

**APPENDIX 5.**  
**SECTION VII – SCHEDULE OF REQUIREMENT**

<b>I) ELECTRONIC SECURITY SYSTEMS TENDER CATEGORIES /LOTS</b>			
<b>SUMMARY</b>			
<b>CATEGORY/LOT</b>	<b>STATION/DESCRIPTION</b>		
CATEGORY/LOT 1	INSTALLATION OF CCTV MAJOR DISTRIBUTION/ TRANSMISSION SUBSTATION		
CATEGORY/LOT 2	INSTALLATION OF CCTV FOR KEY OFFICES		
CATEGORY/LOT 3	INSTALLATION OF ACCESS CONTROL IN SUBSTATIONS & KEY OFFICES		
CATEGORY/LOT 4	SECURITY SYSTEMS FOR FACILITIES AND INFRASTRUCTURE		
CATEGORY/LOT 5	INSTALLATION OF ELECTRIC FENCES FOR KEY SUBSTATIONS		
CATEGORY/LOT 6	INSTALLATION OF INTRUDER ALARMS		

<b>CATEGORY/LOT 1: INSTALLATION OF CCTV IN MAJOR DISTRIBUTION/ TRANSMISSION SUBSTATIONS</b>			
<b>NO</b>	<b>STATION/DESCRIPTION</b>	<b>SYSTEMS</b>	<b>LOCATION</b>
1	Nairobi West Substation	CCTV	Nairobi West
2	Kitale depot Substation	CCTV	Kitale
3	Webuye Substation	CCTV	Webuye
4	New Bamburi Substation	CCTV	Bamburi
5	Embu Depot Substation	CCTV	Embu
6	Manufacturers Training-3no technical persons	CCTV	To be determined

<b>CATEGORY/LOT 2: INSTALLATION OF CCTV FOR KEY OFFICES</b>			
<b>NO</b>	<b>Station/Description</b>	<b>Systems</b>	<b>Location</b>
1	Kakamega Office	CCTV	Kakamega
2	Kericho Depot	CCTV	Kericho
3	Kisii Depot	CCTV	Kisii
4	Nakuru Depot	CCTV	Nakuru
5	Nairobi South	CCTV	Nairobi South
6	Lukenya Substation	CCTV	Lukenya

7	Manufacturers Training-3no technical persons	CCTV	To be determined
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**CATEGORY/LOT 3: INSTALLATION OF ACCESS CONTROL IN SUBSTATIONS & KEY OFFICES**

NO	STATION/DESCRIPTION	SYSTEMS	LOCATION
1	Electricity House Kisumu	Access control & CCTV	Kisumu
2	Electricity House Mombasa	Access control	Mombasa
3	Electricity House Nakuru	Access control	Nakuru
4	Manufacturers Training-3no technical persons	Access control	To be determined

**CATEGORY/LOT 4: SECURITY SYSTEMS FOR FACILITIES AND INFRASTRUCTURE**

NO	STATION/DESCRIPTION	SYSTEMS	LOCATION
1	Machakos Substation	CCTV & Access Control	Machakos
2	New Industrial Substation	CCTV & Access Control	Enterprise Rd Nairobi
3	Kikuyu Substation	CCTV & Access Control	Kikuyu
4	Nyahururu stores/ Substation	CCTV & Access Control	Nyahururu
5	Kilifi Substation	CCTV & Access Control	Kilifi
6	Homabay Stores	CCTV & Access Control	Homabay
8	Njoro Substation	CCTV & Access Control	Njoro ,Nakuru
9	Emali Stores	CCTV & Access Control	Emali
10	Garissa Office	CCTV & Access Control	Garissa
11	Manufacturers Training-3no technical persons	CCTV	To be determined

**CATEGORY/LOT 5: INSTALLATION OF ELECTRIC FENCES/PERIMETER INTRUSION SYSTEM FOR KEY SUBSTATIONS**

NO	STATION/DESCRIPTION	SYSTEMS	LOCATION
1.	Kiboko Substation	Electric Fence	Kiboko Substation
2.	Kipevu Substation	Electric Fence	Kipevu SS
3.	Makuyu Substation	Electric Fence	Makuyu
4.	Mamlaka Substation	CCTV intrusion system	Mamlaka Substation
5.	Thika industrial Substation	CCTV intrusion system	Thika industrial SS
6.	Sarmach Substation	CCTV- intrusion system	Sarmach Substation
7.	Villa Franka Substation	CCTV intrusion system	Villa Franka
8.	Eldoret depot and Substation	CCTV intrusion system	Eldoret
9.	Manufacturers Training-3no technical persons	Electric Fence/CCTV	To be determined

CATEGORY/LOT 6: INSTALLATION OF INTRUDER ALARMS			
NO	STATION/DESCRIPTION	SYSTEMS	LOCATION
1.	Eldoret depot	Intrusion detection	Eldoret
2.	Naivasha office	Intrusion detection	Naivasha
3.	Ukunda Banking hall-Stores	Intrusion detection	Ukunda
4.	Nairobi South Depot	Intrusion detection	Nairobi
5.	Kisii Depot	Intrusion detection	Kisii
6.	Westlands Substation	Electric Fence	Westlands
7.	Nairobi North SS	Electric Fence	Nairobi North SS
8.	Webuye Substation	Electric Fence	Webuye
9.	Manufacturers Training-3no technical persons	Intrusion and Electric Fence	To be determined

## **PRICE SCHEDULE /BILLS OF QUANTITIES**

**(Unit Price in all Categories/Lots shall include 12 Months Warranty service and maintenance during the defect Liability period as described in the SLA as well as the manufacturer's equipment warranty as described in the tender)**

**CATEGORY/LOT 1: INSTALLATION OF CCTV MAJOR DISTRIBUTION/ TRANSMISSION  
SUBSTATION**

**NAIROBI WEST DEPOT IP- CCTV &ACCESS CONTROL**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
A.	5 MPX, WDR Fixed Dome Camera	No.	37				
B.	2MPX PTZ Camera	No.	1				
C.	64-Channel NVR and storage Server upto 40TB	No.	1				
D.	Genetec Video License (per Camera).	No.	38				
E.	IP Access Control System ( <b>TYPE B</b> ) at Entry (Fingerprint Reader) and Exit (Proximity Reader) complete with Licences, IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETEC network (per Door)	No.	6				
F.	40 Inch 1080P LED Monitor C/W mount accessories	No.	1				
G.	32 Inch 1080P LED Monitor C/W mount accessories	No.	1				
H.	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
<b>Total Carried to Collection Nairobi west depot page 1</b>							

**Bill of Quantities Page 2**

<b>No</b>	<b>Item Description</b>	<b>Unit</b>	<b>QTY</b>	<b>Country of origin</b>	<b>Rate in KES(Vat Exc)</b>	<b>Amount</b>	<b>Part Numbers</b>
A.	Allow for cabling, ducting and necessary accessories	LOT	1				
B.	Network Devices accessories&cabinets-3 Edge switches ,1 core switch	LOT	1				
C.	6 Kva true online UPS	NO	1				
D.	3 Kva true online UPS	NO	2				
E.	1.5 Kva true online UPS	NO	1				
F.	Allow for integration of the system to existing GENETEC server	LOT	1				
G.	Client Work station	LOT	1				
H.	Installation, Testing and Commissioning to client satisfaction	LOT	1				
I.	Biometric Access Control cards	No.	200				
<b>Total Carried to Collection Nairobi west depot page 2</b>							

	<b>SUMMARY PAGE NAIROBI WEST DEPOT IP- CCTV &amp;ACCESS CONTROL CCTV BILL OF QUANTITIES</b>		
<b>1.</b>	<b>Total Carried to collection Page 1 Nairobi west depot</b>		
<b>2.</b>	<b>Total Carried to collection Page 2 Nairobi west depot</b>		
	<b>SUB-TOTAL- NAIROBI WEST DEPOT IP- CCTV &amp;ACCESS CONTROL</b>		

**CATEGORY/LOT 1: INSTALLATION OF CCTV MAJOR DISTRIBUTION/ TRANSMISSION SUBSTATION**

**KITALE DEPOT IP- CCTV &ACCESS CONTROL**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
A.	5 MPX, WDR Fixed Dome Camera	No.	21				
B.	32-Channel NVR and storage Server upto 40TB	No.	1				
C.	Genetec Video License (per Camera).	No.	21				
D.	IP Access Control System at Entry <b>(TYPE B)</b> (Fingerprint Reader) and Exit (Proximity Reader) complete with Licences, IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETEC network (per door).	No.	6				
E.	40 Inch 1080P LED Monitor C/W mount accessories	No.	1				
F.	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	<b>Total Carried to collection Kitale depot Page 1</b>						



**Bill of Quantities Kitale depot Page 2**

<b>No</b>	<b>Item Description</b>	<b>Unit</b>	<b>QTY</b>	<b>Country of origin</b>	<b>Rate in KES(Vat Exc)</b>	<b>Amount</b>	<b>Part Numbers</b>
<b>A.</b>	Allow for cabling, ducting and necessary accessories	LOT	1				
<b>B.</b>	Network Devices accessories&cabinets-3 Edge switches	LOT	1				
<b>C.</b>	3 Kva true online UPS	NO	2				
<b>D.</b>	Allow for integration of the system to existing GENETEC server	LOT	1				
<b>E.</b>	Client Work station	LOT	1				
<b>F.</b>	Installation, Testing and Commissioning to client satisfaction	LOT	1				
<b>G.</b>	Biometric Access Control cards	No.	200				
	<b>Total Carried to collection Kitale depot Page 2</b>						

	<b>SUMMARY PAGE KITALE DEPOT IP- CCTV &amp;ACCESS CONTROL IP- CCTV &amp;ACCESS CONTROL CCTV BILL OF QUANTITIES</b>		
1.	<b>Total Carried to collection Kitale depot Page 1</b>		
2.	<b>Total Carried to collection Kitale depot Page 2</b>		
	<b>SUB-TOTAL- KITALE DEPOT IP- CCTV &amp;ACCESS CONTROL</b>		

**CATEGORY/LOT 1: INSTALLATION OF CCTV MAJOR DISTRIBUTION/ TRANSMISSION SUBSTATION**

**WEBUYE SUBSTATION IP- CCTV &ACCESS CONTROL**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
A	5 MPX, WDR Fixed Dome Camera	No.	16				
B	2MPX PTZ Camera	No.	2				
C	32-Channel NVR and storage Server upto 40TB	No.	1				
D	Genetec Video License (per Camera).	No.	18				
E	IP Access Control System at Entry <b>(TYPE A)</b> (Proximity Reader) and Exit (Proximity Reader) complete with Licences, IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETEC network (Per Door)	No.	4				
F	32 Inch 1080P LED Monitor C/W mount accessories	No.	1				
G	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	<b>Total Carried to collection Webuye Substation Page 1</b>						

**Bill of Quantities Webuye Substation Page 2**

<b>No</b>	<b>Item Description</b>	<b>Unit</b>	<b>QTY</b>	<b>Country of origin</b>	<b>Rate in KES(Vat Exc)</b>	<b>Amount</b>	<b>Part Numbers</b>
<b>A.</b>	Allow for cabling, ducting and necessary accessories	LOT	1				
<b>B.</b>	Network Devices accessories&cabinets-3 Edge switches ,1 core switch	LOT	1				
<b>C.</b>	3 Kva true online UPS	NO	1				
<b>D.</b>	Allow for integration of the system to existing GENETEC server	LOT	1				
<b>E.</b>	Installation, Testing and Commissioning to client satisfaction	LOT	1				
<b>F.</b>	Biometric Access Control Cards	No.	200				
	<b>Total Carried to collection Webuye Substation Page 2</b>						

	<b>SUMMARY PAGE WEBUYE SUBSTATION IP- CCTV &amp;ACCESS CONTROL IP- CCTV &amp;ACCESS CONTROL CCTV BILL OF QUANTITIES</b>		
<b>1.</b>	<b>Total Carried to collection Webuye Substation Page 1</b>		
<b>2.</b>	<b>Total Carried to collection Webuye Substation Page 2</b>		
	<b>SUB-TOTAL-WEBUYE SUBSTATION IP- CCTV &amp;ACCESS CONTROL</b>		

**CATEGORY/LOT 1: INSTALLATION OF CCTV MAJOR DISTRIBUTION/ TRANSMISSION SUBSTATION**

**NEW BAMBURI SUBSTATION IP- CCTV &ACCESS CONTROL**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
<b>A.</b>	5 MPX, WDR Fixed Dome Camera	No.	29				
<b>B.</b>	2MPX PTZ Camera	No.	1				
<b>C.</b>	32-Channel NVR and storage Server upto 40TB	No.	1				
<b>D.</b>	Genetec Video License (per Camera).	No.	30				
<b>E.</b>	IP Access Control System <b>TYPE A</b> at Entry (Proximity Reader) and Exit (Proximity Reader) complete with Licences, IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETEC network (per door).	No.	3				
<b>F.</b>	40 Inch 1080P LED Monitor C/W mount accessories	No.	1				
<b>G.</b>	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	<b>Total Carried to collection New Bamburi Substation Page 1</b>						

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
A.	Allow for cabling, ducting and necessary accessories	LOT	1				
B.	Network Devices accessories&cabinets-3 Edge switches ,1 core switch	LOT	1				
C.	3 Kva true online UPS	NO	2				
D.	1.5 Kva true online UPS	NO	1				
E.	Allow for integration of the system to existing GENETEC server	LOT	1				
F.	Installation, Testing and Commissioning to client satisfaction	LOT	1				
G.	Biometric Access Control cards	NO.	200				
<b>Total Carried to collection New Bamburi Substation</b> <b>Page 2</b>							

