

**ADDENDUM TO BILLS OF QUANTITIES (TO BE USED BY BIDDERS) FOR  
PROPOSED REFURBISHMENT OF ELECTRICAL POWER SUPPLY DISTRIBUTION  
TO KENYA CIVIL AVIATION AUTHORITY'S STATIONS.**

**CONTRACT PRELIMINARIES**

<b>ITEM</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>RATE</b>	<b>KSHS</b>
1	Discrepancies clause 1.02				
2	Conditions of sub-contract Agreement clause 1.03				
3	Payments clause 1.04				
4	Site location clause 1.06				
5	Scope of Contract Works clause 1.08				
6	Extent of the Contractor's Duties clause 1.09				
7	Firm price contract clause 1.12				
8	Variation clause 1.13				
9	Prime cost and provisional sum clause 3.14 (insert profit and attendance which is a percentage of expended PC or provisional sum.)				
10	Bond clause 1.15				
11	Government Legislation and Regulations clause 1.16				
12	Import Duty and Value Added Tax clause 1.17 (Note this clause applies for materials supplied only. VAT will also be paid by the sub-contractor as allowed in the summary page)				
13	Insurance company Fees clause 1.18				
14	Provision of services by the Main contractor clause 1.19				
15	Samples and Materials Generally clause 1.21				
	<b>SUB-TOTAL CARRIED TO PAGE H/3</b>				

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSHS
16	Supplies clause 1.20				
17	Bills of Quantities clause 1.23 Contractor's Office in Kenya clause 1.24				
18	Builder's Work clause 1.25				
19	Setting to work and Regulating system clause 1.29				
20	Identification of plant components clause 1.30				
21	Working Drawings clause 1.32				
22	Record Drawings(As Installed) and Instructions clause 1.33				
23	Maintenance Manual clause 1.34				
24	Hand over clause 1.35				
25	Painting clause 1.36				
26	Testing and Inspection – manufactured plant clause 1.38				
27	Testing and Inspection – Installation clause 1.39  Storage of Materials clause 1.41  Initial Maintenance clause 1.42				
<b>SUB-TOTAL CARRIED TO PAGE H/3</b>					

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSHS
29	Local and other Authorities notices and fees clause 1.60				
30	Temporary Works clause 1.63				
31	Patent Rights clause 1.64				
32	Mobilization and Demobilization Clause 1.65				
33	Extended Preliminaries Clause 1.66 (see Appendix - clause 1.70)				
34	Supervision by Engineer and Site Meetings Clause 1.67	1	Item	500,000	500,000.00
35	Allow for profit and Attendance for the above				
36	Amendment to Scope of Sub-contract Works Clause 1.68				
37	Contractor obligation and Employers Obligation clause 1.69.				
	<b>Sub-total above</b>				
	<b>Sub-total brought forward from page H-1</b>				
	<b>Sub-total brought forward from page H-2</b>				
	<b>TOTAL FOR SCHEDULE No. 1- PRELIMINARIES- CARRIED FORWARD TO GRAND SUMMARY PAGE H/35</b>				

**BILL No. 1 - ELECTRICAL INSTALLATION WORKS**

**SCHEDULE No. 1: JOMO KENYATTA (JKIA)**

Item	Description	Qty	Unit	Rate Kshs	Cost Kshs
	<b>SUPPLY, DELIVER, INSTALL, TEST AND COMMISSION THE FOLLOWING:-</b>				
A	Allow for proper cable management & labelling of the existing but untidy cabling.	1	Item		
B	Careful decommissioning and removal of the obsolete/ malfunctioned/ dilapidated/vandalised electrical items/ fittings, power distribution panels/ boards and associated switchgears. Carefully store and arrange for handing over to client.	1	Item		
C	Testing the status of existing earthing/ grounding system using appropriate electrical test equipment and compile formal report. If required allow for the appropriate remedial works to reinstate to the recommended functional status.	1	Item		
D	Allow for assement, troubleshooting, testing by appropriate electrical test equipment and compile formal report and making good electrical faults associated with phase inbalancing on the existing clean power distribution panel	1	Item		
	<b>JKIA Airport - Power Room</b>				
1.0	95 mm <sup>2</sup> 4-C PVC/SWA/PVC copper cable for AVS bypass, drawn in cable tray / trunking c/w appropriate cable lugs as East African Cable (EAC) or approved equivalent ( <b>Provisional quantity - Actual length to be confirmed on site</b> )	30	Lm		
	i) Cable glands for above cable	2	No.		
2.0	250A TPN Manual bypass switch & Isolator switch for above AVS wall mounted c/w housing and all other necessary accessories as <b>ABB/Schneider</b> or approved equivalent	1	No.		
3.0	10mm <sup>2</sup> 4-C PVC/SWA/PVC copper cable for interconnection between the new LV Board panels (to be located in the new power room) and individual changeovers switches for the existing 2No. UPSs & 2No. Distribution boards, drawn in cable tray / trunking c/w appropriate cable lugs & glands as East African Cable (EAC) or approved equivalent ( <b>Provisional quantity - Actual length to be confirmed on site</b> )	80	Lm		
4.0	As detto but 6mm <sup>2</sup> 4-C PVC/SWA/PVC copper cable	40	Lm		
5.0	175A TPN Manual changeover switch wall mounted c/w all other necessary accessories as <b>ABB/Schneider</b> or approved equivalent	1	No.		
	<b>Total for carried forward to the Next page</b>				

