total</i>				

ITEM	DESCRIPTION	QTY	UNIT	RATE (E)	AMOUNT	
					E	Cts
	SECTION 3.4: APPLIANCES					
3.4,1	2000W, 240V, fully automatic electric stainless steel hot air hand drier of 30m/s airspeed.	No.	5			
TOTAL CARRIED TO SUMMARY OF SECTIONS PAGE 84				<i>Sub-Total</i>		

ITEM	DESCRIPTION	QTY	UNIT	RATE (E)	AMOUNT	
					E	Cts
	SECTION 3.5: TESTING & COMMISSIONING					
3.5,1	Test and Commission the complete installation.	Sum	1			
3.5,2	Issue a Certificate of Compliance (CoC) in accordance with the SANS 0142-1 (2001) requirements per Distribution Board.	Sum	1			
TOTAL CARRIED TO SUMMARY OF SECTIONS PAGE 84			<i>Sub-Total</i>			

ITEM	DESCRIPTION	AMOUNT	
		E	Cts
	BILL 3 - LOWER GROUND FLOOR SUMMARY OF SECTIONS		
	SECTION 3.1 LIGHTING OUTLETS		
	SECTION 3.2: CHANELLING SYSTEMS		
	SECTION 3.3: POWER - GENERAL PURPOSE OUTLETS		
	SECTION 3.4: APPLIANCES		
	SECTION 3.5: TESTING & COMMISSIONING		
TOTAL CARRIED TO MAIN SUMMARY PAGE 104		<i>Sub-Total</i>	

ITEM	DESCRIPTION	QTY	UNIT	RATE (E)	AMOUNT	
					E	Cts
	BILL 4- PROVISION FOR TELEPHONE AND DATA INSTALLATION					
	Allow a provision for Data/Telephone as specified.					
6,1	RETICULATION AND DISTRIBUTION BOARDS					
a	Telephone Manhole, 820 X 710 X 600mm internal dimensions,formed of one brickwall sides on 60mm thick mass concrete coverslab or cast iron slab cover, with holes as required for sleeves and water proofing around complete.	No.	3			
b	Supply and Install 600 X 600 X 150mm deep flush wall mounted, galvanised Telephone Distribution Board colour white with locked door by spring catch and lock intalled.	No.	3			
c	Flush mounted data draw box 100 X 100mm and galvanised steel draw wire in place	m	90			
6,2	SLEEVES AND CONDUITS					
a	110mm dia. PVC sleeves complete with couplings, adpters	m	34			
b	50mm dia. PVC sleeves complete with couplings, adpters	m	31			
c	Telephone points complete with 20mm dia. PVC conduits, couplings, adpters. Rate to include tubing on walls and slab from distribution board to telephone points and power skirting	No.	20			
d	Data points complete with 20mm dia. PVC conduits, couplings, adpters. Rate to include tubing on walls and slab from saver to data points and power skirting	No.	20			
e	Flush mounted data draw box 100 X 100mm and galvanised steel draw wire in place	m	108			
6,3	TELEPHONE AND DATA OUTLETS					
a	Telephone Socket outlet flush, mounted on power skirting and cluster box.	No.	11			
b	Data outlet flush wall mounted on power skirting and cluster box	No.	8			
TOTAL CARRIED TO MAIN SUMMARY PAGE 104				<i>Sub-Total</i>		

ITEM	DESCRIPTION	QTY	UNIT	RATE (E)	AMOUNT	
					E	Cts
	BILL 5 - FIRE ALARM INSTALLATION					
7,1	FIRE ALARM PANNEL					
a	Supply and install six zone Alarm Annunciator Pannel-Zitron TCP 600 X 600 X 150mm deep flush wall mounted including all accessories.	No.	1			
7,2	FIRE POINTS AND ACCESSORIES					
a	Fire-alarm points in 2x2.5mm ² mineral insulated cables drawn in 25mm dia pvc conduit terminating on the panel.	No.	30			
b	Smoke detector	No.	18			
c	Break Glass contacts	No.	5			
d	Siren	No.	3			
e	Heat detector	No.	2			
7,3	TESTING & COMMISSIONING					
a	Test and Commission the complete installation.	Sum	1			
b	Issue a Certificate of Compliance (CoC) in accordance with the SANS 0142-1 (2001) requirements per Distribution Board.	Sum	1			
c	Fire Specialist Services	Sum	1	E9 500,00	E9 500,00	
TOTAL CARRIED TO MAIN SUMMARY PAGE 104			<i>Sub-Total</i>			