	<b>SUMMARY PAGE NEW BAMBURI SUBSTATION IP- CCTV &amp;ACCESS CONTROL IP- CCTV &amp;ACCESS CONTROL CCTV BILL OF QUANTITIES</b>		
<b>1.</b>	<b>Total Carried to collection New Bamburi Substation Page 1</b>		
<b>2.</b>	<b>Total Carried to collection New Bamburi Substation Page 2</b>		
	<b>SUB-TOTAL-NEW BAMBURI SUBSTATION IP- CCTV &amp;ACCESS CONTROL</b>		



**CATEGORY/LOT 1: INSTALLATION OF CCTV MAJOR DISTRIBUTION/ TRANSMISSION SUBSTATION**

**EMBU DEPOT/SUBSTATION IP- CCTV &ACCESS CONTROL**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
A.	5 MPX, WDR Fixed Dome Camera	No.	10				
B.	32-Channel NVR and storage Server upto 40TB	No.	1				
C.	Genetec Video License (per Camera).	No.	10				
D.	IP Access Control System at Entry <b>TYPE B</b> (Fingerprint Reader) and Exit (Proximity Reader) complete with Licences, IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETEC network (per door).	No.	2				
E.	32 Inch 1080P LED Monitor C/W mount accessories	No.	1				
F.	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	<b>Total Carried to collection Embu Depot/ Substation Page 1</b>						

Bill of Quantities Embu Depot/ Substation Page 2							
No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount KES(Vat Exc)	Part Numbers
A.	Allow for cabling, ducting and necessary accessories	LOT	1				
B.	Network Devices accessories&cabinets-3 Edge switches ,1 core switch	LOT	1				
C.	3 Kva true online UPS	NO	2				
D.	1.5 Kva true online UPS	NO	1				
E.	Allow for integration of the system to existing GENETEC server	LOT	1				
F.	Client Work station	LOT	1				
G.	Installation, Testing and Commissioning to client satisfaction	LOT	1				
H.	Biometric Access Control cards	No.	200				
	Total Carried to collection Embu Depot/ Substation Page 2						

	<b>SUMMARY PAGE EMBU DEPOT/ SUBSTATION IP- CCTV &amp;ACCESS CONTROL IP- CCTV &amp;ACCESS CONTROL CCTV BILL OF QUANTITIES</b>		
<b>1.</b>	<b>Total Carried to collection Embu Depot/ Substation Page 1</b>		
<b>2.</b>	<b>Total Carried to collection Embu Depot/ Substation Page 2</b>		
	<b>SUB-TOTAL- EMBU DEPOT/SUBSTATION IP- CCTV &amp;ACCESS CONTROL</b>		

**CATEGORY/LOT 1: INSTALLATION OF CCTV MAJOR DISTRIBUTION/ TRANSMISSION SUBSTATION**

**TECHNICAL TRAINING**

Bill of Quantities CATEGORY/LOT 1-Technical Training Page 1							
No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount KES(Vat Exc)	Part Numbers
A	<b>Manufacturers Training: Factor costs as follows:</b>						
i)	Manufacturers Training at the manufacturers for 3no technical persons (Factor only the cost of training i.e venue ,trainers, transport to and from the training venue and certification)						
ii)	Travelling and accommodation for 3no technical persons	LOT	1		3,500,000.00	3,500,000.00	
	<b>Total Carried to collection Bill of Quantities CATEGORY/LOT 1-Technical Training Page 1</b>						

**SUMMARY PAGE CATEGORY/LOT 1: INSTALLATION OF CCTV MAJOR DISTRIBUTION/  
TRANSMISSION SUBSTATION BILL OF QUANTITIES**

1.	<b>Sub-total- Nairobi west depot Ip- Cctv &amp; access control</b>	<b>Amount KES(VatExc)</b>	
2.	<b>Sub-total- Kitale depot/ Substation Ip- Cctv &amp;access control</b>		
3.	<b>Sub-total- Webuye Substation Ip- Cctv &amp;access control</b>		
4.	<b>Sub-total- New Bamburi Substation Ip- Cctv &amp;access control</b>		
5.	<b>Sub-total- Embu Depot /Substation Ip- Cctv &amp;access control</b>		
6.	<b>Sub-total- TECHNICAL TRAINING</b>		
	<b>SUB-TOTAL- CCTV MAJOR DISTRIBUTION/ TRANSMISSION SUBSTATION</b>		
	<b>Add 16% Vat</b>		
	<b>GRAND TOTAL CATEGORY/LOT 1: INSTALLATION OF CCTV MAJOR DISTRIBUTION/ TRANSMISSION SUBSTATION</b>		

**SCHEDULE OF MAINTENANCE CATEGORY/LOT 1: INSTALLATION OF CCTV MAJOR  
DISTRIBUTION/ TRANSMISSION SUBSTATION**

<b>Item</b>	<b>Description</b>	<b>Unit of measure</b>	<b>Quantity</b>	<b>Unit Price VAT Exclusive ( Ksh)</b>	<b>Total Price VAT Exclusive ( Ksh)</b>
1	Allow maintenance for a period of 1 (one) year done quarterly as per Kplc SLA.	No	4		

NB;

To be done after one year warranty of servicing during period

## CATEGORY/LOT 1-RECOMMENDED SCHEDULE OF SPARE PARTS

[illegible]

**NB: The cost of spare parts shall be budgeted for and consumed in subsequent repair & Maintenance budget after the warranty period on as-and- when needed-basis.**

Name of Tenderer\_\_\_\_\_Signature & Official Stamp\_\_\_\_\_

**SECTION VIII (B) – BILLS OF QUANTITIES**

(See specifications in a separate section)

**CATEGORY/LOT 2: INSTALLATION OF IP-CCTV FOR KEY OFFICES  
KAKAMEGA OFFICE IP- CCTV & ACCESS CONTROL**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
<b>A.</b>	5 MPX, WDR Fixed Dome Camera	No.	18				
<b>B.</b>	32-Channel NVR and storage Server upto 20TB	No.	1				
<b>C.</b>	Genetec Video License (per Camera).	No.	18				
<b>D.</b>	IP Access Control System <b>TYPE B</b> at Entry (Fingerprint Reader) and Exit (Proximity Reader) complete with Licences, IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETEC network (per door).	No.	6				
<b>E.</b>	32 Inch 1080P LED Monitor C/W mount accessories	No.	1				
<b>F.</b>	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	<b>Total Carried to Collection Kakamega Office page 1</b>						



**Bill of Quantities Kakamega Office Page 2**

<b>No</b>	<b>Item Description</b>	<b>Unit</b>	<b>QTY</b>	<b>Country of origin</b>	<b>Rate in KES(Vat Exc)</b>	<b>Amount KES(Vat Exc)</b>	<b>Part Numbers</b>
<b>A.</b>	Allow for cabling, ducting and necessary accessories		1				
<b>B.</b>	Network Devices accessories&cabinets-3 Edge switches ,1 core switch	LOT	1				
<b>C.</b>	3 Kva true online UPS	NO	2				
<b>D.</b>	Allow for integration of the system to existing GENETEC server	LOT	1				
<b>E.</b>	Client Work station	LOT	1				
<b>F.</b>	Installation, Testing and Commissioning to client satisfaction	LOT	1				
<b>G.</b>	Biometric Access Control cards	No.	200				
<b>Total Carried to Collection Kakamega Office page 2</b>							

	<b>SUMMARY PAGE KAKAMEGA OFFICE IP- CCTV &amp;ACCESS CONTROL CCTV BILL OF QUANTITIES</b>		
<b>1.</b>	<b>Total Carried to collection Page 1 Kakamega Office</b>		
<b>2.</b>	<b>Total Carried to collection Page 2 Kakamega Office</b>		
	<b>SUB-TOTAL- KAKAMEGA OFFICE - CCTV &amp;ACCESS CONTROL</b>		

**CATEGORY/LOT 2: INSTALLATION OF IP-CCTV FOR KEY OFFICES**

**KERICHO DEPOT IP- CCTV &ACCESS CONTROL**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
<b>A.</b>	5 MPX, WDR Fixed Dome Camera	No.	19				
<b>B.</b>	32-Channel NVR and storage Server up to 20TB	No.	1				
<b>C.</b>	Genetec Video License (per Camera).	No.	19				
<b>D.</b>	IP Access Control System <b>TYPE B</b> at Entry (Fingerprint Reader) and Exit (Proximity Reader) complete with Licences, IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETEC network (per door).	No.	7				
<b>E.</b>	40 Inch 1080P LED Monitor C/W mount accessories	No.	1				
<b>F.</b>	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	<b>Total Carried to Collection Kericho Depot page 1</b>						

**Bill of Quantities Kericho Depot Page 2**

<b>No</b>	<b>Item Description</b>	<b>Unit</b>	<b>QTY</b>	<b>Country of origin</b>	<b>Rate in KES(Vat Exc)</b>	<b>Amount</b>	<b>Part Numbers</b>
<b>A.</b>	Allow for cabling, ducting and necessary accessories		1				
<b>B.</b>	Network Devices accessories&cabinets-3 Edge switches ,1 core switch	LOT	1				
<b>C.</b>	3 Kva true online UPS	NO	1				
<b>D.</b>	1.5 Kva true online UPS	NO	2				
<b>E.</b>	Allow for integration of the system to existing GENETEC server	LOT	1				
<b>F.</b>	Client Work station	LOT	1				
<b>G.</b>	Installation, Testing and Commissioning to client satisfaction	LOT	1				
<b>H.</b>	Biometric Access Control cards	No.	200				
	<b>Total Carried to Collection Kericho Depot page 2</b>						

	<b>SUMMARY PAGE KERICHO DEPOT IP- CCTV &amp;ACCESS CONTROL CCTV BILL OF QUANTITIES</b>		
<b>1.</b>	<b>Total Carried to collection Page 1 Kericho Depot</b>		
<b>2.</b>	<b>Total Carried to collection Page 2 Kericho Depot</b>		
	<b>SUB-TOTAL- KERICHO DEPOT - CCTV &amp;ACCESS CONTROL</b>		

**CATEGORY/LOT 2: INSTALLATION OF IP-CCTV FOR KEY OFFICES**  
**KISII DEPOT IP- CCTV &ACCESS CONTROL**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
<b>A.</b>	5 MPX, WDR Fixed Dome Camera	No.	19				
<b>B.</b>	32-Channel NVR and storage Server upto 20TB	No.	1				
<b>C.</b>	Genetec Video License (per Camera).	No.	19				
<b>D.</b>	IP Access Control System <b>TYPE B</b> at Entry (Fingerprint Reader) and Exit (Proximity Reader) complete with Licenses, IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETEC network (per door).	No.	4				
<b>E.</b>	40 Inch 1080P LED Monitor C/W mount accessories	No.	1				
<b>F.</b>	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	<b>Total Carried to Collection Kisii Depot page 1</b>						

<b>No</b>	<b>Item Description</b>	<b>Unit</b>	<b>QTY</b>	<b>Country of origin</b>	<b>Rate in KES(Vat Exc)</b>	<b>Amount KES(Vat Exc)</b>	<b>Part Numbers</b>
<b>A.</b>	Allow for cabling, ducting and necessary accessories		1				
<b>B.</b>	Network Devices accessories&cabinets-3 Edge switches ,1 core switch	LOT	1				
<b>C.</b>	3 Kva true online UPS	NO	1				
<b>D.</b>	1.5 Kva true online UPS	NO	2				
<b>E.</b>	Allow for integration of the system to existing GENETEC server	LOT	1				
<b>F.</b>	Client Work station	LOT	1				
<b>G.</b>	Installation, Testing and Commissioning to client satisfaction	LOT	1				
<b>H.</b>	Biometric Access Control cards	No.	200				
	<b>Total Carried to Collection Kisii Depot page 2</b>						

	<b>SUMMARY PAGE KISII DEPOT IP- CCTV &amp;ACCESS CONTROL CCTV BILL OF QUANTITIES</b>		
<b>1.</b>	<b>Total Carried to collection Page 1 Kisii Depot</b>		
<b>2.</b>	<b>Total Carried to collection Page 2 Kisii Depot</b>		
	<b>SUB-TOTAL- KISII DEPOT - CCTV &amp;ACCESS CONTROL</b>		



**CATEGORY/LOT 2: INSTALLATION OF IP-CCTV FOR KEY OFFICES**

**NAKURU DEPOT IP- CCTV &ACCESS CONTROL**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
<b>A.</b>	5 MPX, WDR Fixed Dome Camera	No.	32				
<b>B.</b>	64-Channel NVR and storage Server up to 24TB	No.	1				
<b>C.</b>	Genetec Video License (per Camera).	No.	32				
<b>D.</b>	IP Access Control System <b>TYPE B</b> at Entry (Fingerprint Reader) and Exit (Proximity Reader) complete with Licences, IP readers with inbuilt controller module, Door Maglock, Door Closure , Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETEC network (Per door).	No.	4				
<b>E.</b>	40 Inch 1080P LED Monitor C/W mount accessories	No.	1				
<b>F.</b>	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	<b>Total Carried to Collection Nakuru Depot page 1</b>						

**Bill of Quantities Nakuru Depot Page 2**

<b>No</b>	<b>Item Description</b>	<b>Unit</b>	<b>QTY</b>	<b>Country of origin</b>	<b>Rate in KES(Vat Exc)</b>	<b>Amount KES(Vat Exc)</b>	<b>Part Numbers</b>
<b>A.</b>	Allow for cabling, ducting and necessary accessories	LOT	1				
<b>B.</b>	Network Devices accessories&cabinets-3 Edge switches,1 core switch	LOT	1				
<b>C.</b>	3 Kva true online UPS	NO	1				
<b>D.</b>	1.5 Kva true online UPS	NO	2				
<b>E.</b>	Allow for integration of the system to existing GENETEC server	LOT	1				
<b>F.</b>	Client Work station	LOT	1				
<b>G.</b>	Installation, Testing and Commissioning to client satisfaction	LOT	1				
<b>H.</b>	Biometric Access Control cards	No.	200				
	<b>Total Carried to Collection Nakuru Depot page 2</b>						