Item	Description	Qty	Unit	Kshs.
	<b>Total Brought forward from the previous page</b>			
6.0	63A TPN Manual changeover switch wall mounted c/w all other necessary accessories as <b>ABB/Schneider</b> or approved equivalent	2	No.	
7.0	As detto but 32A TPN	2	No.	
8.0	Power points comprising wiring in 5 x 6.0mm <sup>2</sup> SC PVC insulated CU cables drawn in cable tray / trunking complete with all necessary accessories, to and from the UPS. (Avg. cable run of 10m)	2	No.	
9.0	63A 5 Pin Industrial socket outlets for item above as Legrand or approved equivalent and labelled "As per application"	2	No.	
10.0	63A TPN Manual bypass switch & Isolator switch for above UPS wall mounted c/w housing and all other necessary accessories as <b>ABB/Schneider</b> or approved equivalent	1	No.	
11.0	Power points for extract fans comprising wiring in 5 x 4.0mm <sup>2</sup> PVC/SC/CU cables drawn in trunking complete with all necessary accessories	2	No.	
12.0	25A TPN, 50Hz moulded isolator c/w waterproof housing for item above as Legrand or approved equivalent	2	No.	
13.0	10-Way Modular type, free standing power distribution panel board for floor mounting with both rear and front access panels, cable manager compartments, metal clad 14SWG, 415 mains L.V Switch Board manufactured to BS EN60 439-1, form 2b separation and fully wired for one incoming MCCB and 10No. TP outgoing feeders as described here below with the following and all the other necessary accessories:	2	Item	
	i) 250 Amps 4 pole copper busbars			
	ii) 40x10mm earth bar;			
	iii) 160A TPN MCCB main Incomer, adjustable as <b>ABB/Schneider</b> or Equal and approved			
	iv) 1No. 80A TPN MCCB			
	v) 4No. 63A TPN MCCB			
	vi) 1No. 32A TPN MCCB			
	vii) 1No. 63A SPN MCCB			
	viii) 2No Spare ways;			
	ix) Set of digital energy multimeter (complete with current transformers and fuse holder/fuses) for indication of voltage, current, kW, kWh, KVA, power factor, etc.			
	x) 25kA, 415V three-phase surge diverter as Furse ESP 415			
	xi) All necessary interconnecting cables;			
14.0	300x75mm, 14SWG cable tray c/w mounting row bolts and all other necessary accessories	40	Lm	
	<b>Total for carried forward to the Next page</b>			

Item	Description	Qty	Unit		Kshs.
	<b>Total Brought forward from the previous page</b>				
	<b>Tower - Power rooms (upper floor)</b>				
15.0	Lighting points wired in 3 x 1.5mm <sup>2</sup> PVC/SC CU cables drawn in 20mmØ surface mounted HG/PVC conduits complete with all necessary accessories but excluding switches for 2way switching.	10	No.		
15.1	10A, moulded plastic ivory white switch plates as MK or approved equivalent as follows:- i) One gang two way ii) Two gang two way	2 3	No. No.		
1.11	20A, unswitched fused spur DP control switch with neon light and cord outlet for item above as MK or approved equivalent	1	No.		
16.0	Standard Recessed 600 X 600mm coolday LED Panel Light with 40watts, pf >0.9, CCT - 6500K, 100-240V, THD <15% and 50,000hrs c/w all the necessary accessories, as PHILLIPS or approved equivalent.	10	No		
16.1	As detto but EMERGENCY version with rechargeable battery for 3 hour duration	2	No		
17.0	Clean/UPS power socket outlet power points comprising wiring in 3 x 2.5mm <sup>2</sup> PVC/SC CU cables drawn in trunking including all accessories but excluding plates	3	No.		
18.0	13A Non-Standard switched socket outlet plates in moulded <i>Red colour</i> complete with with neon indicator and universal multiplug as MK or approved equivalent as follows: i) Twin switched	5	No.		
19.0	Power points comprising wiring in 5 x 10.0mm <sup>2</sup> SC PVC insulated CU cables drawn in cable tray / trunking complete with all necessary accessories, to and from the UPS. (Avg. cable run of 10m)	2	No.		
20.0	63A TPN Manual bypass switch & Isolator switch for above UPS wall mounted c/w housing and all other necessary accessories as <b>ABB/Schneider</b> or approved equivalent	1	No.		
21.0	10mm <sup>2</sup> 4-C PVC insulated CU cables drawn in cable tray / trunking /38 mm Ø HG PVC conduits concealed in building fabric complete with all the necessary accessories wired to bypass the UPS.	10	Lm		
22.0	150A, 6-Way, TPN DB surface/flush mounted as Schneider or approved equivalent	2	No.		
23.0	SP Miniature circuit breakers for the distribution boards above i) 10A SP MCB ii) 20A SP MCB iii) 30A SP MCB iv) 63A TP MCB v) 45A SP MCB vi) TP blanking plates	2 5 6 2 2 2	No. No. No. No. No. No.		
	<b>Total for carried forward to the Next page</b>				

Item	Description	Qty	Unit	Kshs.
<b>Total Brought forward from the previous page</b>				
<b>JKIA Radar</b>				
24.0	120 mm <sup>2</sup> 4-C PVC/SWA/PVC copper cable for AVS bypass, drawn in cable tray / trunking c/w appropriate cable lugs as East African Cable (EAC) or approved equivalent ( <b>Provisional quantity - Actual length to be confirmed on site</b> )	10	Lm	
	i) Cable glands for above cable	2	No.	
25.0	300A TPN Manual bypass switch & Isolator switch for above AVS wall mounted c/w housing and all other necessary accessories as <b>ABB/Schneider</b> or approved equivalent	1	No.	
26.0	150x75mm, 14SWG cable tray c/w mounting row bolts and all other necessary accessories	30	Lm	
27.0	Allow for labelling the distribution boards (both new and existing) under this section including all the incoming and outgoing circuits as per the specifications to Engineer's approval.	1	Item	
28.0	Allow for 4 sets (in A1 coloured print outs and soft copy in PDF format) of "As installed" drawings and Schematic wiring diagram to Engineer's approval and to be pinned at the station.	1	Item	
28.1	Supply and install 40x10mm compensation of potential main earth copper bar with porcelain insulators and provisions for connections to water pipes, cooking gas system, lightning protection system, main power switching panel and other utilities	1	Item	
<b>FIRE ALARM SYSTEM</b>				
29.0	Fire Alarm points comprising wiring in 1.5mm <sup>2</sup> heat resistant cables drawn in 20mmØ concealed HG PVC conduits	5	No.	
30.0	Addressable Photoelectric Smoke Detector as Menvier or Approved Equivalent	4	No.	
31.0	Addressable Rate of Rise Heat Detector as Menvier or Approved equivalent	1	No.	
32.0	Addressable Manual Fire Alarm 'Break Glass' call points as MENVIER or approved equivalent.	3	No.	
33.0	Addressable Electronic Fire Alarm sounder complete with Red Flashing beacon as MENVIER or approved equivalent.	2	No.	
34.0	Microprocessor based 1-Loop Addressable Fire Alarm Control Panel as Menvier or Approved Equivalent	1	No.	
<b>TOTAL FOR JKIA C/F TO COLLECTION PAGE H/15</b>				

