

MAKELLE PRIMARY SCHOOL
SUMMARY: ELECTRICAL WORKS INSTALLATION

SECTION	DESCRIPTION	QTY	AMOUNT	TOTAL
2	MV Reticulation / Upgrade (provisional)	Lot		
3	LV Reticulation	Lot		
4	Administration Block	1		
5	4 Classroom Block	2		
6	Grade R	1		
SUB TOTAL 1				
	TOTAL BID PRICE VAT INCL			

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
2	<u>MV RETICULATION</u>				
2.1	Supply and Install 32kVA 11kV/400V transformer complete with structures and poles. Supply and install fox conductor ACSR	each	1		
<u>Note(s):</u>					
<u>TOTAL FOR BILL - CARRIED FORWARD TO SUMMARY</u>					

ITEM	DESCRIPTION	UNIT	QTY	RATE	TOTAL
3	LV RETICULATION				
3.1	Distribution Kiosks, 3CR12, Powder coated, plinth mounted, complete with equipment as specified				
3.1.1	Main Kiosk	No	1		
3.1.2	Kiosk K1-3	No			
3.1.3	Sub - DB	No			
3.1.4	Plinth	No	1		
3.2	Trenching Excavating, bedding, backfilling, consolidating and making good as specified,				
3.2.1	Pickable soil	m³	63.00		
3.2.2	Hard rock	m³	27.00		
3.2.3	Very hard rock	m³			
3.2.4	Backfilling and compaction	m³	90.00		
3.3	110mm dia PVC sleeves for road crossings/cable entries into the building-rate must include for galv steel draw wires in spare sleeves and sealing of ends	m	20		
3.4	Concrete slabs for crossing of other services - rate must include installation 200mm below existing services	m			
3.5	Cable warning tape, 300mm above cables	m	300		
3.6	Cable markers, above cables	No	5		
3.7	600/1000V PVC SWA cables, in trenches and sleeves, including labels				
TOTAL FOR BILL - CARRIED FORWARD					

TOTAL FOR BILL - BROUGHT FORWARD				
3.7.1	185mm ² 4core	m		
3.7.2	150mm ² 4core	m	0	
3.7.3	95mm ² 4core	m		
3.7.4	70mm ² 4core	m		
3.7.5	50mm ² 4core	m	174	
3.7.6	35mm ² 4core	m	0	
3.7.7	25mm ² 2core	m	0	
3.7.8	16mm ² 4core	m	0	
3.7.9	16mm ² 3core	m	0	
3.7.10	10mm ² 3core	m	259	
3.7.11	6mm ² 4core	m		
3.7.12	4mm ² 2core	m		
3.7.13	2.5mm ² 2core	m		
3.8	600/1000V Cable terminations, for PVC PVC SWA PVC Cu cables, for indoor or outdoor use, as required			
3.8.1	Gland no 5 complete with shroud	No	2	
3.8.2	Gland no 4 complete with shroud	No	0	
3.8.3	Gland no 3 complete with shroud	No	10	
3.8.4	Gland no 2 complete with shroud	No	0	
3.9	Earth conductors (HDHC), including ends			
3.9.1	95mm ²	m		
3.9.2	35mm ²	m	174	
3.9.3	25mm ²	m	0	
3.9.4	16mm ²	m	0	
3.9.5	10mm ²	m	0	
3.9.6	6mm ²	m	259	
3.9.7	4mm ²	m		
3.10	Testing of this section in the presence of the Employer and/or the Engineer, including all equipment, power generator, etc.	No	1	
TOTAL FOR BILL - CARRIED FORWARD TO SUMMARY				

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
4	<u>ADMINISTRATION BLOCK</u>				
4.1	General trenching work for sleeves along the routes as pegged out on site after co-ordination with other services Allowance must be made for the sifting of soil when required, removal and carting away of all stones and rocks including dumping off site. Backfilling and compaction shall be carried out as specified for overall siteworks.				
4.1.1	Trenching through floor for sleeves	m ³			
4.1.2	Excavation and backfilling in soft soil	m ³			
4.1.3	Excavation and backfilling in hard rock	m ³			
4.2	Cable and Data Sleeves Supply and installation of PVC Sleeves through floor construction to power distribution board and communication board complete with standard radius sleeve bends				
4.2.1	75mm Diameter for Data Radius bends:	m	30		
4.2.2	75mm Diameter	No			
4.2.3	110mm Diameter	No			
4.3	Draw Wires Supply and install a 0.6mm diameter galvanised draw wire in sleeves and conduit for data installation	m	750		
4.4	Distribution Boards Supply, delivery, storage and submission of workshop drawings for the Flush mounted architrave steel type power distribution boards complete with flush trays, doors, switch gear mounting trays, copper busbars, neutral and earth bars, correctly sized interna				
4.4.1	Distribution Board (DB-ADM)	No.	1		
TOTAL FOR BILL - CARRIED FORWARD					