	<b>SUMMARY PAGE NAKURU DEPOT IP- CCTV &amp;ACCESS CONTROL CCTV BILL OF QUANTITIES</b>		
<b>1.</b>	<b>Total Carried to collection Page 1 Nakuru Depot</b>		
<b>2.</b>	<b>Total Carried to collection Page 2 Nakuru Depot</b>		
	<b>SUB-TOTAL- NAKURU DEPOT - CCTV &amp;ACCESS CONTROL</b>		

**CATEGORY/LOT 2: INSTALLATION OF IP-CCTV FOR KEY OFFICES**

**NAIROBI SOUTH DEPOT IP- CCTV &ACCESS CONTROL**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
<b>A.</b>	5 MPX, WDR Fixed Dome Camera	No.	48				
<b>B.</b>	2MPX PTZ Camera	No.	4				
<b>C.</b>	64-Channel NVR and storage Server upto 40TB	No.	1				
<b>D.</b>	Genetec Video License (per Camera).	No.	52				
<b>E.</b>	IP Access Control System <b>TYPE B</b> at Entry (Finger print Reader) and Exit (Proximity Reader) complete with Licences, IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETEC network (per door).	No.	6				
<b>F.</b>	40 Inch 1080P LED Monitor C/W mount accessories	No.	2				
<b>G.</b>	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	<b>Total Carried to Collection Nairobi South Depot page 1</b>						

**Bill of Quantities Nairobi South Depot Page 2**

<b>No</b>	<b>Item Description</b>	<b>Unit</b>	<b>QTY</b>	<b>Country of origin</b>	<b>Rate in KES(Vat Exc)</b>	<b>Amount KES(Vat Exc)</b>	<b>Part Numbers</b>
<b>A.</b>	Allow for cabling, ducting, poles& necessary accessories	LOT	1				
<b>B.</b>	Network Devices accessories&cabinets-6 Edge switches ,1 core switch	LOT	1				
<b>C.</b>	6 KVA true online UPS	NO	1				
<b>D.</b>	3 KVA true online UPS	NO	3				
<b>E.</b>	1.5 KVA true online UPS	NO	3				
<b>F.</b>	Allow for integration of the system to existing GENETEC server	LOT	1				
<b>G.</b>	Client Work station	LOT	1				
<b>H.</b>	Installation, Testing and Commissioning to client satisfaction	LOT	1				
<b>I.</b>	Biometric Access Control cards	No.	200				
	<b>Total Carried to Collection Nairobi South Depot page 2</b>						

	<b>SUMMARY PAGE NAIROBI SOUTH DEPOT IP- CCTV &amp;ACCESS CONTROL CCTV BILL OF QUANTITIES</b>		
<b>1.</b>	<b>Total Carried to collection Page 1 Nairobi South Depot</b>	<b>Amount KES(Vat Exc)</b>	
<b>2.</b>	<b>Total Carried to collection Page 2 Nairobi South Depot</b>		
	<b>SUB-TOTAL- NAIROBI SOUTH DEPOT - CCTV &amp;ACCESS CONTROL</b>		

**CATEGORY/LOT 2: INSTALLATION OF IP-CCTV FOR KEY OFFICES**

**LUKENYA SUBSTATION IP- CCTV &ACCESS CONTROL**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
<b>A.</b>	5 MPX, WDR Fixed Dome Camera	No.	16				
<b>B.</b>	32-Channel NVR and storage Server upto 12TB	No.	1				
<b>C.</b>	Genetec Video License (per Camera).	No.	16				
<b>D.</b>	IP Access Control System <b>TYPE A</b> at Entry (Proximity Reader) and Exit (Proximity Reader) complete with Licences, IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETEC network (per door).	No.	1				
<b>E.</b>	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
<b>Total Carried to Collection Lukenya Substation page 1</b>							

**Bill of Quantities Lukenya Substation Page 2**

<b>No</b>	<b>Item Description</b>	<b>Unit</b>	<b>QTY</b>	<b>Country of origin</b>	<b>Rate in KES(Vat Exc)</b>	<b>Amount</b>	<b>Part Numbers</b>
<b>A.</b>	Allow for cabling, ducting, poles& necessary accessories		1				
<b>B.</b>	Network Devices accessories&cabinets-1 Edge switch	LOT	1				
<b>C.</b>	3 Kva true online UPS	NO	1				
<b>D.</b>	Allow for integration of the system to existing GENETEC server	LOT	1				
<b>E.</b>	Installation, Testing and Commissioning to client satisfaction	LOT	1				
<b>F.</b>	Biometric Access Control cards	No.	200				
	<b>Total Carried to Collection Lukenya Substation page 2</b>						



	<b>SUMMARY PAGE LUKENYA SUBSTATION IP- CCTV &amp;ACCESS CONTROL CCTV BILL OF QUANTITIES</b>		
<b>1.</b>	<b>Total Carried to collection Page 1 Lukenya Substation</b>		
<b>2.</b>	<b>Total Carried to collection Page 2 Lukenya Substation</b>		
	<b>SUB-TOTAL-LUKENYA SUBSTATION CCTV &amp;ACCESS CONTROL</b>		

**CATEGORY/LOT 2: INSTALLATION OF CCTV MAJOR DISTRIBUTION/ TRANSMISSION  
SUBSTATION**

**TECHNICAL TRAINING**

<b>Bill of Quantities CATEGORY/LOT 2-Technical Training Page 1</b>							
<b>No</b>	<b>Item Description</b>	<b>Unit</b>	<b>QTY</b>	<b>Country of origin</b>	<b>Rate in KES(Vat Exc)</b>	<b>Amount KES(Vat Exc)</b>	<b>Part Numbers</b>
A	<b>Manufacturers Training: Factor costs as follows:</b>						
i)	Manufacturers Training at the manufacturers for 3no technical persons (Factor only the cost of training i.e venue ,trainers, transport to and from the training venue and certification)	LOT	1				
ii)	Travelling and accommodation for 3no technical persons	LOT	1		3,500,000.00	3,500,000.00	
	<b>Total Carried to collection Bill of Quantities CATEGORY/LOT 2-Technical Training Page 1</b>						

**SUMMARY PAGE CATEGORY/LOT 2 BILL OF QUANTITIES: INSTALLATION OF IP-CCTV FOR KEY OFFICES**

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1.	Sub-total- Kakamega Office CCTV IP- CCTV & Access control		
2.	Sub-total- Kericho Depot CCTV IP- CCTV & Access control		
3.	Sub-total- Kisii Depot CCTV IP- CCTV & Access control		
4.	Sub-total- Nakuru Depot CCTV IP- CCTV & Access control		
5.	Sub-total- Nairobi South Depot CCTV IP- CCTV & Access control		
6.	Sub-total- Lukenya Substation CCTV IP- CCTV & Access control		
7.	Sub-total- Technical Training		
	<b>SUB-TOTAL- INSTALLATION OF IP- CCTV FOR KEY OFFICES</b>		
	<b>Add 16% Vat</b>		
	<b>GRAND TOTAL CATEGORY/LOT 2 BILL OF QUANTITIES: INSTALLATION OF IP-CCTV FOR KEY OFFICES</b>		

**SCHEDULE OF MAINTENANCE CATEGORY/LOT 2: INSTALLATION OF IP-CCTV  
FOR KEY OFFICES**

Item	Description	Unit of measure	Quantity	Unit Price VAT	Total Price VAT
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				<b>Exclusive ( Ksh)</b>	<b>Exclusive ( Ksh)</b>
1	Allow maintenance for a period of 1 (one) year done quarterly as per Kplc SLA.	No	4		

NB;

To commence one year after (defect liability period & and first six months of warranty period) of servicing during period

**CATEGORY/LOT 2-RECOMMENDED SCHEDULE OF SPARE PARTS**

<b>Item</b>	<b>Description</b>	<b>Qty</b>	<b>Unit Price VAT Excl ( Ksh)</b>	<b>Total Price VAT Excl ( Ksh)</b>	<b>Total Price VAT Incl ( Ksh)</b>



<b>B.</b>	64-Channel NVR and storage Server up to 40TB	No.	1				
<b>C.</b>	Genetec Video License (per Camera).	No.	55				
<b>D.</b>	Visitor Management system with following components 1 No. Visitor management kiosk, 1No. visitor management smartphone with app, 1 No. visitor management badging printer with 100 badge printing rolls No, 1No. Hand Held visitor scanner, complete with software and licenses as per the specifications and other accessories necessary to complete the installation.	Lot	1				
<b>E.</b>	IP Access Control System <b>TYPE C</b> at Entry (Facial Reader) and Exit (Proximity Reader) complete with Licences, IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETEC network (Per door).	No.	12				
<b>F.</b>	40 Inch 1080P LED Monitor C/W mount accessories	No.	1				
<b>G.</b>	32 Inch 1080P LED Monitor C/W mount accessories	No.	1				
<b>H.</b>	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
<b>Total Carried to Collection Electricity House Kisumu page 1</b>							

<b>Bill of Quantities Electricity House Kisumu Page 2</b>							
<b>No</b>	<b>Item Description</b>	<b>Unit</b>	<b>QTY</b>	<b>Country of origin</b>	<b>Rate in KES(Vat Exc)</b>	<b>Amount KES(Vat Exc)</b>	<b>Part Numbers</b>
<b>A.</b>	Allow for cabling, ducting and necessary accessories	LOT	1				

<b>B.</b>	Network accessories&cabinets-6 switches ,1 core switch	Devices Edge	LOT	1				
<b>C.</b>	6 Kva true online UPS		NO	1				
<b>D.</b>	3 Kva true online UPS		NO	3				
<b>E.</b>	1.5 Kva true online UPS		NO	2				
<b>F.</b>	Allow for integration of the system to existing GENETEC server		LOT	1				
<b>G.</b>	Client Work station		LOT	1				
<b>H.</b>	Installation, Testing and Commissioning to client satisfaction		LOT	1				
<b>I.</b>	Establishment of regional Security Control Room		LOT	1		3,500,000.00	3,500,000.00	
<b>J.</b>	Biometric Access Control cards		No.	1000				
	<b>Total Carried to Collection Electricity House Kisumu page 2</b>							

	<b>SUMMARY PAGE ELECTRICITY HOUSE KISUMU-IP- CCTV &amp;ACCESS CONTROL CCTV BILL OF QUANTITIES</b>		
<b>1.</b>	<b>Total Carried to collection Page 1 Electricity House Kisumu</b>		
<b>2.</b>	<b>Total Carried to collection Page 2 Electricity House Kisumu</b>		
	<b>SUB-TOTAL- ELECTRICITY HOUSE KISUMU-IP- CCTV &amp;ACCESS</b>		



**CATEGORY/LOT 3: INSTALLATION OF ACCESS CONTROL IN SUBSTATIONS & KEY OFFICES**  
**ELECTRICITY HOUSE NAKURU ACCESS CONTROL SYSTEMS**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
<b>A.</b>	IP Access Control System <b>TYPE C</b> at Entry (Facial Reader) and Exit (Proximity Reader) complete with Licences, IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETEC network (Per door).	No.	10				
<b>B.</b>	Visitor Management system with following components 1 No. Visitor management kiosk, 1No. visitor management smartphone with app, 1 No. visitor management badging printer with 100 badge printing rolls No, 1No. Hand Held visitor scanner, complete with software and licenses as per the specifications and other accessories necessary to complete the installation.	Lot	1				
<b>C.</b>	ACCESS Control enrollment reader compatible with Type A,B&C readers	No.	1				
<b>D.</b>	Client Workstation	No.	1				
<b>E.</b>	Walkthrough detector as per specifications	NO.	2				
<b>F.</b>	Sliding gate as per specifications	LOT	1				
<b>G.</b>	Network Devices accessories&cabinets-4no Edge switches and 1 core switch.	LOT	1				
<b>H.</b>	3 Kva true online UPS	NO	3				
<b>I.</b>	Installation, Testing, Training and Commissioning to client satisfaction	LOT	1				
<b>J.</b>	Biometric Access Control cards	No.	200				
	<b>Total Carried to Collection Electricity House Nakuru</b>						

**CATEGORY/LOT 3: INSTALLATION OF ACCESS CONTROL IN SUBSTATIONS & KEY OFFICES**

**ELECTRICITY HOUSE MOMBASA ACCESS CONTROL SYSTEMS**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
<b>A.</b>	IP Access Control System <b>TYPE C</b> at Entry (Facial Reader) and Exit (Proximity Reader) complete with Licences, IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETEC network (Per door).	No.	18				
<b>B.</b>	Visitor Management system with following components 1 No. Visitor management kiosk, 1No. Visitor management smartphone with app, 1 No. visitor management-badging printer with 100-badge printing rolls No, 1No. Hand Held visitor scanner, complete with software and licenses as per the specifications and other accessories necessary to complete the installation.	Lot	1				
<b>C.</b>	ACCESS Control enrollment reader compatible with Type A,B&C readers	No.	1				
<b>D.</b>	Network Devices accessories&cabinets-4no Edge switches	LOT	1				
<b>E.</b>	3 Kva true online UPS	No.	3				
<b>F.</b>	Installation, Testing, Training and Commissioning to client satisfaction	LOT	1				
<b>G.</b>	Biometric Access Control cards	No.	200				
	<b>Total Carried to Collection Electricity House Mombasa</b>						