**SCHEDULE No. 2: STONY ATHI**

Item	Description	Qty	Unit	Rate Kshs	Cost Kshs
	<b>Supply, Install, Test and Commission the following</b>				
A	Allow for proper cable management & labelling of the existing but untidy cabling.	1	Item		
B	Testing the status of existing earthing/ grounding system using appropriate electrical test equipment and compile formal report. If required allow for the appropriate remedial works to reinstate to the recommended functional status.	1	Item		
1.0	10mm <sup>2</sup> 2-C PVC/SWA/PVC copper cable c/w appropriate cable lugs from Power intake to changeover unit as EAC or approved equivalent <b>(Provisional quantity - Actual length to be confirmed on site)</b>	20	Lm		
	i) Cable glands for above cables	4	No.		
2.0	Allow for disconnecting the existing 6mm <sup>2</sup> 4-C PVC/SWA /PVC cable from Meter Box to changeover unit, stripping into separate cores and rewiring/reorganizing and re-termination	1	Item		
	i) cable glands for re-termination	2	No.		
	ii) cable lugs for the above cables	2	No.		
3.0	2.5 mm <sup>2</sup> 19-Core signal control cables for the generator sensor drawn in 20mmØ HG PVC conduits complete with all necessary accessories	15	Lm		
4.0	Trenching at an average depth of 750 mm laying, tilling and backfilling for the signal control cable above	10	Lm		
5.0	Interlocking concrete tiles marked DANGER-HATARI	25	No.		
	<b>UPS</b>				
6.0	3 x 4 mm <sup>2</sup> SC PVC insulated copper cable for UPS Bypass switch drawn in cable tray / trunking c/w appropriate cable lugs as East African Cable (EAC) or approved equivalent	10	Lm		
7.00	25A SPN Manual bypass switch & Isolator switch for above UPS wall mounted c/w housing and all other necessary accessories as ABB/Schneider or approved equivalent	1	No.		
	<b>Total for carried forward to the Next page</b>				



Item	Description	Qty	Unit		Kshs.
<b>Total Brought forward from the previous page</b>					
8.0	6Ways SPN flush mounted Consumer Unit complete with 100A integral isolator as Schneider or approved equivalent	1	No.		
9.0	SP Miniature circuit breakers as Schneider or approved equivalent for item above.				
	(i) 45A SP MCB	1	No.		
	(ii) 32A SP MCB	1	No.		
	(iii) 20A SP MCB	1	No.		
	(iv) 10A SP MCB	1	No.		
	vi) Blanking plates	2	No.		
10.0	Construct 300mm x 450mm x 600mm deep concrete manhole complete with concrete metal waterproof cover as per technical specifications to Engineer's approval	1	Item		
11.0	Standard dual tariff weather proof meter box fabricated from steel sheet 16SWG Deep Powder coated complete with meter viewing Perspex windows and all the necessary accessories to Engineer's approval	1	Item		
12.0	Allow for labelling the distribution boards (both new and existing) under this section including all the incoming and outgoing circuits as per the specifications to Engineer's approval.	1	Item		
13.0	Allow for 4 sets (in A1 coloured print outs and soft copy in PDF format) of "As installed" drawings and Schematic wiring diagram to Engineer's approval and to be pinned at the station.	1	Item		
<b>TOTAL FOR STONY ATHI C/F TO COLLECTION PAGE H/15</b>					

**SCHEDULE No. 3: NGONG HILLS**

Item	Description	Qty	Unit	Rate Kshs	Cost Kshs
<b>Supply, Install, Test and Commission the following</b>					
A	Allow for proper cable management & labelling of the existing but untidy cabling.	1	Item		
B	Testing the status of existing earthing/ grounding system using appropriate electrical test equipment and compile formal report. If required allow for the appropriate remedial works to reinstate to the recommended functional status.	1	Item		
<b>DVOR</b>					
1.0	10mm <sup>2</sup> 2-C PVC/SWA/PVC copper cable c/w appropriate cable lugs from KPLC meterboard to changeover	20	Lm		
	i) Cable glands for above cable	2	No.		
2.0	10mm <sup>2</sup> 2-C PVC/SWA/PVC copper cable c/w appropriate cable lugs from generator to changeover	50	Lm		
	i) Cable glands for above cable	2	No.		
3.0	2.5 mm <sup>2</sup> 19-C signal control PVC CU cables drawn in 20mmØ XLPE/PVC conduits complete with all necessary accessories for genset	50	Lm		
4.0	Standard IP54 feeder pillar, complete with mounting concrete base and stands with space to accommodate 1No. Single Phase Meter, complete with all the necessary accessories	1	No.		
<b>AVS</b>					
5.0	32A SPN Manual bypass switch & Isolator switch complete with appropriate cabling for above AVS wall mounted c/w housing and all other necessary accessories as ABB/Schneider or approved equivalent	1	No.		
<b>Total for carried forward to the Next page</b>					

Item	Description	Qty	Unit		Kshs.
<b>Total Brought forward from the previous page</b>					
<b>VHF</b>					
6.0	Standard IP54 feeder pillar, complete with mounting concrete base and stands with space to accommodate 1No. Single Phase Meter, complete with all the necessary accessories	1	No.		
7.0	63A SP Isolation Switch as Schneider or approved equivalent	2	No.		
8.0	3x10mm <sup>2</sup> S-C PVC copper cable c/w appropriate cable lugs from KPLC meterbox to the existing consumer unit at equipment room	10	Lm		
9.0	32A SPN Manual bypass switch & Isolator switch complete with appropriate cabling for above AVS wall mounted c/w housing and all other necessary accessories as ABB/Schneider or approved equivalent	1	No.		
10.00	150x75mm, 14SWG cable tray c/w mounting row bolts and all other necessary accessories	10	Lm		
12.0	Allow for labelling the distribution boards (both new and existing) under this section including all the incoming and outgoing circuits as per the specifications to Engineer's approval.	1	Item		
13.0	Allow for 4 sets (in A1 coloured print outs and soft copy in PDF format) of "As installed" drawings and Schematic wiring diagram to Engineer's approval and to be pinned at the station.	1	Item		
<b>TOTAL FOR NGONG HILLS C/F TO COLLECTION PAGE H/15</b>					

**SCHEDULE No. 4: MUA HILLS**

Item	Description	Qty	Unit	Rate Kshs	Cost Kshs
<p><b>SUPPLY, DELIVER, INSTALL, TEST AND COMMISSION THE FOLLOWING:-</b></p>					
A	Allow for proper cable management & labelling of the existing but untidy cabling.	1	Item		
B	Careful decommissioning and removal of the obsolete/ malfunctioned/ dilapidated/vandalised electrical items/ fittings, power distribution panels/ boards and associated switchgears. Carefully store and arrange for handing over to client.	1	Item		
C	Testing the status of existing earthing/ grounding system using appropriate electrical test equipment and compile formal report. If required allow for the appropriate remedial works to reinstate to the recommended functional status.	1	Item		
<p><b>Equipment Room</b></p>					
1.0	16.0 mm <sup>2</sup> 4-C PVC/SWA/PVC copper cable for UPS bypass, drawn in cable tray / trunking c/w appropriate cable lugs as East African Cable (EAC) or approved equivalent <b>(Provisional quantity - Actual length to be confirmed on site)</b> i) Cable glands for above cable	10	Lm		
		2	No.		
2.0	80A TPN AVS manual bypass switch wall mounted c/w housing and all other necessary accessories as <b>ABB/Schneider</b> or approved equivalent	1	No.		
<p><b>Generator House</b></p>					
3.0	Allow for careful decommissioning and removal of the existing obsolete/ dilapidated power distribution panels and associated switchgears. Carefully store and arrange for handing over to client.	1	Item		
<p><b>Total for carried forward to the Next page</b></p>					