TOTAL FOR BILL - BROUGHT FORWARD					
4.5	Low Voltage PVC Cables Supply and installation of PVC SWA PVC cable and Bare Copper Earth Wire in sleeves and in trenches				
4.5.1	25mm 4 core PVC SWA Cable	m			
4.5.2	16mm BCEW	m			
	Terminations:				
4.5.3	25mm 4 core cable	No			
4.5.4	16mm BCEW	No			
4.6	Conduit Work Supply, delivery and installation of SABS approved PVC / Galvanised Conduits completed with all required conduit accessories. Built or Chase into brick or concrete work:				
4.6.1	20mm PVC Conduit	m			
4.6.2	25mm PVC Conduit In Ceiling space and Timber work or along Purlins	m	300		
4.6.3	20mm PVC Conduit	m	450		
4.6.4	Conduit Boxes Supply and installation of SABS approved conduit boxes, installed in the run of the conduit installation, cast into concrete and built into brickwork or flush inside false ceiling spaces, complete with all required conduit termination accessories.				
4.6.6	20mm diameter 4 way type(round box)	No	35		
4.7	Wall Boxes Supply and installation of SABS approved galvanised pressed steel wall boxes for building flush into brickwork or cast into concrete work. Flush mounted type:				
4.7.1	100 x 50 x 50mm	No	18		
4.7.2	100 x 100 x 50mm	No	14		
TOTAL FOR BILL - CARRIED FORWARD					

TOTAL FOR BILL - BROUGHT FORWARD					
4.8	PVC Wiring in conduits:				
4.8.1	2.5mm ² for lights circuits	m	1080		
4.8.2	4mm ² for plug sockets circuits	m	1170		
	Stranded Bare Copper Earth Wire				
	Supply and installation of stranded bare copper earth wire along with PVC wiring in conduits. Tendered rates shall make provision for wastage.				
4.8.3	1.5mm ²	m	1080		
4.9	Light Switches				
	Supply and installation of SABS approved type 16A flush and surface type light switches. Final paint finishes shall be confirmed at a later stage, allowance shall however be made as specified in the general specification. All boxes for flush mounting measured somewhere				
4.9.1	1 Lever 1 way stainless steel light switches supplied by Cbi or equivalent	No	16		
4.9.2	1 Lever 2 way stainless steel light switches supplied by Cbi or equivalent	No	2		
4.9.3	2 Lever 1 way stainless steel light switches supplied by Cbi or equivalent	No	1		
4.9.4	Photo cell	No	1		
4.9.4	360 Degree Occupancy Sensors	No	2		
4.10	Socket Outlets				
	Supply and installation of SABS approved switched and unswitched type flush and surface mounted type 16A switched socket outlets suitable for mounting in flush steel wall boxes or in steel pedestal units or on surface.				
	The final colour of the paint finish shall be confirmed at a later stage, allowance shall be made as specified in the specification.				
	All flush type boxes and special pedestals measured elsewhere.				
	Flush switched sockets type:				
4.10.1	16A 3 pin single socket outlets stainless steel light switches supplied by Cbi or equivalent	No	13		
4.10.2	16A 3 pin double socket outlets stainless steel light switches supplied by Cbi or equivalent	No	1		
4.10.3	Type D: Wall mounted power cluster socket outlets	No	7		
TOTAL FOR BILL - CARRIED FORWARD					