**CATEGORY/LOT 3: INSTALLATION OF ACCESS CONTROL IN SUBSTATIONS & KEY OFFICES**

**TECHNICAL TRAINING**

<b>Bill of Quantities CATEGORY/LOT 3-Technical Training</b>							
<b>No</b>	<b>Item Description</b>	<b>Unit</b>	<b>QTY</b>	<b>Country of origin</b>	<b>Rate in KES(Vat Exc)</b>	<b>Amount KES(Vat Exc)</b>	<b>Part Numbers</b>
<b>A</b>	<b>Manufacturers Training: Factor costs as follows:</b>						
i)	Manufacturers Training at the manufacturers for 3no technical persons (Factor only the cost of training i.e venue ,trainers, transport to and from the training venue and certification)	LOT	1				
ii)	Travelling and accommodation for 3no technical persons	LOT	1		<b>3,500,000.00</b>	<b>3,500,000.00</b>	
	<b>Total Carried to collection Bill of Quantities CATEGORY/LOT 3-Technical Training</b>						

**SUMMARY PAGE: INSTALLATION OF ACCESS CONTROL IN SUBSTATIONS & KEY OFFICES BILL OF QUANTITIES**

<b>1.</b>	<b>Total Carried to collection Electricity House Kisumu</b>		
<b>2.</b>	<b>Total Carried to collection Electricity House Nakuru</b>		
<b>3.</b>	<b>Total Carried to collection Electricity House Mombasa</b>		
<b>4.</b>	<b>Total – Technical Training</b>		
	<b>SUB-TOTAL FOR ACCESS CONTROL IN SUBSTATIONS &amp; KEY OFFICES</b>		
	<b>Add 16% Vat</b>		
	<b>GRAND TOTAL INSTALLATION OF ACCESS CONTROL IN SUBSTATIONS &amp; KEY OFFICES</b>		

**SCHEDULE OF MAINTENANCE CATEGORY/LOT 3: INSTALLATION OF ACCESS CONTROL IN SUBSTATIONS & KEY OFFICES**

<b>Item</b>	<b>Description</b>	<b>Unit of measure</b>	<b>Quantity</b>	<b>Unit Price VAT Exclusive ( Ksh)</b>	<b>Total Price VAT Exclusive ( Ksh)</b>
1	Allow maintenance for a period of 1 (one) year done quarterly as per Kplc SLA.	No	4		

NB;

To be done after one year warranty of servicing during period

### **CATEGORY/LOT 3-RECOMMENDED SCHEDULE OF SPARE PARTS**

[illegible]

**NB: The cost of spare parts shall be budgeted for and consumed in subsequent repair & Maintenance budget after the warranty period on as-and- when needed-basis.**

Name of Tenderer\_\_\_\_\_Signature & Official Stamp

**SECTION VIII (D)–BILLS OF QUANTITIES**

(See specifications in a separate section)

**CATEGORY/LOT 4: SECURITY SYSTEMS FOR FACILITIES AND INFRASTRUCTURE  
MACHAKOS SUBSTATION IP- CCTV & ACCESS CONTROL**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
A.	5 MPX, WDR Fixed Dome Camera	No.	16				
B.	16-Channel NVR and storage Server upto 12TB	No.	1				
C.	Genetec Video License (per Camera).	No.	16				
D.	IP Access Control System <b>TYPE A</b> at Entry (Proximity Reader) and Exit (Proximity Reader) complete with Licences, IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETEC network (per door).	No.	2				
E.	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	<b>Total Carried to Collection Machakos Substation page 1</b>						

**Bill of Quantities Machakos Substation Page 2**

<b>No</b>	<b>Item Description</b>	<b>Unit</b>	<b>QTY</b>	<b>Countr y of origin</b>	<b>Rate in KES(Vat Exc)</b>	<b>Amount KES(Vat Exc)</b>	<b>Part Numb ers</b>
<b>A.</b>	Allow for cabling, ducting and necessary accessories	LOT	1				
<b>B.</b>	Network Devices accessories&cabinets-1-Edge switch.	LOT	1				
<b>C.</b>	3 Kva true online UPS	NO	1				
<b>D.</b>	Allow for integration of the system to existing GENETEC server	LOT	1				
<b>E.</b>	Installation, Integration, Testing and Commissioning to client satisfaction	LOT	1				
<b>F.</b>	Biometric Access Control cards	No.	200				
	<b>Total Carried to Collection Machakos Substation page 2</b>						



	<b>SUMMARY PAGE MACHAKOS SUBSTATION-IP- CCTV &amp;ACCESS CONTROL CCTV BILL OF QUANTITIES</b>		
<b>1.</b>	<b>Total Carried to collection Page 1 Machakos Substation</b>		
<b>2.</b>	<b>Total Carried to collection Page 2 Machakos Substation</b>		
	<b>SUB-TOTAL-MACHAKOS SUBSTATION-IP- CCTV &amp;ACCESS</b>		

**CATEGORY/LOT 4: SECURITY SYSTEMS FOR FACILITIES AND INFRASTRUCTURE**

**NEW INDUSTRIAL SUBSTATION IP- CCTV &ACCESS CONTROL**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
<b>A.</b>	5 MPX, WDR Fixed Dome Camera	No.	10				
<b>B.</b>	16-Channel NVR and storage Server upto 12TB	No.	1				
<b>C.</b>	Genetec Video License (per Camera).	No.	10				
<b>D.</b>	IP Access Control System <b>TYPE A</b> at Entry (Proximity Reader) and Exit (Proximity Reader) complete with Licences, IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETEC network (per door).	No.	2				
<b>E.</b>	32 Inch 1080P LED Monitor C/W mount accessories	No.	1				
<b>F.</b>	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	<b>Total Carried to Collection New Industrial Substation page 1</b>						

**Bill of Quantities New Industrial Substation Page 2**

<b>No</b>	<b>Item Description</b>	<b>Unit</b>	<b>QTY</b>	<b>Countr y of origin</b>	<b>Rate in KES(Vat Exc)</b>	<b>Amount</b>	<b>Part Numb ers</b>
<b>A.</b>	Allow for cabling, ducting and necessary accessories	LOT	1				
<b>B.</b>	Network Devices accessories&cabinets-1-Edge switches.	LOT	1				
<b>C.</b>	3 KVA true online UPS	NO	1				
<b>D.</b>	Allow for integration of the system to existing GENETEC server	LOT	1				
<b>E.</b>	Installation, Testing and Commissioning to client satisfaction	LOT	1				
<b>F.</b>	Biometric Access Control cards	No.	200				
	<b>Total Carried to Collection New Industrial Substation page 2</b>						

	<b>SUMMARY PAGE NEW INDUSTRIAL SUBSTATION-IP- CCTV &amp;ACCESS CONTROL CCTV BILL OF QUANTITIES</b>		
1.	<b>Total Carried to collection Page 1 New Industrial Substation</b>		
2.	<b>Total Carried to collection Page 2 New Industrial Substation</b>		
	<b>SUB-TOTAL-NEW INDUSTRIAL SUBSTATION-IP- CCTV &amp;ACCESS</b>		

**CATEGORY/LOT 4: SECURITY SYSTEMS FOR FACILITIES AND INFRASTRUCTURE**

**KIKUYU SUBSTATION IP- CCTV & ACCESS CONTROL**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
<b>A.</b>	5 MPX, WDR Fixed Dome Camera	No.	10				
<b>B.</b>	16-Channel NVR and storage Server upto 12TB	No.	1				
<b>C.</b>	Genetec Video License (per Camera).	No.	10				
<b>D.</b>	IP Access Control System <b>TYPE A</b> at Entry (Proximity Reader) and Exit (Proximity Reader) complete with Licences, IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETEC network (per door).	No.	2				
<b>E.</b>	32 Inch 1080P LED Monitor C/W mount accessories	No.	1				
<b>F.</b>	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	<b>Total Carried to Collection Kikuyu Substation page 1</b>						

**Bill of Quantities Kikuyu Substation Page 2**

<b>No</b>	<b>Item Description</b>	<b>Unit</b>	<b>QTY</b>	<b>Countr y of origin</b>	<b>Rate in KES(Vat Exc)</b>	<b>Amount KES(Vat Exc)</b>	<b>Part Numb ers</b>
<b>A.</b>	Allow for cabling, ducting and necessary accessories	LOT	1				
<b>B.</b>	Network Devices accessories&cabinets-1-Edge switches .	LOT	1				
<b>C.</b>	3 Kva true online UPS	NO	1				
<b>D.</b>	1.5 Kva true online UPS	NO					
<b>E.</b>	Allow for integration of the system to existing GENETEC server	LOT	1				
<b>F.</b>	Installation, Testing and Commissioning to client satisfaction	LOT	1				
<b>G.</b>	Biometric Access Control cards	No.	200				
<b>Total Carried to Collection Kikuyu Substation page 2</b>							

	<b>SUMMARY PAGE KIKUYU SUBSTATION IP- CCTV &amp; ACCESS CONTROL BILL OF QUANTITIES</b>		
<b>1.</b>	<b>Total Carried to collection Page 1 Kikuyu Substation</b>		
<b>2.</b>	<b>Total Carried to collection Page 2 Kikuyu Substation</b>		
	<b>SUB-TOTAL-KIKUYU SUBSTATION- IP- CCTV &amp;ACCESS</b>		

**CATEGORY/LOT 4: SECURITY SYSTEMS FOR FACILITIES AND INFRASTRUCTURE**

**NYAHURURU DEPOT/ SUBSTATION IP- CCTV &ACCESS CONTROL**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
<b>A.</b>	5 MPX, WDR Fixed Dome Camera	No.	16				
<b>B.</b>	32-Channel NVR and storage Server upto 12TB	No.	1				
<b>C.</b>	Genetec Video License (per Camera).	No.	16				
<b>D.</b>	IP Access Control System <b>TYPE B</b> at Entry (Fingerprint Reader) and Exit (Proximity Reader) complete with Licences, IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETEC network (per door).	No.	1				
<b>E.</b>	32 Inch 1080P LED Monitor C/W mount accessories	No.	1				
<b>F.</b>	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	<b>Total Carried to Collection Nyahururu Depot/ Substation page 1</b>						



Bill of Quantities Nyahururu Depot/ Substation Page 2							
No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount KES(Vat Exc)	Part Numbers
A.	Allow for cabling, ducting and necessary accessories	LOT	1				
B.	Network Devices accessories&cabinets-2-Edge switches.	LOT	1				
C.	3 Kva true online UPS	NO	1				
D.	1.5 Kva true online UPS	NO	1				
E.	Allow for integration of the system to existing GENETEC server	LOT	1				
F.	Installation, Testing and Commissioning to client satisfaction	LOT	1				
G.	Biometric Access Control cards	No.	200				
	Total Carried to Collection Nyahururu Depot/Substation page 2						

	<b>SUMMARY PAGE NYAHURURU DEPOT/ SUBSTATION-IP- CCTV &amp;ACCESS CONTROL CCTV BILL OF QUANTITIES</b>		
<b>1.</b>	<b>Total Carried to collection Page 1 Nyahururu Depot/Substation</b>		
<b>2.</b>	<b>Total Carried to collection Page 2 Nyahururu Depot/Substation</b>		
	<b>SUB-TOTAL-NYAHURURU DEPOT/ SUBSTATION-IP- CCTV &amp;ACCESS</b>		

**CATEGORY/LOT 4: SECURITY SYSTEMS FOR FACILITIES AND INFRASTRUCTURE**

**KILIFI DEPOT/ SUBSTATION IP- CCTV &ACCESS CONTROL**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
A.	5 MPX, WDR Fixed Dome Camera	No.	4				
B.	2MPX PTZ Camera	No.	1				
C.	5 MPX, WDR Fixed Bullet Camera	No.	14				
D.	32-Channel NVR and storage Server upto 30TB	No.	1				
E.	Genetec Video License (per Camera).	No.	19				
F.	IP Access Control System <b>TYPE B</b> at Entry (Fingerprint Reader) and Exit (Proximity Reader) complete with Licences, IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETEC network (per door).	No.	3				
G.	40 Inch 1080P LED Monitor C/W mount accessories	No.	1				
H.	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	<b>Total Carried to Collection Kilifi Depot/ Substation page 1</b>						

**Bill of Quantities Kilifi Depot/ Substation Page 2**

<b>No</b>	<b>Item Description</b>	<b>Unit</b>	<b>QTY</b>	<b>Countr y of origin</b>	<b>Rate in KES(Vat Exc)</b>	<b>Amount KES(Vat Exc)</b>	<b>Part Numb ers</b>
<b>A.</b>	Allow for cabling, ducting, Poles and necessary accessories	LOT	1				
<b>B.</b>	Network Devices accessories&cabinets-2-Edge switches.	LOT	1				
<b>C.</b>	3 Kva true online UPS	NO	2				
<b>D.</b>	Allow for integration of the system to existing GENETEC server	LOT	1				
<b>E.</b>	Client Work station	LOT	1				
<b>F.</b>	Installation, Testing and Commissioning to client satisfaction	LOT	1				
<b>G.</b>	Biometric Access Control cards	No.	200				
<b>Total Carried to Collection Kilifi Depot/Substation page 2</b>							

	<b>SUMMARY PAGE KILIFI DEPOT/ SUBSTATION-IP- CCTV &amp;ACCESS CONTROL CCTV BILL OF QUANTITIES</b>		
1.	<b>Total Carried to collection Page 1 Kilifi Depot/Substation</b>		
2.	<b>Total Carried to collection Page 2 Kilifi Depot/Substation</b>		
	<b>SUB-TOTAL-KILIFI DEPOT/ SUBSTATION-IP- CCTV &amp;ACCESS</b>		

**CATEGORY/LOT 4: SECURITY SYSTEMS FOR FACILITIES AND INFRASTRUCTURE**

**HOMABAY STORES IP- CCTV &ACCESS CONTROL**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
A.	5 MPX, WDR Fixed Dome Camera	No.	12				
B.	24-Channel NVR and storage Server upto 30TB	No.	1				
C.	Genetec Video License (per Camera).	No.	12				
D.	IP Access Control System <b>TYPE A</b> at Entry (Proximity Reader) and Exit (Proximity Reader) complete with Licences, IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETEC network (per door).	No.	2				
E.	40 Inch 1080P LED Monitor C/W mount accessories	No.	1				
F.	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	<b>Total Carried to Collection Homabay Stores page 1</b>						