Item	Description	Qty	Unit		Kshs.
4.0	<p><b>Total Brought forward from the previous page</b></p> <p>6-Way Modular type, free standing power distribution panel board for floor mounting with both rear and front access panels, cable manager compartments, metal clad 14SWG, 415 mains L.V Switch Board manufactured to BS EN60 439-1, form 2b separation and fully wired for one incoming MCCB and 6No. TP outgoing feeders as described here below with the following and all the other necessary accessories:</p> <p>i) Provide space for mounting 1No.three phase KPLC meter  ii) Provide space for mounting 2 No. set of KPLC cut out</p> <p>iii) 250 Amps 4 pole Automatic Transfer Switching (ATS) system c/w Manual-bypass switch as <b>ABB/Schneider</b> or equal and approved  iv) 250 Amps 4 pole copper busbars  v) 40x10mm earth bar;  vi) 225A TPN MCCB main Incomer, adjustable as Merlin Gerin "BA" or Equal and approved  vii) 2No. 125A TPN MCCB  viii) 1No. 80A TPN MCCB  ix) 2No. 63A SPN MCCB  x) 2No Spare ways;  xi)Voltmeter/ Ammeters meters complete with associated current transformers;  xii) All necessary interconnecting cables;</p> <p style="text-align: center;"><b>Radar Station</b></p>	1	Item		
5.0	Allow for proper fixing of the existing but loose GI strip to the earth pit by saddling as appropriate and to Engineer's approval	1	Item		
6.0	Allow for careful decommissioning and removal of the existing obsolete/ dilapidated power distribution panels and associated switchgears. Carefully store and arrange for handing over to client.	1	Item		
	<b>Total for carried forward to the Next page</b>				

Item	Description	Qty	Unit		Kshs.
<b>Total Brought forward from the previous page</b>					
7.0	<p>6-Way Modular type, free standing power distribution panel board for floor mounting with both rear and front access panels, cable manager compartments, metal clad 14SWG, 415 mains L.V Switch Board manufactured to BS EN60 439-1, form 2b separation and fully wired for one incoming MCCB and 6No. TP outgoing feeders as described here below with the following and all the other necessary accessories:</p> <p>i) 150 Amps 4 pole copper busbars  ii) 40x10mm earth bar;  iii) 125A TPN MCCB main Incomer, adjustable as <b>ABB/Schneider</b> or Equal and approved  iv) 2No. 125A TPN MCCB  v) 3No. 80A TPN MCCB  vi) 1No. 63A SPN MCCB  vii) 2No Spare ways;  viii) Voltmeter/ Ammeters meters complete with associated current transformers;  ix) All necessary interconnecting cables;</p>	1	Item		
8.0	Free standing modular type, automatic stepped, 75 kVAR, stepped as 25:50:75 Power Factor Correction Bank integral with the LV switchboard and complete with interconnecting cables.	1	Item		
9.0	As "detto" but 50kVA ( <b>provide rate only</b> )	0	Item		
10.0	Supply and install 40x10mm compensation of potential main earth copper bar with porcelain insulators and provisions for connections to water pipes, cooking gas system, lightning protection system, main power switching panel and other utilities	1	Item		
11.0	Allow for labelling the switch board under this section including all the incoming and outgoing circuits as per the specifications	1	Item		
12.0	Allow for 4 sets (in A1 coloured print outs and soft copy in PDF format) of "As installed" drawings and Schematic wiring diagram to Engineer's approval and to be pinned at the station.	1	Item		
<b>TOTAL FOR MUA HILLS C/F TO COLLECTION PAGE H/15</b>					

	<b>BILL No. 1 COLLECTION PAGE</b>	<b>TOTAL</b>
<b>1</b>	<b>TOTAL FOR JKIA B/F Page H/7.....</b>	
<b>2</b>	<b>TOTAL FOR STONY ATHI B/F Page H/9.....</b>	
<b>3</b>	<b>TOTAL FOR NGONG HILLS B/F Page H/11.....</b>	
<b>4</b>	<b>TOTAL FOR MUA HILLS B/F Page H/14.....</b>	
<b>TOTAL FOR ELECTRICAL WORKS C/F TO GRAND SUMMARY PAGE H/35</b>		

**BILL No. 2 - AUTOMATIC VOLTAGE STABILIZER (AVS) INSTALLATION WORKS**

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSHS
<b>Supply, deliver to site, install, test and commission the following:</b>					
1.0	10kVA, AVS as described in the technical specifications of this document and complete with the necessary accessories to engineers approval ( for NGONG HILLS)	1	No		
2.0	As "detto" but 7.5kVA ( <b>provide rate only</b> )	0	Item		
3.0	Allow for testing and commissioning of the AVS to satisfaction of the project engineer	1	No		
<b>TOTAL FOR AVS C/F TO GRAND SUMMARY PAGE H/35</b>					



**BILL No. 3 - UNINTERRUPTIBLE POWER SUPPLY (UPS) INSTALLATION WORKS**

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSHS
<b>Supply, deliver to site, install, test and commission the following:</b>					
1.0	7.5kVA, UPS as described in the technical specifications of this document and complete with the necessary accessories to engineers approval ( for STONY ATHI STATION)	1	No		
2.0	As "detto" but 10kVA ( <b>provide rate only</b> )	0	Item		
3.0	Allow for testing and commissioning of the UPS to satisfaction of the project engineer	1	No		
<b>TOTAL FOR AVS C/F TO GRAND SUMMARY PAGE H/35</b>					