TOTAL FOR BILL - BROUGHT FORWARD				
4.11	Light Fittings			
	Supply, delivery to site, storage and installation of the below specified light fittings complete with lamps, fixing material, mounting and tubes. Allowance must be made in the rates for all the required fixing materials and accessories.			
	Fittings to be equal and similar approved to the below quoted manufacture.			
4.11.1	Type F1: 2x18W 1200mm T5 Open Channel Fluorescent Light	No	26	
4.11.2	1200mm 2x18W LED vapourproof fluorescent luminaire	No	5	
4.11.3	10W LED Rondo downlight	No	23	
4.11.4	15W LED Round Bulkhead Without Dali Modification	No	4	
4.11.5	30W LARVIK IP67 FloodLight	No	2	
4.12	Electrical Tests			
	Making provision for the required inspection, tests and the commissioning of the complete installation and the issuing of the required certificate.			
4.12.1	Building installation	Sum	1	
4.13	Others			
4.13.1	300 x 300mm - Telephone & Data DB	No	1	
4.13.2	100 x 100 x 50mm - Draw box for Communication complete with blank cover	No		
4.13.3	2 compartment power skirting installed in offices	m	40	
4.13.4	Socket outlet points on Powerskirting; must include draw box, blank cover plate, etc,	No	12	
4.13.4	Telephone points on Powerskirting; must include draw box, blank cover plate, etc,	No	4	
4.13.5	Data points on Powerskirting; must include draw box, blank cover plate, etc,	No	12	
4.13.6	5A 2pole Isolator, in suitable York Box, for HVAC	No	2	
4.13.7	16A 2pole Isolator, in suitable York Box, for HVAC	No	2	
4.13.8	20A 2pole Isolator, in suitable York Box, for HVAC	No	1	
4.13.9	40A Isolator points with complete and suitable fitting, for geyser or cooker	No	1	
4.13.10	Provide the sum of R6,000.00 for the supply and installation of school motorised siren c/w timer	Sum	1	
4.13.11	Provide the sum of R15,000.00 for the supply and installation of school Alarm system	Sum	1	
TOTAL FOR BILL - CARRIED FORWARD TO SUMMARY				R 0.00

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
5	FOUR CLASSROOM				
5	Excavation and Trenching MV Reticulation General trenching work for sleeves along the routes as pegged out on site after co-ordination with other services Allowance must be made for the sifting of soil when required, removal and carting away of all stones and rocks including dumping off site. Backfilling and compaction shall be carried out as specified for overall siteworks.				
5..1	Trenching through floor for sleeves	m ³			rate only
5..2	Excavation and backfilling in soft soil	m ³			rate only
5..3	Excavation and backfilling in hard rock	m ³			rate only
5.2	Cable and Data Sleeves Supply and installation of PVC Sleeves through floor construction to power distribution board and communication board complete with standard radius sleeve bends				
5.2.1	50 mm Diameter for Power Cables	m	30		
5.2.2	110mm Diameter for power cable	m			rate only
	Radius bends:				
5.2.3	75mm Diameter	No			rate only
5.2.4	110mm Diameter	No			rate only
5.3	Draw Wires Supply and install a 0,6mm diameter galvanised draw wire in sleeves and conduit for data installation	m	610		
5.4	Distribution Boards Supply, delivery, storage and submission of workshop drawings for the Flush mounted architrave steel type power distribution boards complete with flush trays, doors, switch gear mounting trays, copper busbars, neutral and earth bars, correctly sized internal				
5.5.	Supply and install a Distribution Board	No.	1		
TOTAL FOR BILL - CARRIED FORWARD					

TOTAL FOR BILL - BROUGHT FORWARD				
5.5	Low Voltage PVC Cables Supply and installation of PVC SWA PVC cable and Bare Copper Earth Wire in sleeves and in trenches			
5.5.1	10mm 4 core PVC SWA Cable	m		rate only
5.5.2	4mm BCEW	m		rate only
	Terminations:			
5.5.3	16mm 2 core cable	No		rate only
5.5.4	10mm BCEW	No		rate only
5.6	Conduit Work Supply, delivery and installation of SABS approved PVC Conduits completed with all required conduit accessories. Built or Chase into brick or concrete work:			
5.6.1	20mm PVC conduit	m		rate only
5.6.2	25mm PVC conduit	m	280	
	In Ceiling space and Timber work or along Purlins			
5.6.3	20mm PVC conduit	m	330	
5.6.4	25mm PVC conduit	m		rate only
5.7	Supply and installation of SABS approved conduit boxes, installed in the run of the conduit installation, cast into concrete and built into brickwork or flush inside false ceiling spaces, complete with all required conduit termination accessories.			
5.7.1	20mm diameter 4 way type (round box)	No	15	
5.7	Wall Boxes Supply and installation of SABS approved galvanised pressed steel wall boxes for building flush into brickwork or cast into concrete work. Flush mounted type:			
5.7.1	100 x 50 x 50mm	No	8	
5.7.2	100 x 100 x 50mm	No	8	
TOTAL FOR BILL - CARRIED FORWARD				