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount KES(Vat Exc)	Part Numbers
A.	Allow for cabling, ducting, Poles and necessary accessories	LOT	1				
B.	Network Devices accessories&cabinets-2-Edge switches	LOT	1				
C.	3 Kva true online UPS	NO	1				
D.	Allow for integration of the system to existing GENETEC server	LOT	1				
E.	Installation, Testing and Commissioning to client satisfaction	LOT	1				
F.	Biometric Access Control cards	No.	200				
	<b>Total Carried to Collection Homabay Stores page 2</b>						

	<b>SUMMARY PAGE HOMABAY STORES-IP- CCTV &amp;ACCESS CONTROL CCTV BILL OF QUANTITIES</b>		
1.	<b>Total Carried to collection Page 1 Homabay Stores</b>		
2.	<b>Total Carried to collection Page 2 Homabay Stores</b>		
	<b>SUB-TOTAL-HOMABAY STORES-IP- CCTV &amp;ACCESS</b>		

**CATEGORY/LOT 4: SECURITY SYSTEMS FOR FACILITIES AND INFRASTRUCTURE**

**NJORO SUBSTATION IP- CCTV &ACCESS CONTROL**



No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
A.	5 MPX, WDR Fixed Dome Camera	No.	10				
B.	16-Channel NVR and storage Server upto 12TB	No.	1				
C.	Genetec Video License (per Camera).	No.	10				
D.	IP Access Control System <b>TYPE A</b> at Entry (Proximity Reader) and Exit (Proximity Reader) complete with Licences, IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETEC network (per door).	No.	2				
E.	32 Inch 1080P LED Monitor C/W mount accessories	No.	1				
F.	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	<b>Total Carried to Collection Njoro Substation page 1</b>						

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
A.	Allow for cabling, ducting and necessary accessories	LOT	1				
B.	Network Devices accessories&cabinets-1-Edge switches.	LOT	1				
C.	3 Kva true online UPS	NO	1				
D.	Allow for integration of the system to existing GENETEC server	LOT	1				
E.	Installation, Testing and Commissioning to client satisfaction	LOT	1				
F.	Biometric Access Control cards	No.	200				
	<b>Total Carried to Collection Njoro Substation page 2</b>						

	<b>SUMMARY PAGE NJORO SUBSTATION SUBSTATION-IP- CCTV &amp;ACCESS CONTROL CCTV BILL OF QUANTITIES</b>		
<b>1.</b>	<b>Total Carried to collection Page 1 Njoro Substation</b>		
<b>2.</b>	<b>Total Carried to collection Page 2 Njoro Substation</b>		
	<b>SUB-TOTAL-NJORO SUBSTATION- IP- CCTV &amp;ACCESS</b>		

**CATEGORY/LOT 4: SECURITY SYSTEMS FOR FACILITIES AND INFRASTRUCTURE**

**EMALI OFFICE IP- CCTV &ACCESS CONTROL**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
<b>A.</b>	5 MPX, WDR Fixed Dome Camera	No.	5				
<b>B.</b>	16-Channel NVR and storage Server up to 12TB	No.	1				
<b>C.</b>	Genetec Video License (per Camera).	No.	5				
<b>D.</b>	IP Access Control System <b>TYPE B</b> at Entry (Fingerprint Reader) and Exit (Proximity Reader) complete with Licenses, IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETEC network (per door).	No.	2				
<b>E.</b>	32 Inch 1080P LED Monitor C/W mount accessories	No.	1				
<b>F.</b>	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	<b>Total Carried to Collection Emali Office page 1</b>						

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount KES(Vat Exc)	Part Numbers
A.	Allow for cabling, ducting and necessary accessories	LOT	1				
B.	Network Devices accessories&cabinets-1-Edge switches.	LOT	1				
C.	1.5 Kva true online UPS	NO	1				
D.	Allow for integration of the system to existing GENETEC server	LOT	1				
E.	Installation, Testing and Commissioning to client satisfaction	LOT	1				
F.	Biometric Access Control cards	No.	200				
	<b>Total Carried to Collection Emali Office page 2</b>						

	<b>SUMMARY PAGE EMALI OFFICE-IP- CCTV &amp;ACCESS CONTROL CCTV BILL OF QUANTITIES</b>		
<b>1</b>	<b>Total Carried to collection Page 1 Emali Office</b>		
<b>2</b>	<b>Total Carried to collection Page 2 Emali Office</b>		
	<b>SUB-TOTAL-EMALI OFFICE-IP- CCTV &amp;ACCESS</b>		

**CATEGORY/LOT 4: SECURITY SYSTEMS FOR FACILITIES AND INFRASTRUCTURE**

**GARRISA OFFICE IP- CCTV &ACCESS CONTROL**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
A.	5 MPX, WDR Fixed Dome Camera	No.	10				
B.	16-Channel NVR and storage Server up to 12TB	No.	1				
C.	Genetec Video License (per Camera).	No.	10				
D.	IP Access Control System <b>TYPE B</b> at Entry (Fingerprint Reader) and Exit (Proximity Reader) complete with Licenses, IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETEC network (per door).	No.	2				
E.	32 Inch 1080P LED Monitor C/W mount accessories	No.	1				
F.	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	<b>Total Carried to Collection Garrisa Office page 1</b>						

**Bill of Quantities Garrisa Office Page 2**

<b>No</b>	<b>Item Description</b>	<b>Unit</b>	<b>QTY</b>	<b>Countr y of origin</b>	<b>Rate in KES(Vat Exc)</b>	<b>Amount KES (Vat Exc)</b>	<b>Part Numb ers</b>
<b>A.</b>	Allow for cabling, ducting and necessary accessories	LOT	1				
<b>B.</b>	Network Devices accessories&cabinets-1-Edge switches.	LOT	1				
<b>C.</b>	3 Kva true online UPS	NO	1				
<b>D.</b>	Allow for integration of the system to existing GENETEC server	LOT	1				
<b>E.</b>	Installation, Testing and Commissioning to client satisfaction	LOT	1				
<b>F.</b>	Biometric Access Control cards	No.	200				
	<b>Total Carried to Collection Garrisa Office page 2</b>						



	<b>SUMMARY PAGE GARRISA OFFICE-IP- CCTV &amp;ACCESS CONTROL CCTV BILL OF QUANTITIES</b>		
1.	<b>Total Carried to collection Page 1 Garrisa Office</b>		
2.	<b>Total Carried to collection Page 2 Garrisa Office</b>		
	<b>SUB-TOTAL-GARRISA OFFICE-IP- CCTV &amp;ACCESS</b>		

**CATEGORY/LOT 4: SECURITY SYSTEMS FOR FACILITIES AND INFRASTRUCTURE**

**TECHNICAL TRAINING**

Bill of Quantities CATEGORY/LOT 4-Technical Training Page 1							
No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount KES(Vat Exc)	Part Numbers
A	<b>Manufacturers Training: Factor costs as follows:</b>						
i)	Manufacturers Training at the manufacturers for 3no technical persons (Factor only the cost of training i.e venue ,trainers, transport to and from the training venue and certification)	LOT	1				
ii)	Travelling and accommodation for 3no technical persons	LOT	1		3,500,000.00	3,500,000.00	
	<b>Total Carried to collection Bill of Quantities CATEGORY/LOT 4-Technical Training Page 1</b>						

**SUMMARY PAGE CATEGORY/LOT 4 BILL OF QUANTITIES: SECURITY SYSTEMS FOR FACILITIES AND INFRASTRUCTURE**

	<b>Sub-total- Machakos Substation CCTV IP- CCTV &amp; Access control</b>				
<b>1.</b>	<b>Sub-total- New Industrial Substation CCTV IP- CCTV &amp; Access control</b>				
<b>2.</b>	<b>Sub-total- kikuyu Substation CCTV IP- CCTV &amp; Access control</b>				
<b>3.</b>	<b>Sub-total- Nyahururu stores/ Substation CCTV IP- CCTV &amp; Access control</b>				
<b>4.</b>	<b>Sub-total- Kilifi Substation CCTV IP- CCTV &amp; Access control</b>				
<b>5.</b>	<b>Sub-total- Homabay Stores CCTV IP- CCTV &amp; Access control</b>				
<b>6.</b>	<b>Sub-total- Njoro Substation CCTV IP- CCTV &amp; Access control</b>				
<b>7.</b>	<b>Sub-total- Emali Stores CCTV IP- CCTV &amp; Access control</b>				
<b>8.</b>	<b>Sub-total- Garissa Office CCTV IP- CCTV &amp; Access control</b>				
<b>9.</b>	<b>Total – Technical Training</b>				
<b>10.</b>	<b>Total Carried to collection Bill of Quantities CATEGORY/LOT 4-Technical Training Page 1</b>				
	<b>SUB-TOTAL- SECURITY SYSTEMS FOR FACILITIES AND INFRASTRUCTURE</b>				
	<b>Add 16% Vat</b>				
	<b>GRAND TOTAL CATEGORY/LOT 4 BILL OF QUANTITIES: SECURITY SYSTEMS FOR FACILITIES AND INFRASTRUCTURE</b>				

**SCHEDULE OF MAINTENANCE CATEGORY/LOT 4: SECURITY SYSTEMS FOR FACILITIES AND INFRASTRUCTURE MACHAKOS SUBSTATION IP- CCTV & ACCESS CONTROL**

<b>Item</b>	<b>Description</b>	<b>Unit of measure</b>	<b>Quantity</b>	<b>Unit Price VAT Exclusive ( Ksh)</b>	<b>Total Price VAT Exclusive ( Ksh)</b>
1	Allow maintenance for a period of 1 (one) year done quarterly as per Kplc SLA.	No	4		

NB;

To be done after one year warranty of servicing during period The cost of spare parts shall be budgeted for and consumed in subsequent repair & Maintenance budget after the warranty period

## CATEGORY/LOT 4-RECOMMENDED SCHEDULE OF SPARE PARTS

[illegible]

**NB: The cost of spare parts shall be budgeted for and consumed in subsequent repair & Maintenance budget after the warranty period on as-and- when needed-basis.**

Name of Tenderer\_\_\_\_\_Signature & Official Stamp

**SECTION VIII (E) – BILLS OF QUANTITIES**

(See specifications in a separate section)

**CATEGORY/LOT 5: INSTALLATION OF ELECTRIC FENCES &INTRUSION SYSTEM FOR KEY SUBSTATIONS:****KIBOKO SUBSTATION ELECTRIC FENCE**

Bill of Quantities Kiboko Substation Page 1							
No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
	<b>FREE-STANDING 16 -Lines elephant protection Electric Fence to cover 423m Perimeter comprising 16 strands spaced 100mm comprising of Well treated Wooden Poles and with necessary accessories in conformity with relevant standards and general good practice and allow for works to be installed, tested and Commissioned to client's satisfaction with the following :</b>						
A	Adequate mains energizer Nemtek minimum 10J Output or equivalent and approved complete with back-up battery and Keypad as per the specifications.	No.	2				
B	GSM/IP Module as per detailed specifications.	No	1				
C	Lead out under gate cable including excavating in road works with necessary ducting and making good disturbed surfaces	M	500				
D	Allow for redesigning while repairing and replacing damaged Concrete Poles up to 30% of existing Poles						
	<b>Total Carried to Collection Kiboko Substation page 1</b>						

**Bill of Quantities Kiboko Substation Page 2**

<b>No</b>	<b>Item Description</b>	<b>Unit</b>	<b>QTY</b>	<b>Coun try of origin</b>	<b>Rate in KES(Vat Exc)</b>	<b>Amount KES(Va t Exc)</b>	<b>Part Number s</b>
A	<b>High tensile 2.5mm fence wire ( HT )</b>	M	6598				
B	<b>Fence Poles</b> Allow for well treated Elephant wooden poles as per Elephant protection Electric fence standards	No.	183				
C	<b>Siren Kit complete with box, sounder and strobe</b> 12V,DC Security sounder and strobe with a range of 1 km as per detailed specifications.	No.	1				
D	<b>W-Insulators</b> High density porcelain UV stabilized plastic polythene insulators to adequately cover the installations as per IEE standards	Item	1				
E	<b>Chain Link</b> Allow for redesigning and reconstructing existing Chain Link with new one while utilizing up to 50% of existing.	Item	1				
<b>Total Carried to Collection Kiboko Substation page 2</b>							

**Bill of Quantities Kiboko Substation Page 3**

<b>No</b>	<b>Item Description</b>	<b>Unit</b>	<b>QTY</b>	<b>Coun try of origin</b>	<b>Rate in KES(Vat Exc)</b>	<b>Amount KES(Va t Exc)</b>	<b>Part Number s</b>
A	<b>Strain –S-insulators</b> STF Black-High density porcelain UV stabilized plastic polythene insulators to adequately cover the installations as per IEE standards	Item	1				
B	Earthing of the Electric fence as per the IEE regulations and to be done at intervals of 30M	Item	1				
C	Hatari signs	No	40				
D	Provide for power and Alarm cable as per IEE Standards	Item	1				
E	Supply and fix Razor wire along the free- stranding electric fence, conforming to the following specifications:- 980mm diameter coil size Double Galvanized Razor wire ; Blade profile - Ripper Razor Wire; Stretch factor - maximum of 10M per coil and secured with steel plates at 1M centers and with two coatings to prevent rust.	M	550				
<b>Total Carried to Collection Kiboko Substation page 3</b>							

**Bill of Quantities Kiboko Substation Page 4**



No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount KES(Vat Exc)	Part Numbers
A	<b>Energizer Cabinet with following specs:</b> Energizer steel cabinet 500x500x250mm fabricated from 25x25x3mm angle line framing and 3mm thick plain sheet with lockable door including painting and mounting to Clients approval.	No.	1				
B	AVS 30A voltage guard	No.	1				
C	Allow for installation, configurations, Training, Testing and Commissioning to clients satisfaction. Installation to include all necessary civil and electrical works. Contractor to submit 3no identical handover box files will all correspondences of works and including drawings, layouts, manuals. To be done in consultation with the client for more details and format.	Item	1				
<b>Total Carried to Collection Kiboko Substation page 4</b>							