**BILL No. 4 - GENERATOR INSTALLATION WORKS****SCHEDULE No. 1: JKIA RADAR****BILL NO.1 – 170KVA GENERATING SET**

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSHS
	<b>Supply, deliver to site, install, test and commission the following:</b>				
1.1	Supply, deliver to site, install, test and commission a prime rated 170KVA, 3 phase, 415V, 50Hz diesel generating set with a continuous power factor of 0.8 lagging and as fully described in the particular specifications. The generator set is to be complete with a sound attenuated canopy and an integral base/belly daily service fuel tank with an operational running capacity of 8 hours.	1	No		
1.2	Supply and install complete external exhaust pipework for the above generators including all supports, hangers, hot air discharge ducting and weather grille, flanges and flexible connections, fixings, lagging and cladding with gauge 22 aluminium sheet and all other materials as necessary for the works as per the specifications	35	M		
1.3	Connect the exhaust pipe above in item 1.2 using steel pipes of adequate diameter, and flexible piping off engine exhaust manifold complete with heavy duty silencer	1	Item		
1.4	Supply and install earthing arrangements for the above generator sets comprising 50sq.mm earth lead, 1800mm long x 15mm diameter copper earth electrode with driving stud and clamp, 300mm x 300mm x 300mm deep concrete manhole, with removable cover, 1000mm x 1000mm copper earth mat, marconite backfill, red soil and all other necessary accessories as per the requirements of the technical specifications	1	Item		
<b>SUB-TOTAL C/F TO PRICE COLLECTION PAGE</b>					

**BILL NO. 2- 170KVA AMF CONTROL PANEL**

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSHS
	<b>Supply, deliver to site, install, test and commission the following:</b>				
2.1	An electrical control panel complete with suitable rated incoming MCCBs, contactors and timer for automatic change over operation and complete with all other control accessories as fully described in clauses 9.3 to 9.10 of the particular specifications	1	No		
2.2	Suitable rated manual by-pass switch with clearly labeled <b>NORMAL-OFF-BYPASS</b> positions, <b>and shall such be wired that when the switch is on either OFF or BYPASS position, the generator shall receive no signal to start</b>	1	No.		
2.3	240V AC/12V DC mains power supply trickle battery charger as specified in clause 9.6 of specifications. The trickle charger shall charge the battery when the set is on <b>IDLE mode</b> , otherwise when the set is <b>RUNNING</b> , the battery shall be charged by the <b>generator charger</b> . Wiring shall be done such that the two chargers shall not operate at the same time.	1	No.		
2.4	12 Volts battery as specified in clause 9.6 of the particular specifications	2	No.		
2.5	Armoured cables complete with glands and pvc sleeves: (a) 95 mm sq. 4 core PVC/SWA/PVC copper cable (b) 4.0mm <sup>2</sup> , 4 core, PVC/SWA/PVC copper cable	50 50	M M		
2.6	Inter-wire the control panel with the Mains L.V board	1	Item		
2.7	Supply and install 300mm x 50 mm x 2 compartment 16SWG powder coated sheet steel cable tray including all brackets, bends, screws, covers, etc, as per the Technical Specification. Sample to be submitted for approval prior to procurement. SCREW-ON type	30	M		
2.8	Allow for testing and commissioning the generating system installation using load bank capable of delivering full load (provide test certificate)	1	Item		
2.9	100mm uPVC duct at 600mm below ground level across drive ways and concrete areas. Trenching at 600mm deep, sifting, cable laying on bed of sand or soft earth not less than 75mm dep and surrounded and covered by a further 75mm of stone free sand or soft earth, danger hatari warning and backfilling.	40	M		
<b>SUB-TOTAL C/F TO PRICE COLLECTION PAGE</b>					

**BILL NO. 3 - 170KVA RECOMMENDED SPARE PARTS AND LUBRICATORS**

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSHS
<b>For the supply to the site of the following spare parts and lubricators:</b>					
3.1	Oil Filters	4	No.		
3.2	Air Filters	4	No.		
3.3	Fuel Filter	4	No.		
3.4	Fuel injector nozzle to suit the set	4	No.		
3.5	Set of Fan belts to suit the set	1	No.		
3.6	10 litres container of sump oil of grade.....*	1	No.		
3.7	2 kilogram grease in a tin of grade .....*	1	No.		
3.8	10 litre plastic container of distilled water	1	No.		
3.9	20 litre of engine oil in a tin of grade.....*	1	No.		
3.10	Any other spare parts recommended by Tenderer **				
*The tenderer to fill in the Grade quality to be supplied					
**The tenderer to fill in the details and price of items but the price not to be included in total carried forward to summary page					
<b>SUB-TOTAL C/F TO PRICE COLLECTION PAGE</b>					

**BILL NO. 4 –TOOLS TO BE SUPPLIED WITH THE SETS**

ITEM	DESCRIPTION	UNIT	QTY	RATE	KSHS
<b>For the supply to site of the following tools:</b>					
4.1	Metal tool box with lock and two keys	No.	1		
4.2	Set of 8 No. Chrome vanadium ring spanners in sizes to suit the set	No.	1		
4.3	Set of 3 screwdrivers, 75mm, 200mm and 300mm plus one 200mm Philips type	No.	1		
4.4	- ditto -but open ended spanners	No.	1		
4.5	Set of feeler gauges	No.	1		
4.6	Grease gun to suit greasing points	No.	1		
4.7	Oil can, trigger type	No.	1		
4.8	Any other special tools which the tenderer recommends should be purchased as an optional:*				
<p><b>NOTE*</b> Tenderer should give detail and prices of item 9 but the price not to be included in total carried forward.</p>					
<b>SUB-TOTAL C/F TO PRICE COLLECTION PAGE</b>					

**BILL NO.5 – AUXILIARY FUEL TANK**

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSHS
5.1	Supply, deliver to site and install, to the approval of the project manager, and connect to the daily service base/belly fuel tank, an auxiliary fuel tank with level indicator and with an operational running capacity of 72 hours. The tank is to be of mild steel plates of minimum thickness of 3mm complete with stand and all interconnecting G.I pipe work.	1	No		
5.2	Supply, install, test and commission a 240 V ac fuel booster pump complete with a suitable rated motor DOL starter and all interconnecting accessories and G. I piping	1	Item		
<b>SUB-TOTAL C/F TO PRICE SUMMARY PAGE</b>					

**PRICE COLLECTION PAGE**

	DESCRIPTION	AMOUNT
<b>A</b>	Sub-Total for Bill No. 1 - Generator Set	
<b>B</b>	Sub-Total for Bill No. 2 - AMF Panel	
<b>C</b>	Sub-Total for Bill No. 3 - Recommended Spare Parts and Lubricators	
<b>D</b>	Sub-Total for Bill No. 4 - Tools to be Supplied with the Set	
<b>E</b>	Sub-Total for Bill No. 5 - Auxiliary Fuel Tank	
<b>TOTAL FOR SCHEDULE No. 1: JKIA RADAR C/F TO COLLECTION PAGE H/30</b>		