ITEM	DESCRIPTION	QTY	UNIT	RATE (E)	AMOUNT	
					E	Cts
BILL 6- PROVISION FOR AIRCONDITIONING SYSTEM						
6,1	Allow for an amount of Four Hundred and Thirty Thousand Emalangeneni Only for Aircon Installation	Sum	1	E450 000,00	E450 000,00	
TOTAL CARRIED TO MAIN SUMMARY PAGE 104				<i>Sub-Total</i>		

ITEM	DESCRIPTION	UNIT	QTY	RATE (E)	AMOUNT	
					E	Cts
BILL 7 - EARTHING, LIGHTNING PROTECTION & EMC						
7,1	SITE SURVEY					
a	As specified per the engineer specifications. before any installation work can commence on this section the contractor must verify the following and write a report; assessment of site soil conditions, resistivity of the local soil, volume of ground encapsulated by the grid and overall earth resistance. This work is to be undertaken by a earthing specialist. <i>Having verified the site conditions, supply and install lightning protection system using the equipment listed below. Installation to be undertaken by a specialist contractor.</i>	Sum	1			
7,2	AIR TERMINATION SYSTEM					
a	25mm bare copper flat tape.	m	32			
b	25 sq. mm bare copper stranded conductor.	m	16			
c	Copper covered steel earth arials 1.2m long, mounted on the roof as per Engineer instruction.	No	5			
d	"Bond all roof metallic equipment to earth including water gutters, steel columns and roof sheets."	Sum	1			
e	200mm dia. x 200mm precast concrete manholes complete with concrete covers.	No	2			
7,3	DOWN CONDUCTORS					
a	25mm ² Bare Copper Conductors connected from the air termination system to wall mounted inspection box. Rate to include conduiting, chasing to wall all conduit from air termination system to inspection box and all accessories.	m	35			
b	100mm x 100mm Earth Inspection box wall mounted at 350mm above finished floor level. Rate to include 4x4 Fibre glass with sliding door box, adapters, cable lugs, screws and accessories.	No	6			
7,4	EARTH TERMINATION SYSTEM					
a	25mm ² Bare Copper Conductors connected from Inspection box to Earth Spike/Earth mat. Rate to include conduiting, chasing to wall all conduit from inspection box to earth spike/earth mat and all accessories.	m	35			
b	Copper covered steel earth rods class 2, 1.5 m long, driven full length into ground complete with ground buried clamps.	No	2			
7,5	TESTING					
a	Test the installation included in the presence of the Engineer. Rate to include providing all testing equipment	Sum	1			
TOTAL CARRIED TO MAIN SUMMARY PAGE 104				<i>Sub-Total</i>		

ITEM	DESCRIPTION	AMOUNT	
		E	Cts
	<u>MAIN SUMMARY</u>		
	BILL 1 - PRELIMINARY AND GENERAL		
	BILL 2 - MV & LV DISTRIBUTION NETWORK		
	BILL 3 - GROUND FLOOR INSTALLATION		
	BILL 4 - PROVISION FOR TELEPHONE & DATA INSTALLATION		
	BILL 5- FIRE ALARM INSTALLATION		
	BILL 6 - AIRCONDITIONING SYSTEM		
	BILL 7 - EARTHING, LIGHTNING PROTECTION & EMC		
	<i>Sub-Total A</i> →		
	Allow for 10% contingency to the sub-total, to be used as directed by Electrical Engineer or deducted in whole or part if not required →		
	<i>Sub-Total B (Sub total A + Contingencies)</i> →		
	Allow for 1% CIC Levy →		
	<i>Sub-Total C (Sub total B + CIC Levy)</i> →		
	Allow for 15% Value Added Tax (VAT) →		
	Electrical Contractor Stamp		
	TOTAL (SUB TOTAL C + VAT) CARRIED FORWARD TO FORM OF TENDER		