TOTAL FOR BILL - BROUGHT FORWARD					
5.8	PVC Wiring in conduits:				
5.8.1	2.5mm ² for lights circuits	m	660		
5.8.2	4mm ² for plug sockets circuits	m	840		
	Stranded Bare Copper Earth Wire				
	Supply and installation of stranded bare copper earth wire along with PVC wiring in conduits. Tendered rates shall make provision for wastage.				
5.8.3	2.5mm ²	m	660		
5.8.4	4mm ²	m			rate only
5.9	Light Switches				
	Supply and installation of SABS approved type 16A flush and surface type light switches. Final paint finishes shall be confirmed at a later stage, allowance shall however be made as specified in the general specification.				
5.9.1	1 Lever 1 way	No	8		
5.9.2	2 Lever 2 way	No			rate only
5.9.3	3 Lever 2 way	No			rate only
5.9.4	3 Lever 1 way	No			rate only
5.9.5	Photo cell	No	1		
5.9.6	Motion Sensor	No			rate only
5	Socket Outlets				
	Supply and installation of SABS approved switched and unswitched type flush and surface mounted type 16A switched socket outlets suitable for mounting in flush steel wall boxes or in steel pedestal units or on surface.				
	The final colour of the paint finish shall be confirmed at a later stage, allowance shall be made as specified in the specification.				
	All flush type boxes and special pedestals measured elsewhere.				
	Flush switched sockets type:				
5.0.1	16A double socket outlets - ZA plug	No	8		
TOTAL FOR BILL - CARRIED FORWARD					

TOTAL FOR BILL - BROUGHT FORWARD					
5.1	Light Fittings Supply, delivery to site, storage and installation of the below specified light fittings complete with lamps, fixing material, mounting and tubes. Allowance must be made in the rates for all the required fixing materials and accessories. Fittings to be equal and similar approved to the below quoted manufacturer.				
5.1.1	Type F1: 2x14W 600mm LED decorative fluorescent light	No			rate only
5.1.2	Type W1: 2x14W 600mm LED decorative vapour fluorescent light	No			rate only
5.1.3	1200x600mm 60W Recessed LED panel without dali modification	No			rate only
5.1.4	200W LED High Bay Pendant	No			rate only
5.1.5	1200mm 2x28W LED open channel fluorescent luminaire	No	20		
	1200mm 2x28W LED vapourproof fluorescent luminaire	No	4		
5.1.6	15W LED Round Bulkhead Without Dali Modification	No	5		
5.2	Electrical Tests Making provision for the required inspection, tests and the commissioning of the complete installation and the issuing of the required certificate.				
5.2.1	Building installation	Sum	1		
5.4	Others				
5.5.	300 x 300mm - Telephone & Data DB	No			rate only
5.5.2	100 x 100 x 50mm - Draw box for Communication complete with blank cover	No			rate only
5.5.3	2 compartment power skirting installed in offices	m			rate only
TOTAL FOR BILL PER BLOCK (3X FLOORS)- CARRIED FORWARD TO SUMMARY					

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
6	GRADE R CLASSROOM				
6.1	Excavation and Trenching MV Reticulation General trenching work for sleeves along the routes as pegged out on site after co-ordination with other services Allowance must be made for the sifting of soil when required, removal and carting away of all stones and rocks including dumping off site. Backfilling and compaction shall be carried out as specified for overall siteworks.				
6.1.1	Trenching through floor for sleeves	m ³			rate only
6.1.2	Excavation and backfilling in soft soil	m ³			rate only
6.1.3	Excavation and backfilling in hard rock	m ³			rate only
6.2	Cable and Data Sleeves Supply and installation of PVC Sleeves through floor construction to power distribution board and communication board complete with standard radius sleeve bends				
6.2.1	50 mm Diameter for Power Cables	m	30		
6.2.2	110mm Diameter for power cable	m			rate only
	Radius bends:				
6.2.3	75mm Diameter	No			rate only
6.2.4	110mm Diameter	No			rate only
6.3	Draw Wires Supply and install a 0,6mm diameter galvanised draw wire in sleeves and conduit for data installation	m	550		
6.4	Distribution Boards Supply, delivery, storage and submission of workshop drawings for the Flush mounted architrave steel type power distribution boards complete with flush trays, doors, switch gear mounting trays, copper busbars, neutral and earth bars, correctly sized internal				
6.6.1	Supply and install a Distribution Board	No.	1		
TOTAL FOR BILL - CARRIED FORWARD					