**SCHEDULE No. 2: JKIA AIRPORT  
BILL NO.1 – 120KVA GENERATING SET**

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSHS
	<p><b>Supply, deliver to site, install, test and commission the following:</b></p> <p>1.1 Supply, deliver to site, install, test and commission a prime rated 120KVA, 3 phase, 415V, 50Hz diesel generating set with a continuous power factor of 0.8 lagging and as fully described in the particular specifications. The generator set is to be complete with a sound attenuated canopy and an integral base/belly daily service fuel tank with an operational running capacity of 8 hours.</p> <p>1.2 Supply and install complete external exhaust pipework for the above generators including all supports, hangers, hot air discharge ducting and weather grille, flanges and flexible connections, fixings, lagging and cladding with gauge 22 aluminium sheet and all other materials as necessary for the works as per the specifications</p> <p>1.3 Connect the exhaust pipe above in item 1.2 using steel pipes of adequate diameter, and flexible piping off engine exhaust manifold complete with heavy duty silencer</p> <p>1.4 Supply and install earthing arrangements for the above generator sets comprising 50sq.mm earth lead, 1800mm long x 15mm diameter copper earth electrode with driving stud and clamp, 300mm x 300mm x 300mm deep concrete manhole, with removable cover, 1000mm x 1000mm copper earth mat, marconite backfill, red soil and all other necessary accessories as per the requirements of the technical specifications</p>	<p>1</p> <p>30</p> <p>1</p> <p>1</p>	<p>No</p> <p>M</p> <p>Item</p> <p>Item</p>		
	<b>SUB-TOTAL C/F TO PRICE COLLECTION PAGE</b>				

**BILL NO. 2- 120KVA AMF CONTROL PANEL**

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSHS
	<b>Supply, deliver to site, install, test and commission the following:</b>				
2.1	An electrical control panel complete with suitable rated incoming MCCBs, contactors and timer for automatic change over operation and complete with all other control accessories as fully described in clauses 9.3 to 9.10 of the particular specifications	1	No		
2.2	Suitable rated manual by-pass switch with clearly labeled <b>NORMAL-OFF-BYPASS</b> positions, <b>and shall such be wired that when the switch is on either OFF or BYPASS position, the generator shall receive no signal to start</b>	1	No.		
2.3	240V AC/12V DC mains power supply trickle battery charger as specified in clause 9.6 of specifications. The trickle charger shall charge the battery when the set is on <b>IDLE mode</b> , otherwise when the set is <b>RUNNING</b> , the battery shall be charged by the <b>generator charger</b> . Wiring shall be done such that the two chargers shall not operate at the same time.	1	No.		
2.4	12 Volts battery as specified in clause 9.6 of the particular specifications	2	No.		
2.5	Armoured cables complete with glands and pvc sleeves: (a) 50 mm sq. 4 core PVC/SWA/PVC copper cable (b) 4.0mm <sup>2</sup> , 4 core, PVC/SWA/PVC copper cable	80 80	M M		
2.6	Inter-wire the control panel with the Mains L.V board	1	Item		
2.7	Supply and install 300mm x 50 mm x 2 compartment 16SWG powder coated sheet steel cable tray including all brackets, bends, screws, covers, etc, as per the Technical Specification. Sample to be submitted for approval prior to procurement. SCREW-ON type	30	M		
2.8	Allow for testing and commissioning the generating system installation using load bank capable of delivering full load (provide test certificate)	1	Item		
2.9	100mm uPVC duct at 600mm below ground level across drive ways and concrete areas. Trenching at 600mm deep, sifting, cable laying on bed of of sand or soft earth not less than 75mm dep and surrounded and covered by a further 75mm of stone free sand or soft earth, danger hatari warning and backfilling.	50	M		
<b>SUB-TOTAL C/F TO PRICE COLLECTION PAGE</b>					



**BILL NO. 3 - 120KVA RECOMMENDED SPARE PARTS AND LUBRICATORS**

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSHS
<b>For the supply to the site of the following spare parts and lubricators:</b>					
3.1	Oil Filters	4	No.		
3.2	Air Filters	4	No.		
3.3	Fuel Filter	4	No.		
3.4	Fuel injector nozzle to suit the set	4	No.		
3.5	Set of Fan belts to suit the set	1	No.		
3.6	10 litres container of sump oil of grade.....*	1	No.		
3.7	2 kilogram grease in a tin of grade .....*	1	No.		
3.8	10 litre plastic container of distilled water	1	No.		
3.9	20 litre of engine oil in a tin of grade.....*	1	No.		
3.10	Any other spare parts recommended by Tenderer **				
*The tenderer to fill in the Grade quality to be supplied					
**The tenderer to fill in the details and price of items but the price not to be included in total carried forward to summary page					
<b>SUB-TOTAL C/F TO PRICE COLLECTION PAGE</b>					

**BILL NO. 4 –TOOLS TO BE SUPPLIED WITH THE SETS**

ITEM	DESCRIPTION	UNIT	QTY	RATE	KSHS
	<b>For the supply to site of the following tools:</b>				
4.1	Metal tool box with lock and two keys	No.	1		
4.2	Set of 8 No. Chrome vanadium ring spanners in sizes to suit the set	No.	1		
4.3	Set of 3 screwdrivers, 75mm, 200mm and 300mm plus one 200mm Philips type	No.	1		
4.4	- ditto -but open ended spanners	No.	1		
4.5	Set of feeler gauges	No.	1		
4.6	Grease gun to suit greasing points	No.	1		
4.7	Oil can, trigger type	No.	1		
4.8	Any other special tools which the tenderer recommends should be purchased as an optional:*				
	<b>NOTE*</b> Tenderer should give detail and prices of item 9 but the price not to be included in total carried forward.				
<b>SUB-TOTAL C/F TO PRICE COLLECTION PAGE</b>					

**PRICE COLLECTION PAGE**

	DESCRIPTION	AMOUNT
<b>A</b>	Sub-Total for Bill No. 1 - Generator Set	
<b>B</b>	Sub-Total for Bill No. 2 - AMF Panel	
<b>C</b>	Sub-Total for Bill No. 3 - Recommended Spare Parts and Lubricators	
<b>D</b>	Sub-Total for Bill No. 4 - Tools to be Supplied with the Set	
<b>E</b>	Allow for Kshs. 200,000 for burglar proofing generator location	<b>200,000</b>
<b>TOTAL FOR SCHEDULE No. 2: JKIA AIRPORT C/F TO COLLECTION PAGE H/30</b>		