	<b>SUMMARY PAGE KIBOKO SUBSTATION ELECTRIC FENCE BILL OF QUANTITIES</b>
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1.	Total Carried to Collection Kiboko Substation page 1		
2.	Total Carried to Collection Kiboko Substation page 2		
3.	Total Carried to Collection Kiboko Substation page 3		
4.	Total Carried to Collection Kiboko Substation page 4		
	<b>SUB-TOTAL- KIBOKO SUBSTATION ELECTRIC FENCE</b>		

**CATEGORY/LOT 5: INSTALLATION OF ELECTRIC FENCES &INTRUSION SYSTEM FOR KEY SUBSTATIONS:**

**KIPEVU SUBSTATION ELECTRIC FENCE**

<b>Bill of Quantities Kipevu Substation Page 1</b>							
<b>No</b>	<b>Item Description</b>	<b>Unit</b>	<b>QTY</b>	<b>Coun try of origin</b>	<b>Rate in KES(Vat Exc)</b>	<b>Amount</b>	<b>Part Numbers</b>
						<b>KES(Vat Exc)</b>	
	<b>ELECTRIC FENCE ABOVE MASONRY WALLING</b> The following in electric fence to cover 262m Perimeter comprising 8 strands spaced 100mm centers above the walling and comprising necessary accessories in conformity with relevant standards and general good practice and allow for works to be installed, tested and Commissioned to client's satisfaction with the following :						
A	Adequate mains energizer DRUID 15Nemtek 4.6J Output or equal and approved complete with back-up battery and Keypad as per the specifications.	No.	1				
B	GSM/IP Module as per detailed specifications.	No	1				
C	Lead out under gate cable including excavating in road works with necessary ducting and making good No.	M	300				
	<b>Total Carried to Collection Kipevu Substation page 1</b>						

**Bill of Quantities Kipevu Substation Page 2**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount KES(Vat Exc)	Part Numbers
A	<b>High tensile 1.6mm fence wire ( HT )</b>	M	2550				
B	<b>Fence Poles</b> Double Galvanized Electroplated, double galvanized square tube 25 x 25 x 1.5mm thick steel Hollow Square Tube for W and S insulators posts with plastic top caps. Apply Metal primer before installing and 2 finishing coats of 1st quality gloss paint "Crown" including embedding 200mm deep in the reinforced columns and walls Complete with metal lugs and approved by the client.	No.	100				
C	<b>Siren Kit complete with box, sounder and strobe</b> 12V,DC Security sounder and strobe with a range of 1 km as per detailed specifications.	No.	1				
D	<b>W-Insulators</b> High density porcelain UV stabilized plastic polythene insulators to adequately cover the installations as per IEE standards	Item	1				
	<b>Total Carried to Collection Kipevu Substation page 2</b>						

**Bill of Quantities Kipevu Substation Page 3**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount KES(Vat Exc)	Part Numbers
A	<b>Strain –S-insulators</b> STF Black-High density porcelain UV stabilized plastic polythene insulators to adequately cover the installations as per IEE standards	Item	1				
B	Earthing of the Electric fence as per the IEE regulations and to be done at intervals of 30M	Item	1				
C	Hatari signs	No	30				
D	Provide for power and Alarm cable as per IEE Standards	Item	1				
E	Supply and fix Razor wire at the top of the boundary wall conforming to the following specifications:- coil size - 450mm diameter, Blade profile - Ripper Razor Wire, Stretch factor - maximum of 10M per coil and secured with steel plates at 1M centers (Galvanized)	M	301				
	<b>Total Carried to Collection Kipevu Substation page 3</b>						

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount KES(Vat Exc)	Part Numbers
A	<b>Energizer Cabinet with following specs:</b> Energizer steel cabinet 500x500x250mm fabricated from 25x25x3mm angle line framing and 3mm thick plain sheet with lockable door including painting and mounting to Clients approval.	No.	1				
B	AVS 30A voltage guard	No.	1				
C	Allow for installation, configurations, Training, Testing and Commissioning to clients satisfaction. Installation to include all necessary civil and electrical works. Contractor to submit 3no identical handover box files will all correspondences of works and including drawings, layouts, manuals. To be done in consultation with the client for more details and format.	Item	1				
<b>Total Carried to Collection Kipevu Substation page 4</b>							

	<b>SUMMARY PAGE KIPEVU SUBSTATION ELECTRIC FENCE BILL OF QUANTITIES</b>
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1.	Total Carried to Collection Kipevu Substation page 1		
2.	Total Carried to Collection Kipevu Substation page 2		
3.	Total Carried to Collection Kipevu Substation page 3		
4.	Total Carried to Collection Kipevu Substation page 4		
	<b>SUB-TOTAL- KIPEVU SUBSTATION ELECTRIC FENCE</b>		

**CATEGORY/LOT 5: INSTALLATION OF ELECTRIC FENCES &INTRUSION SYSTEM FOR KEY SUBSTATIONS:**

**MAKUYU SUBSTATION ELECTRIC FENCE**

Bill of Quantities Makuyu Substation Page 1							
No	Item Description	Unit	QTY			Amount	

				Country of origin	Rate in KES(Vat t Exc)	KES(Vat Exc)	Part Numbers
	<b>ELECTRIC FENCE ABOVE MASONRY WALLING</b> The following in electric fence to cover 297m Perimeter comprising 8 strands spaced 100mm centers above the walling and comprising necessary accessories in conformity with relevant standards and general good practice and allow for works to be installed, tested and Commissioned to client's satisfaction with the following :						
A	Adequate mains energizer DRUID 15 Nemtek 4.6J Output or equal and approved complete with back-up battery and Keypad as per the specifications.	No.	1				
B	GSM/IP Module as per detailed specifications.	No	1				
C	Lead out under gate cable including excavating in road works with necessary ducting and making good No.	M	200				
	<b>Total Carried to Collection Makuyu Substation page 1</b>						



**Bill of Quantities Makuyu Substation Page 2**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount KES(Vat Exc)	Part Numbers
A	<b>High tensile 1.6mm fence wire ( HT )</b>	M	3088				
B	<b>Fence Poles</b> Double Galvanized Electroplated, double galvanized square tube 25 x 25 x 1.5mm thick steel Hollow Square Tube for W and S insulators posts with plastic top caps. Apply Metal primer before installing and 2 finishing coats of 1st quality gloss paint "Crown" including embedding 200mm deep in the reinforced columns and walls Complete with metal lugs and approved by the client.	No.	130				
C	<b>Siren Kit complete with box, sounder and strobe</b> 12V,DC Security sounder and strobe with a range of 1 km as per detailed specifications.	No.	1				
D	<b>W-Insulators</b> High density porcelain UV stabilized plastic polythene insulators to adequately cover the installations as per IEE standards	Item	1				
	<b>Total Carried to Collection Makuyu Substation page 2</b>						

**Bill of Quantities Makuyu Substation Page 3**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(V at Exc)	Amount KES(V at Exc)	Part Numbers
A	<b>Strain –S-insulators</b> STF Black-High density porcelain UV stabilized plastic polythene insulators to adequately cover the installations as per IEE standards	Item	1				
B	Earthing of the Electric fence as per the IEE regulations and to be done at intervals of 30M	Item	1				
C	Hatari signs	No	30				
D	Provide for power and Alarm cable as per IEE Standards	Item	1				
E	Supply and fix Razor wire at the top of the boundary wall conforming to the following specifications:- coil size - 450mm diameter, Blade profile - Ripper Razor Wire, Stretch factor - maximum of 10M per coil and secured with steel plates at 1M centers (Galvanized)	M	386				
<b>Total Carried to Collection Makuyu Substation page 3</b>							

**Bill of Quantities Makuyu Substation Page 4**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount KES(Vat Exc)	Part Numbers
A	<b>Energizer Cabinet with following specs:</b> Energizer steel cabinet 500x500x250mm fabricated from 25x25x3mm angle line framing and 3mm thick plain sheet with lockable door including painting and mounting to Clients approval.	No.	1				
B	AVS 30A voltage guard	No.	1				
C	Allow for installation, configurations, Training, Testing and Commissioning to clients satisfaction. Installation to include all necessary civil and electrical works. Contractor to submit 3no identical handover box files will all correspondences of works and including drawings, layouts, manuals. To be done in consultation with the client for more details and format.	Item	1				
<b>Total Carried to Collection Makuyu Substation page 4</b>							

	<b>SUMMARY PAGE MAKUYU SUBSTATION ELECTRIC FENCE BILL OF QUANTITIES</b>		
<b>1.</b>	<b>Total Carried to Collection Makuyu Substation page 1</b>		

2.	Total Carried to Collection Makuyu Substation page 2		
3.	Total Carried to Collection Makuyu Substation page 3		
4.	Total Carried to Collection Makuyu Substation page 4		
	<b>SUB-TOTAL- MAKUYU SUBSTATION ELECTRIC FENCE</b>		

**CATEGORY/LOT 5: INSTALLATION OF ELECTRIC FENCES &INTRUSION SYSTEM FOR KEY SUBSTATIONS:**

**MAMLAKA SUBSTATION CCTV**

Bill of Quantities Mamlaka Substation Page 1							
No	Item Description	Unit	QTY			Amount	

				Country of origin	Rate in KES(Vat Exc)	KES(Vat Exc)	Part Numbers
A.	5 MPX, WDR Fixed Dome Camera	No.	10				
B.	16-Channel NVR and storage Server upto 12TB	No.	1				
C.	Genetec Video License (per Camera).	No.	10				
D.	IP Access Control System <b>TYPE A</b> at Entry (Proximity Reader) and Exit (Proximity Reader) complete with Licences, IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETEC network (per door).	No.	2				
E.	32 Inch 1080P LED Monitor C/W mount accessories	No.	1				
F.	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	<b>Total Carried to Collection Mamlaka page 1</b>						

**Bill of Quantities Mamlaka Page 2**

<b>No</b>	<b>Item Description</b>	<b>Unit</b>	<b>QTY</b>	<b>Countr y of origin</b>	<b>Rate in KES(Vat Exc)</b>	<b>Amount KES(Vat Exc)</b>	<b>Part Numb ers</b>
<b>A.</b>	Allow for cabling, ducting and necessary accessories	LOT	1				
<b>B.</b>	Network Devices accessories&cabinets-1-Edge switches.	LOT	1				
<b>C.</b>	3 Kva true online UPS	NO	1				
<b>D.</b>	Allow for integration of the system to existing GENETEC server	LOT	1				
<b>E.</b>	Installation, Testing and Commissioning to client satisfaction	LOT	1				
	Biometric Access Control cards	No.	200				
	<b>Total Carried to Collection Mamlaka page 2</b>						

	<b>SUMMARY PAGE MAMLAKA SUBSTATION-IP- CCTV &amp;ACCESS CONTROL CCTV BILL OF QUANTITIES</b>		
<b>1.</b>	<b>Total Carried to collection Page 1 Mamlaka Substation</b>		
<b>2.</b>	<b>Total Carried to collection Page 2 Mamlaka Substation</b>		
	<b>SUB-TOTAL-MAMLAKA SUBSTATION-IP- CCTV &amp;ACCESS</b>		

**CATEGORY/LOT 5: INSTALLATION OF ELECTRIC FENCES &INTRUSION SYSTEM FOR KEY SUBSTATIONS:**

**THIKA INDUSTRIAL SUBSTATION CCTV**

**Bill of Quantities Thika Industrial Substation Page 1**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
A.	5 MPX, WDR Fixed Dome Camera	No.	10				
B.	16-Channel NVR and storage Server up to 12TB	No.	1				
C.	Genetec Video License (per Camera).	No.	10				
D.	IP Access Control System <b>TYPE A</b> at Entry (Proximity Reader) and Exit (Proximity Reader) complete with Licences, IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETEC network (per door).	No.	2				
E.	32 Inch 1080P LED Monitor C/W mount accessories	No.	1				
F.	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	<b>Total Carried to Collection Thika Industrial page 1</b>						



**Bill of Quantities Thika Industrial Page 2**

<b>No</b>	<b>Item Description</b>	<b>Unit</b>	<b>QTY</b>	<b>Countr y of origin</b>	<b>Rate in KES(Vat Exc)</b>	<b>Amount KES(Vat Exc)</b>	<b>Part Numb ers</b>
<b>A.</b>	Allow for cabling, ducting and necessary accessories	LOT	1				
<b>B.</b>	Network Devices accessories&cabinets-1-Edge switches.	LOT	1				
<b>C.</b>	3 Kva true online UPS	NO	1				
<b>D.</b>	Allow for integration of the system to existing GENETEC server	LOT	1				
<b>E.</b>	Installation, Testing and Commissioning to client satisfaction	LOT	1				
<b>F.</b>	Biometric Access Control cards	No.	200				
	<b>Total Carried to Collection Thika Industrial page 2</b>						

	<b>SUMMARY PAGE THIKA INDUSTRIAL SUBSTATION-IP- CCTV &amp;ACCESS CONTROL CCTV BILL OF QUANTITIES</b>		
<b>1.</b>	<b>Total Carried to collection Page 1 Thika Industrial Substation</b>		
<b>2.</b>	<b>Total Carried to collection Page 2 Thika Industrial Substation</b>		
	<b>SUB-TOTAL-THIKA INDUSTRIAL SUBSTATION-IP- CCTV &amp;ACCESS</b>		