TOTAL FOR BILL - BROUGHT FORWARD					
6.5	Low Voltage PVC Cables Supply and installation of PVC SWA PVC cable and Bare Copper Earth Wire in sleeves and in trenches				
6.5.1	10mm 4 core PVC SWA Cable	m			rate only
6.5.2	4mm BCEW	m			rate only
	Terminations:				
6.5.3	16mm 2 core cable	No			rate only
6.5.4	10mm BCEW	No			rate only
6.6	Conduit Work Supply, delivery and installation of SABS approved PVC Conduits completed with all required conduit accessories. Built or Chase into brick or concrete work:				
6.6.1	20mm PVC conduit	m			rate only
6.6.2	25mm PVC conduit	m	250		
	In Ceiling space and Timber work or along Purlins				
6.6.3	20mm PVC conduit	m	300		
6.6.4	25mm PVC conduit	m			rate only
6.7	Supply and installation of SABS approved conduit boxes, installed in the run of the conduit installation, cast into concrete and built into brickwork or flush inside false ceiling spaces, complete with all required conduit termination accessories.				
6.7.1	20mm diameter 4 way type(round box)	No	15		
6.7	Wall Boxes Supply and installation of SABS approved galvanised pressed steel wall boxes for building flush into brickwork or cast into concrete work. Flush mounted type:				
6.7.1	100 x 50 x 50mm	No	8		
6.7.2	100 x 100 x 50mm	No	10		
TOTAL FOR BILL - CARRIED FORWARD					

TOTAL FOR BILL - BROUGHT FORWARD				
6.8	PVC Wiring in conduits:			
6.8.1	2.5mm ² for lights circuits	m	600	
6.8.2	4mm ² for plug sockets circuits	m	750	
	Stranded Bare Copper Earth Wire			
	Supply and installation of stranded bare copper earth wire along with PVC wiring in conduits. Tendered rates shall make provision for wastage.			
6.8.3	2.5mm ²	m	600	
6.8.4	4mm ²	m		rate only
6.9	Light Switches			
	Supply and installation of SABS approved type 16A flush and surface type light switches. Final paint finishes shall be confirmed at a later stage, allowance shall however be made as specified in the general specification.			
6.9.1	1 Lever 1 way	No	8	
6.9.2	2 Lever 2 way	No		rate only
6.9.3	3 Lever 2 way	No		rate only
6.9.4	3 Lever 1 way	No		rate only
6.9.5	Photo cell	No	1	
6.9.6	Motion Sensor	No		rate only
6.1	Socket Outlets			
	Supply and installation of SABS approved switched and unswitched type flush and surface mounted type 16A switched socket outlets suitable for mounting in flush steel wall boxes or in steel pedestal units or on surface.			
	The final colour of the paint finish shall be confirmed at a later stage, allowance shall be made as specified in the specification.			
	All flush type boxes and special pedestals measured elsewhere.			
	Flush switched sockets type:			
6.10.1	16A double socket outlets - ZA plug	No	10	
TOTAL FOR BILL - CARRIED FORWARD				

TOTAL FOR BILL - BROUGHT FORWARD				
6.11	Light Fittings Supply, delivery to site, storage and installation of the below specified light fittings complete with lamps, fixing material, mounting and tubes. Allowance must be made in the rates for all the required fixing materials and accessories. Fittings to be equal and similar approved to the below quoted manufacturer.			
6.11.1	Type F1: 2x14W 600mm LED decorative fluorescent light	No		rate only
6.11.2	Type W1: 2x14W 600mm LED decorative vapour fluorescent light	No		rate only
6.11.3	1200x600mm 60W Recessed LED panel without dali modification	No		rate only
6.11.4	200W LED High Bay Pendant	No		rate only
6.11.5	1200mm 2x28W LED open channel fluorescent luminaire	No	8	
	1200mm 2x28W LED vapourproof fluorescent luminaire	No	3	
6.11.6	15W LED Round Bulkhead Without Dali Modification	No	4	
6.12	Electrical Tests Making provision for the required inspection, tests and the commissioning of the complete installation and the issuing of the required certificate.	Sum	1	
6.12.1	Building installation			
6.14	Others			
6.16.1	300 x 300mm - Telephone & Data DB	No		rate only
6.16.2	100 x 100 x 50mm - Draw box for Communication complete with blank cover	No		rate only
6.16.3	2 compartment power skirting installed in offices	m		rate only
TOTAL FOR BILL PER BLOCK (3X FLOORS)- CARRIED FORWARD TO SUMMARY				