**SCHEDULE 3 – 170KVA GENERATOR SHED**

<b>ITEM</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>RATE</b>	<b>KSHS</b>
6.10	1No. 2500 x1500 x 500mm thick reinforced concrete plinth with foundation	2	CM		
	<b>SUBSTRUCURE ( ALL PROVISIONAL)</b>				
6.20	Excavate top soil to reduced levels commencing from stripped level over not more than 300mm deep and cart away as directed.	15	SM		
6.30	Excavate for strip foundation starting from reduced level not exceeding 1.5 meters deep and cart away as directed.	10	CM		
6.40	Return, fill- in and rum selected excavated material	9	CM		
6.50	Remove and cart away from site surplus excavated material as directed	10	CM		
6.60	Hardcore filling in making levels average 300mm thick, depositing and compacting in layers of 150mm maximum thickness.	20	CM		
6.70	Allow for keeping excavations free from all water by pumping or otherwise	1	Item		
6.80	50mm thick murrum blinding to surfaces of fill.	15	SM		
	<b>CONCRETE</b>				
6.90	50mm thick mass concrete class Q ( 1: 4:8 class 15/20mm) to bottoms of foundations	9	SM		
6.10	Institute concrete; reinforced; class20/20mm); vibrated	3	CM		
6.11	400mm thick floor bed	15	SM		
	<b>Reinforcement</b>				
6.12	Bars; high yield steel type A142; cold worked to BS 4483 including bends; hooks, tying wire and distance blocks 8mm thick with 150mm side laps	320	KG		
<b>SUB-TOTAL C/F TO PRICE SUMMARY PAGE</b>					

**BILL NO.2 SCHEDULE 2 – cont'd 30KVA GENERATOR SHED**

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSHS
	<b>Fabric BS 4483</b>				
6.13	Reference A198 mesh 200x200 min weight 2.22 lbs per square foot (measured net – no allowance made for laps, including bends, tying wire and distance blocks).	15	SM		
	<b>Sawn formwork to institute concrete as described:</b>				
6.14	To sides; vertical or battering of foundation, ground beams or the like Edges of ground floor slab over 300mm wide.	10	SM		
	<b>Walling</b>				
6.15	200mm thick approved local natural stone; roughly squared to foundation walling; bedding and jointing in cement sand (1:6).	15	SM		
6.16	Screed; 20mm thick 2No. coat work, 15mm first coat of cement sand (1: 6); 5 mm second coat of cement and lime putty(1: 10); steel trowelled to concrete or block work base generally to plinth; internally.	15	SM		
	<b><u>SUPERSTRUCTURE</u></b>				
6.17	The following in mild steel grill fence comprising 75 x 75 x 4mm square hollow section corner and middle posts at 1500mm centers and 25 x 25 x 3mm thick square hollow section purlin, gilled square bars as described galvanized corrugated prepainted roof sheet; all	24	SM		
	Approximate 6.0 meters long; 75 x75 x 4mm thick post grout with and including mass concrete and carting away from site	15	SM		
<b>SUB-TOTAL C/F TO PRICE SUMMARY PAGE</b>					

**BILL NO.2 SCHEDULE 3 – cont'd 30KVA GENERATOR SHED**

<b>ITEM</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>RATE</b>	<b>KSHS</b>
6.18	Framed grills size 1500 x 2500mm high comprising 20 x 4 mm thick flats at top and bottom and 15 x 15 mm thick square rods at 30mm centers both sides welded to and between 75 x 75mm posts (m/s).	15	LM		
6.19	150 x150 x 2mm thick square hollow section purlins.	80	LM		
6.20	<b>Standard heavy duty Steel casement metal grilled door; of approved manufacture with hinges, handles and lock; fixed with lugs built into concrete or block work; painted externally in mastic and finished with one coat zinc chromate primer.</b> A. Steel painted panel double door size 1800x2400mm high B. Prepare and apply one undercoat and two finishing coats of gloss oil paint to general metal surfaces	1	No		
		10	SM		
6.21	<b>Galvanised steel corrugated roofing sheets; 26 guage pre- painted covering; Fixing to steel purlins (m/s) with J bolts; 400mm end laps and one and half corrugated side laps</b>  250X25MM wrot camphor Fascia board and barge board	15	SM		
		15	LM		
6.22	<b>Paving Slabs</b> 600x600x50mm thick precast concrete paving slab around the building including 50mm thick sand bed and V – jointing with cement and sand mortar	10	SM		
<b>SUB-TOTAL FROM ABOVE</b>					
<b>SUB-TOTAL B/F FROM PAGE H/27</b>					
<b>SUB-TOTAL B/F FROM PAGE H/28</b>					
<b>TOTAL CARRIED FORWARD TO COLLECTION PAGE H/30</b>					

**BILL No. 4 - COLLECTION PAGE**

<b>Item</b>	<b>Description</b>	<b>Amount (Kshs)</b>
1	Sub-Total for Schedule 1 - JKIA RADAR B/F page H/22	
2	Sub-Total for Schedule 2 - JKIA AIRPORT B/F page H/26	
3	Sub-Total for Schedule 3 - GENERATOR SHED B/F page H/29	
<b><i>TOTAL GENERATOR INSTALLATION WORKS C/F TO GRAND SUMMARY PAGE H/35</i></b>		

**BILL No. 5 - IP CCTV SYSTEM INSTALLATION - JKIA AIRPORT**

Item	Description	Qty	Unit	Rate	Kshs.
	<b>Supply, Install, Test and Commission the following as described in the specifications:</b>				
1.01	Indoor, IP POE, Vandal resistant IR 3MP dome camera as described in the technical specifications of this document complete with housing, appropriate mounting brackets and all other accessories to approval	6	No.		
1.02	Indoor, IP POE Vandal resistant 3MP PTZ full HD low light dome camera as described in the technical specifications of this document and complete with power supply adaptors, housing, appropriate mounting brackets and all other accessories to engineers approval	1	No.		
1.03	Indoor, IP POE, Vandal resistant IR 5MP bullet camera as described in the technical specifications of this document complete with housing, appropriate mounting brackets and all other accessories to approval	2	No.		
1.03	12 Port PoE Switch-IPBase edge switch model complete with PoE plus, 10/100/1000Mbps on all Ports and as CISCO catalyst switch (currently available in the market and being supported by Cisco) or approved equivalent	1	No.		
1.04	Category 6A, 12 Port Patch Panel and as Siemon or approved equivalent.	1	No		
1.05	12 Port fibre patch panel as Siemon or approved equivalent.	1	No		
1.06	1m Port fibre patch cord as Siemon or approved equivalent.	2	No		
1.07	1M RJ45-RJ45 Cat 6A UTP factory terminated patch cord as Siemons or approved equivalent to be used at work station.	10	No		
1.08	3M RJ45-RJ45 Cat 6A UTP factory terminated patch cord as Siemons or approved equivalent to be used at work station.	5	No		
1.09	Cat 6A (or currently available in the market) UTP 4-pair cable as Siemons or approved equivalent (Provisional length - actual length to be established on site)	800	M		
1.091	As detto but STP	10	M		
1.10	12U wall mount data cabinet/ with glass door complete with Cable Managers, fans, power outlet points, grounding kits and castors. The data cabinet to be complete with 1No. APC Power Distribution Units (PDU) to accommodate power for the active devices.	1	No.		
1.11	2U vertical cable managers/organizers and as Siemon or approved equivalent	2	No.		
1.12	38mm HG Conduit complete with all accessories for surface mounting	50	M		
1.13	25 X 25mm - single compartment, gauge 16 sheet Deep Powder coated metal trunking along the walls complete with angled cover section, end covers and all other accessories.	200	M		
	<b>Total for carried forward to the Next page</b>				