**CATEGORY/LOT 5: INSTALLATION OF ELECTRIC FENCES &INTRUSION SYSTEM FOR KEY SUBSTATIONS:**

**SARMACH SUBSTATION CCTV**

**Bill of Quantities Sarmach Substation Page 1**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
<b>A.</b>	5 MPX, WDR Fixed Dome Camera	No.	10				
<b>B.</b>	16-Channel NVR and storage Server up to 12TB	No.	1				
<b>C.</b>	Genetec Video License (per Camera).	No.	10				
<b>D.</b>	IP Access Control System <b>TYPE A</b> at Entry (Proximity Reader) and Exit (Proximity Reader) complete with Licences, IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETEC network (per door).	No.	2				
<b>E.</b>	32 Inch 1080P LED Monitor C/W mount accessories	No.	1				
<b>F.</b>	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	<b>Total Carried to Collection Sarmach page 1</b>						

**Bill of Quantities Sarmach Page 2**

<b>No</b>	<b>Item Description</b>	<b>Unit</b>	<b>QTY</b>	<b>Countr y of origin</b>	<b>Rate in KES(Vat Exc)</b>	<b>Amount KES(Vat Exc)</b>	<b>Part Numb ers</b>
<b>A.</b>	Allow for cabling, ducting and necessary accessories	LOT	1				
<b>B.</b>	Network Devices accessories&cabinets-1-Edge switches.	LOT	1				
<b>C.</b>	3 Kva true online UPS	NO	1				
<b>D.</b>	Allow for integration of the system to existing GENETEC server	LOT	1				
<b>E.</b>	Installation, Testing and Commissioning to client satisfaction	LOT	1				
	Biometric Access Control cards	No.	200				
	<b>Total Carried to Collection Sarmach page 2</b>						

	<b>SUMMARY PAGE SARMACH SUBSTATION-IP- CCTV &amp;ACCESS CONTROL CCTV BILL OF QUANTITIES</b>		
<b>1.</b>	<b>Total Carried to collection Page 1 Sarmach Substation</b>		
<b>2.</b>	<b>Total Carried to collection Page 2 Sarmach Substation</b>		
	<b>SUB-TOTAL-SARMACH SUBSTATION-IP- CCTV &amp;ACCESS</b>		

**CATEGORY/LOT 5: INSTALLATION OF ELECTRIC FENCES &INTRUSION SYSTEM FOR KEY SUBSTATIONS:**

**VILLA FRANCA SUBSTATION CCTV**

**Bill of Quantities Villa Franca Substation Page 1**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
<b>A.</b>	5 MPX, WDR Fixed Dome Camera	No.	10				
<b>B.</b>	16-Channel NVR and storage Server upto 12TB	No.	1				
<b>C.</b>	Genetec Video License (per Camera).	No.	10				
<b>D.</b>	IP Access Control System <b>TYPE A</b> at Entry (Proximity Reader) and Exit (Proximity Reader) complete with Licenses, IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETEC network (per door).	No.	2				
<b>E.</b>	32 Inch 1080P LED Monitor C/W mount accessories	No.	1				
<b>F.</b>	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	<b>Total Carried to Collection Villa Franca page 1</b>						

No	Item Description	Unit	QTY	Countr y of origin	Rate in KES(Vat Exc)	Amount KES(Vat Exc)	Part Numb ers
A.	Allow for cabling, ducting and necessary accessories	LOT	1				
B.	Network Devices accessories&cabinets-1-Edge switches.	LOT	1				
C.	3 Kva true online UPS	NO	1				
D.	Allow for integration of the system to existing GENETEC server	LOT	1				
E.	Installation, Testing and Commissioning to client satisfaction	LOT	1				
F.	Biometric Access Control cards	No.	200				
	Total Carried to Collection Villa Franca page 2						

	<b>SUMMARY PAGE VILLA FRANCA SUBSTATION-IP- CCTV &amp;ACCESS CONTROL CCTV BILL OF QUANTITIES</b>		
<b>1.</b>	<b>Total Carried to collection Page 1 Villa Franca Substation</b>		
<b>2.</b>	<b>Total Carried to collection Page 2 Villa Franca Substation</b>		
	<b>SUB-TOTAL-VILLA FRANCA SUBSTATION-IP- CCTV &amp;ACCESS</b>		

**ELDORET DEPOT IP- CCTV &ACCESS CONTROL**

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No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
A.	5 MPX, WDR Fixed Dome Camera	No.	52				
B.	64-Channel NVR and storage Server up to 40TB	No.	1				
C.	Genetec Video License (per Camera).	No.	52				
D.	IP Access Control System <b>TYPE B</b> at Entry (Fingerprint Reader) and Exit (Proximity Reader) complete with Licenses, IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETEC network (per door).	No.	4				
E.	40 Inch 1080P LED Monitor C/W mount accessories	No.	1				
F.	32 Inch 1080P LED Monitor C/W mount accessories	No.	1				
G.	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	<b>Total Carried to Collection Eldoret Depot Cctv page 1</b>						

**Bill of Quantities Eldoret Depot Cctv Page 2**

<b>No</b>	<b>Item Description</b>	<b>Unit</b>	<b>QTY</b>	<b>Countr y of origin</b>	<b>Rate in KES(Vat Exc)</b>	<b>Amount KES(Vat Exc)</b>	<b>Part Numb ers</b>
<b>A.</b>	Allow for cabling, ducting and necessary accessories		1				
<b>B.</b>	Network Devices accessories&cabinets-5 Edge switches ,1 core switch	LOT	1				
<b>C.</b>	6 Kva true online UPS	NO	1				
<b>D.</b>	3 Kva true online UPS	NO	2				
<b>E.</b>	1.5 Kva true online UPS	NO	2				
<b>F.</b>	Allow for integration of the system to existing GENETEC server	LOT	1				
<b>G.</b>	Client Work station	LOT	1				
<b>H.</b>	Installation, Testing and Commissioning to client satisfaction	LOT	1				
	<b>Total Carried to Collection Eldoret Depot Cctv page 2</b>						

	<b>SUMMARY PAGE ELDORET DEPOT IP- CCTV &amp;ACCESS CONTROL CCTV BILL OF QUANTITIES</b>		
1.	<b>Total Carried to collection Page 1 Eldoret Depot Cctv</b>		
2.	<b>Total Carried to collection Page 2 Eldoret Depot Cctv</b>		
	<b>SUB-TOTAL- ELDORET DEPOT -IP- CCTV &amp;ACCESS</b>		

**CATEGORY/LOT 5: INSTALLATION OF ELECTRIC FENCES &INTRUSION SYSTEM FOR KEY SUBSTATIONS:**

**KIPEVU SUBSTATION CCTV**

Bill of Quantities Kipevu Substation Page 1							
No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
A.	5 MPX, WDR Fixed Dome Camera	No.	12				
B.	16-Channel NVR and storage Server up to 12TB	No.	1				
C.	Genetec Video License (per Camera).	No.	12				
D.	IP Access Control System <b>TYPE A</b> at Entry (Proximity Reader) and Exit (Proximity Reader) complete with Licenses, IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETEC network (per door).	No.	3				
E.	32 Inch 1080P LED Monitor C/W mount accessories	No.	1				
F.	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	<b>Total Carried to Collection Kipevu Substation page 1</b>						

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount KES (Vat Exc)	Part Numbers
A.	Allow for cabling, ducting and necessary accessories	LOT	1				
B.	Network Devices accessories&cabinets-1-Edge switches.	LOT	1				
C.	3 Kva true online UPS	NO	1				
D.	1.5 Kva true online UPS	NO	1				
E.	Allow for integration of the system to existing GENETEC server	LOT	1				
F.	Installation, Testing and Commissioning to client satisfaction	LOT	1				
G.	Biometric Access Control cards	No.	200				
	<b>Total Carried to Collection Kipevu Substation page 2</b>						

	<b>SUMMARY PAGE KIPEVU SUBSTATION-IP- CCTV &amp;ACCESS CONTROL CCTV BILL OF QUANTITIES</b>		
<b>1.</b>	<b>Total Carried to collection Page 1 Kipevu Substation</b>		
<b>2.</b>	<b>Total Carried to collection Page 2 Kipevu Substation</b>		
	<b>SUB-TOTAL- KIPEVU SUBSTATION - IP- CCTV &amp;ACCESS</b>		

**CATEGORY/LOT 5: INSTALLATION OF ELECTRIC FENCES &INTRUSION SYSTEM FOR KEY SUBSTATIONS**  
**TECHNICAL TRAINING**

Bill of Quantities CATEGORY/LOT 5-Technical Training Page 1							
No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount KES(Vat Exc)	Part Numbers
A	<b>Manufacturers Training: Factor costs as follows:</b>						
i)	Manufacturers Training at the manufacturers for 3no technical persons (Factor only the cost of training i.e venue ,trainers, transport to and from the training venue and certification)	LOT	1				
ii)	Travelling and accommodation for 3no technical persons	LOT	1		3,500,000.00	3,500,000.00	
	<b>Total Carried to collection Bill of Quantities CATEGORY/LOT 5-Technical Training Page 1</b>						

**SUMMARY PAGE CATEGORY/LOT 5 BILL OF QUANTITIES: INSTALLATION OF ELECTRIC FENCES &INTRUSION SYSTEM FOR KEY SUBSTATIONS**

1.	Sub-Total Kiboko Substation Electric Fence		
2.	Sub-Total Kipevu Substation Electric Fence		

3.	Sub-Total Makuyu Substation Electric Fence		
4.	Sub-Total Mamlaka Substation CCTV & Access		
5.	Sub-Total Thika industrial Substation CCTV & Access		
6.	Sub-Total Sarmach Substation CCTV & Access		
7.	Sub-Total Villa Franka Substation CCTV & Access		
8.	Sub-Total Eldoret depot CCTV		
9.	Sub-Total Kipevu Substation CCTV & Access		
	Sub-total Total Carried to collection Bill of Quantities CATEGORY/LOT 5-Technical Training Page 1		
	<b>SUB-TOTAL- SECURITY SYSTEMS FOR FACILITIES AND INFRASTRUCTURE</b>		
	<b>Add 16% Vat</b>		
	<b>GRAND TOTAL- CATEGORY/LOT 5: INSTALLATION OF ELECTRIC FENCES &amp; INTRUSION SYSTEM FOR KEY SUBSTATIONS</b>		

**SCHEDULE OF MAINTENANCE CATEGORY/LOT 5: INSTALLATION OF ELECTRIC FENCES & INTRUSION SYSTEM FOR KEY SUBSTATIONS:**

Item	Description	Unit of measure	Quantity	Unit Price VAT Exclusive	Total Price VAT Exclusive ( Ksh)
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				( Ksh)	
1	Allow maintenance for a period of 1 (one) year done quarterly as per Kplc SLA.	No	4		

NB;

To be done after one year warranty of servicing during period

**CATEGORY/LOT 5-RECOMMENDED SCHEDULE OF SPARE PARTS**

Item	Description	Qty	Unit Price VAT Excl ( Ksh)	Total Price VAT Excl ( Ksh)	Total Price VAT Incl ( Ksh)



**SECTION VIII (F)–BILLS OF QUANTITIES**

(See specifications in a separate section )

**CATEGORY/LOT 6: INSTALLATION OF INTRUDER ALARMS/INTRUSION DETECTION  
SYSTEMS COMMERCIAL OFFICES****ELDORET DEPOT STORES/OFFICE ALARMS BILL OF QUANTITIES****ELDORET DEPOT STORES/OFFICE ALARMS BILL OF QUANTITIES PAGE 1**

ITEM	DESCRIPTION	UNIT	QTY	RATE	KSHS
<b>A</b>	<b>CONTROL PANEL WITH SOFTWARE AND PROGRAMMING</b> 16-zones input expandable to more than 40 zones and with Keypad zones LCD Keypad with infrared receiver and battery as <b>Pro - Sys 128</b> or equal and approved. At least more than 4-zones partitioning Accommodate more than 50 user codes 4 or more PGM (programmable output) Allow for IP Module and GSM connection to interface with computers, printer and other computer networks. GSM connectivity to allow events communication via mobile	NO	1		
<b>B</b>	<b>MOTION DETECTORS (PIR)</b> Indoor Dual element sensor. 12m (40ft), 110 view angle. False alarms reduction facilities. Interlock sensor geometry. Automatic temperature compensation. Sensitivity adjustment. Protection from UV rays.	NO	8		
<b>C</b>	<b>POWER SUPPLY UNIT(P.S.U.)</b> Complete with back-up battery (12v, 7AH). Output current 3A. Output voltage 13.6-14vdc on mains power. Load regulation 5% Battery recharges 13 hours.	NO	2		
<b>D</b>	<b>4-Channel LONG RANGE ALARM REMOTE RECEIVER KIT</b> Operating voltage 12vdc. Operating range more than 200m radius. Dip-switch coding facility Momentary/latching relay contacts Complete with two remote buttons.	NO	1		
<b>E</b>	Extra Remotes Buttons	NO	2		
<b>F</b>	<b>SIREN</b> Complete unit with built-in strobe Operating voltage 10-14.5vdc with reverse polarity protection. current(hold-off) siren-230mA(typical) Siren output-11dBA@1M,standby 108dBA@1M. Strobe flash rate-120/min,standby 30/min.	NO	1		
<b>Total Carried to collection Page 1 Eldoret Depot Alarms</b>					

**ELDORET DEPOT STORES/OFFICE ALARMS BILL OF QUANTITIES PAGE 2**

<b>ITEM</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>QTY</b>	<b>RATE</b>	<b>KSHS</b>
<b>A.</b>	Extra Keypad	NO	1		
<b>B.</b>	Cabling, cabinets and associated accessories	Lot	1		
<b>C.</b>	<b>PANIC BUTTONS</b> Strong mechanical composition.	No.	4		
<b>D.</b>	<b>ADVANCED GSM/GPRS MODULE</b> Central station events reporting Via Voice/sms/E-mail To transmit zone activations and other alarm events such as specific alarm activation zones, arm/disarm users plus time of arm/disarm, loss of power on the system, system failure/restore and others. Support both prepaid and post-paid SIM Cards. Support remote upload and download.	No.	1		
<b>E.</b>	Installation, Training testing and commissioning	Lot	1		
<b>F.</b>	Guard Monitoring unit Complete with 10 Clocking Points as per the Specifications	Lot	1		
<b>G.</b>	HD Magnetic Contacts	No	2		
	<b>Total Carried to collection Page 2 Eldoret Depot Alarms</b>				