Item	Description	Qty	Unit	Rate	Kshs.
	<b>Total Brought forward from the previous page</b>				
1.14	LED HD panel display 48" as described in the technical specifications of this document complete appropriate mounting brackets and all other accessories to approval	1	No.		
1.16	Digital universal key board complete with joystick and LCD screen	1	No.		
1.17	Operator workstation hardware/Desktop computer complete with software as described in particular specifications complete with necessary accessories	1	Item		
1.18	16channels IP Network video recorder with PoE complete with minimum recording speed of 256mbps, minimum recording HDD 16TB, video management software, redundant power supply and all other accessories and as described in the particular specifications	1	No.		
1.19	Outdoor 8 core single mode fiber cable complete with all accessories for backbone cabling to Monitoring room	70	Lm		
1.20	Grounding and bounding kit complete with 50mm diameter copper bounding bar and 6mm thick green and yellow wire. The Earthing the system is to be to the approval of the Engineer.	1	Item		
1.21	Provide for preparing and submitting individual fluke test results (for each network point) to be submitted as a bound report. Attach printed results and soft copy	1	Lot		
1.22	Any other items necessary to complete the above installation as per the system you propose to install. Please list the items, price and include in your totals	1	Lot		
	a)				
	b)				
	c)				
	d)				
<b>TOTAL FOR IP CCTV SYSTEM C/F TO GRAND SUMMARY PAGE H/35</b>					



**PROJECT MANAGER'S STATIONERY**

Item	Description	Qty	Unit	Rate	Kshs
	<p><b><u>STATIONERY</u></b>  <b><u>Tenderers shall price for the following stationery requirements. These shall then be delivered, upon their first demand to the Chief Engineer (Electrical) immediately after the award to the successful tenderer.</u></b></p>				
A	Laptop computer as described in the particular specifications of this document and complete with all other accessories as LENOVO or approved equivalent.	1	No.		
B	3in1 printer as <b>HP PageWide Pro MFP 477dw</b> , as per Particular specifications complete with Toner to the Project Engineer for project administration	1	No		
C	Photocopy paper, size A4, 80g/cm <sup>3</sup> , White, 500 sheets per ream	20	Reams		
D	HP Laser Jet Cartridges				
	i) Q5949A	2	No.		
	ii) Q6511A	2	No.		
	iii) CE505A/05A	2	No.		
	iv) C4911A (82), Cyan, 69ml	2	No.		
	v) C4912A (82), Magenta, 69ml	2	No.		
	vi) C4913A (82), Yellow, 69ml	2	No.		
E	Broadband USB 4G Modem, preloaded with 25GB of data (Kshs 5,000 worth of airtime) as approved by the Project Engineer.				
	i) Safaricom	1	No.		
	ii) Telkom	1	No.		
	iii) Zain	1	No.		
<b>Sub total for Project Managers Stationery C/F to Grand Summary page (H/35)</b>					

**PROVISIONAL SUMS**

<b>Item</b>	<b>Description</b>	<b>Cost Kshs</b>
<b>A.</b>	<b>CONTINGENCY</b> Allow a Provisional Sum of Kenya Shillings 2.5 Million only contingency sum to be used at the discretion of the Project Engineer	<b>2,500,000.00</b>
<b>B</b>	<b>RELATED / ASSOCIATED BUILDERS WORKS</b> Allow a Provisional Sum of Sum of Kenya Shillings 1.0 Million for related/ associated Builders works	<b>1,000,000.00</b>
<b>C</b>	<b>MECHANICAL VENTILATION/EXTRACTION FANS WORKS</b> Allow a Provisional Sum of Sum of Kenya Shillings 1.0 Million for related/ associated Mechanical ventilation/extraction fans installation works at JKIA Tower power rooms	<b>1,000,000.00</b>
<b>D</b>	<b>TRAINING LEVY</b> Allow a Provisional Sum of Sum of Kenya Shillings Three Hundred Thousand only for CPD Training for SDPW officers	<b>300,000.00</b>
<b>Total for Provisional Sums carried forward to Grand Summary Page (H/35)</b>		<b>4,800,000.00</b>

**GRAND SUMMARY PAGE**

<b>Item</b>	<b>Description</b>	<b>KSHS</b>
1.0	Sub-total for Preliminaries B/F from page H/3	
2.0	Sub-total for Electrical Installation Works B/F from page H/15	
3.0	Sub-total for Automatic voltage stabilizer Installation Works B/F from page H/16	
4.0	Sub-total for Uninterruptible power supply unit (UPS) Installation Works B/F from page H/17	
5.0	Sub-total for Standby Generator set Installation Works B/F from page H/30	
6.0	Sub-total for IP CCTV system Installation Works B/F from page H/32	
7.0	Sub-total for Project Managers Stationery B/F from page H/33	
8.0	Sub-total for Provisional Sums B/F from page H/34	<b>4,800,000.00</b>
9.0	Allow for <b>training and certification</b> of 5No. equipment operators/Technical Staff as described in the technical specifications of this document	
10.0	Allow for <b>maintenance tools &amp; Manuals</b> as described in the technical specifications of this document	
11.0	Provide for preparing and presenting warranty and documentation, for all equipment in both	
	<b>Grand total for Refurbishment of electrical power supply distribution installations works C/F to Form of Tender</b>	

**TOTAL AMOUNT IN WORDS**

.....  
 .....  
 .....

**TENDERER'S NAME & STAMP**

.....  
 .....

**SIGNATURE** ..... **DATE**.....

**P.I.N No.**,..... **V.A.T CERTIFICATE No.**.....

**WITNESS**..... **ADDRESS**.....

**SIGNATURE OF WITNESS**..... **DATE**.....