**SUMMARY PAGE ELDORET DEPOT STORES/OFFICE ALARMS**

No	Item Description	Amount
		KES
1.	Total Carried to collection Page 1 Eldoret Depot Alarms	
2.	Total Carried to collection Page 2 Eldoret Depot Alarms	
	Sub-total-2 Eldoret Depot Alarms	
	<b>TOTAL CARRIED TO COLLECTION ELDORET DEPOT STORES/OFFICE ALARMS</b>	

**CATEGORY/LOT 6: INSTALLATION OF INTRUDER ALARMS/INTRUSION DETECTION SYSTEMS  
COMMERCIAL OFFICES**

**NAIVASHA BANKING HALL ALARMS BILL OF QUANTITIES**

# NAIVASHA BANKING HALL ALARMS BILL OF QUANTITIES PAGE 1

ITEM	DESCRIPTION	UNIT	QTY	RATE	KSHS
A.	<b>CONTROL PANEL WITH SOFTWARE AND PROGRAMMING</b> 16-zones input expandable to more than 40 zones and with Keypad zones LCD Keypad with infrared receiver and battery as <b>Pro - Sys 128</b> or equal and approved. At least more than 4-zones partitioning Accommodate more than 50 user codes 4 or more PGM (programmable output) Allow for IP Module and GSM connection to interface with computers, printer and other computer networks. GSM connectivity to allow events communication via mobile	NO	1		
B.	<b>MOTION DETECTORS (PIR)</b> Indoor Dual element sensor. 12m (40ft), 110 view angle. False alarms reduction facilities. Interlock sensor geometry. Automatic temperature compensation. Sensitivity adjustment. Protection from UV rays.	NO	8		
C.	<b>POWER SUPPLY UNIT(P.S.U.)</b> Complete with back-up battery (12v, 7AH). Output current 3A. Output voltage 13.6-14vdc on mains power. Load regulation 5% Battery recharges 13 hours.	NO	1		
D.	<b>4-Channel LONG RANGE ALARM REMOTE RECEIVER KIT</b> Operating voltage 12vdc. Operating range more than 200m radius. Dip-switch coding facility Momentary/latching relay contacts Complete with two remote buttons.	NO	1		
E.	<b>SIREN</b> Complete unit with built-in strobe Operating voltage 10-14.5vdc with reverse polarity protection. current(hold-off) siren-230mA(typical) Siren output-11dBA@1M,standby 108dBA@1M. Strobe flash rate-120/min,standby 30/min.	NO	1		
	<b>Total Carried to collection Page 1 Naivasha Banking Hall Alarms</b>				

# NAIVASHA BANKING HALL ALARMS BILL OF QUANTITIES PAGE 2

ITEM	DESCRIPTION	UNIT	QTY	RATE	KSHS
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<b>A.</b>	Extra Keypad	NO	1		
<b>B.</b>	Cabling, cabinets and associated accessories	Lot	1		
<b>C.</b>	<b>PANIC BUTTONS</b> Strong mechanical composition.	No.	11		
<b>D.</b>	<b>ADVANCED GSM/GPRS MODULE</b> Central station events reporting Via Voice/sms/E-mail To transmit zone activations and other alarm events such as specific alarm activation zones, arm/disarm users plus time of arm/disarm, loss of power on the system, system failure/restore and others. Support both prepaid and post-paid SIM Cards. Support remote upload and download.	No.	1		
<b>E.</b>	Installation, Training testing and commissioning	Lot	1		
<b>F.</b>	Guard Monitoring unit Complete with 10 Clocking Points as per the Specifications	Lot	1		
<b>G.</b>	HD Magnetic Contacts	No	2		
	<b>Total Carried to collection Page 2 Naivasha Banking Hall Alarms</b>				

**SUMMARY PAGE NAIVASHA BANKING HALL ALARMS**

No	Item Description	Amount
		KES
1.	Total Carried to collection Page 1 Naivasha Banking Hall Alarms	
2.	Total Carried to collection Page 2 Naivasha Banking Hall Alarms	
	Sub-total-2 Naivasha Banking Hall Alarms	
	<b>TOTAL CARRIED TO COLLECTION NAIVASHA BANKING HALL ALARMS</b>	

**CATEGORY/LOT 6: INSTALLATION OF INTRUDER ALARMS/INTRUSION DETECTION SYSTEMS  
COMMERCIAL OFFICES**

**UKUNDA STORES ALARMS BILL OF QUANTITIES**



**UKUNDA STORES ALARMS BILL OF QUANTITIES PAGE 1**

ITEM	DESCRIPTION	UNIT	QTY	RATE	KSHS
<b>A.</b>	<b>CONTROL PANEL WITH SOFTWARE AND PROGRAMMING</b> 16-zones input expandable to more than 40 zones and with Keypad zones LCD Keypad with infrared receiver and battery as <b>Pro - Sys 128</b> or equal and approved. At least more than 4-zones partitioning Accommodate more than 50 user codes 4 or more PGM (programmable output) Allow for IP Module and GSM connection to interface with computers, printer and other computer networks. GSM connectivity to allow events communication via mobile	NO	1		
<b>B.</b>	<b>MOTION DETECTORS (PIR)</b> Indoor Dual element sensor. 12m (40ft), 110 view angle. False alarms reduction facilities. Interlock sensor geometry. Automatic temperature compensation. Sensitivity adjustment. Protection from UV rays.	NO	6		
<b>C.</b>	<b>POWER SUPPLY UNIT(P.S.U.)</b> Complete with back-up battery (12v, 7AH). Output current 3A. Output voltage 13.6-14vdc on mains power. Load regulation 5% Battery recharges 13 hours.	NO	1		
<b>D.</b>	<b>4-Channel LONG RANGE ALARM REMOTE RECEIVER KIT</b> Operating voltage 12vdc. Operating range more than 200m radius. Dip-switch coding facility Momentary/latching relay contacts Complete with two remote buttons.	NO	1		
<b>E.</b>	Extra Remotes Buttons	NO	1		
<b>F.</b>	<b>SIREN</b> Complete unit with built-in strobe Operating voltage 10-14.5vdc with reverse polarity protection. current(hold-off) siren-230mA(typical) Siren output-11dBA@1M,standby 108dBA@1M. Strobe flash rate-120/min,standby 30/min.	NO	1		
<b>Total Carried to collection Page 1 Ukunda Stores Alarms</b>					

**UKUNDA STORES ALARMS BILL OF QUANTITIES PAGE 2**

ITEM	DESCRIPTION	UNIT	QTY	RATE	KSHS
<b>A.</b>	Cabling, cabinets and associated accessories	Lot	1		

<b>B.</b>	<b>PANIC BUTTONS</b> Strong mechanical composition.	No.	4		
<b>C.</b>	<b>ADVANCED GSM/GPRS MODULE</b> Central station events reporting Via Voice/sms/E-mail To transmit zone activations and other alarm events such as specific alarm activation zones, arm/disarm users plus time of arm/disarm, loss of power on the system, system failure/restore and others. Support both prepaid and post-paid SIM Cards. Support remote upload and download.	No.	1		
<b>D.</b>	Installation, Training testing and commissioning	Lot	1		
<b>E.</b>	Guard Monitoring unit Complete with 10 Clocking Points as per the Specifications	Lot	1		
<b>F.</b>	HD Magnetic Contacts	No	2		
	<b>Total Carried to collection Page 2 Ukunda Stores Alarms</b>				

**SUMMARY PAGE UKUNDA STORES ALARMS**

No	Item Description	Amount
		KES
1.	Total Carried to collection Page 1 Ukunda Stores Alarms	
2.	Total Carried to collection Page 2 Ukunda Stores Alarms	
	Sub-total-2 Ukunda Stores Alarms	
	<b>TOTAL CARRIED TO COLLECTION UKUNDA STORES ALARMS</b>	

**CATEGORY/LOT 6: INSTALLATION OF INTRUDER ALARMS/INTRUSION DETECTION SYSTEMS  
COMMERCIAL OFFICES**

**NAIROBI SOUTH STORES ALARMS BILL OF QUANTITIES PAGE 1**

ITEM	DESCRIPTION	UNIT	QTY	RATE	KSHS
<b>A.</b>	<b>CONTROL PANEL WITH SOFTWARE AND PROGRAMMING</b> 16-zones input expandable to more than 40 zones and with Keypad zones LCD Keypad with infrared receiver and battery as <b>Pro - Sys 128</b> or equal and approved. At least more than 4-zones partitioning Accommodate more than 50 user codes 4 or more PGM (programmable output) Allow for IP Module and GSM connection to interface with computers, printer and other computer networks. GSM connectivity to allow events communication via mobile	NO	3		
<b>B.</b>	<b>MOTION DETECTORS (PIR)</b> Indoor Dual element sensor. 12m (40ft), 110 view angle. False alarms reduction facilities. Interlock sensor geometry. Automatic temperature compensation. Sensitivity adjustment. Protection from UV rays.	NO	16		
<b>C.</b>	<b>POWER SUPPLY UNIT(P.S.U.)</b> Complete with back-up battery (12v, 7AH). Output current 3A. Output voltage 13.6-14vdc on mains power. Load regulation 5% Battery recharges 13 hours.	NO	4		
<b>D.</b>	<b>4-Channel LONG RANGE ALARM REMOTE RECEIVER KIT</b> Operating voltage 12vdc. Operating range more than 200m radius. Dip-switch coding facility Momentary/latching relay contacts Complete with two remote buttons.	NO	2		
<b>E.</b>	Extra Remotes Buttons	NO	2		
<b>F.</b>	<b>SIREN</b> Complete unit with built-in strobe Operating voltage 10-14.5vdc with reverse polarity protection. current(hold-off) siren-230mA(typical) Siren output-11dBA@1M,standby 108dBA@1M. Strobe flash rate-120/min,standby 30/min.	NO	3		
<b>Total Carried to collection Page 1 Nairobi South Stores Alarms</b>					

**NAIROBI SOUTH STORES ALARMS BILL OF QUANTITIES PAGE 2**

ITEM	DESCRIPTION	UNIT	QTY	RATE	KSHS
<b>A.</b>	A GSM Monitoring Tablet	NO	1		

<b>B.</b>	<b>ZONE EXPANDER MODULE</b> Compatible with supplied alarm control panel and related modules and accessories.	NO	2		
<b>C.</b>	Cabling, cabinets and associated accessories	Lot	1		
<b>D.</b>	<b>CEILING MOUNT MOTION DETECTOR</b> detection range 12m(40ft) adjustable height(between 1.5m-5.1m) Dual MW + PIR technologies Microprocessor controlled Patented true temperature compensation Superior fluorescent interference rejection Superior RFI immunity LED walk test display Alternate polarity pulse count		3		
<b>E.</b>	<b>PANIC BUTTONS</b> Strong mechanical composition.	No.	6		
<b>F.</b>	<b>ADVANCED GSM/GPRS MODULE</b> Central station events reporting Via Voice/sms/E-mail To transmit zone activations and other alarm events such as specific alarm activation zones, arm/disarm users plus time of arm/disarm, loss of power on the system, system failure/restore and others. Support both prepaid and post-paid SIM Cards. Support remote upload and download.	No.	3		
	Installation, Training testing and commissioning	Lot	1		
<b>G.</b>	Guard Monitoring unit Complete with 10 Clocking Points as per the Specifications	Lot	1		
<b>H.</b>	HD Magnetic Contacts	No	7		
	<b>Total Carried to collection Page 2 Nairobi South Stores Alarms</b>				

## SUMMARY PAGE NAIROBI SOUTH STORES ALARMS

No	Item Description	Amount
		KES

1.	Total Carried to collection Page 1 Nairobi South Stores Alarms	
2.	Total Carried to collection Page 2 Nairobi South Stores Alarms	
	Sub-total-2 Nairobi South Stores Alarms	
	<b>TOTAL CARRIED TO COLLECTION NAIROBI SOUTH STORES ALARMS</b>	

**CATEGORY/LOT 6: INSTALLATION OF INTRUDER ALARMS/INTRUSION DETECTION SYSTEMS  
COMMERCIAL OFFICES**

**KISII STORES ALARMS BILL OF QUANTITIES**

**KISII STORES ALARMS BILL OF QUANTITIES PAGE 1**

ITEM	DESCRIPTION	UNIT	QTY	RATE	KSHS
<b>A.</b>	<b>CONTROL PANEL WITH SOFTWARE AND PROGRAMMING</b> 16-zones input expandable to more than 40 zones and with Keypad zones LCD Keypad with infrared receiver and battery as <b>Pro - Sys 128</b> or equal and approved. At least more than 4-zones partitioning Accommodate more than 50 user codes 4 or more PGM (programmable output) Allow for IP Module and GSM connection to interface with computers, printer and other computer networks. GSM connectivity to allow events communication via mobile	NO	1		
<b>B.</b>	<b>MOTION DETECTORS (PIR)</b> Indoor Dual element sensor. 12m (40ft), 110 view angle. False alarms reduction facilities. Interlock sensor geometry. Automatic temperature compensation. Sensitivity adjustment. Protection from UV rays.	NO	11		
<b>C.</b>	<b>POWER SUPPLY UNIT(P.S.U.)</b> Complete with back-up battery (12v, 7AH). Output current 3A. Output voltage 13.6-14vdc on mains power. Load regulation 5% Battery recharges 13 hours.	NO	1		
<b>D.</b>	<b>4-Channel LONG RANGE ALARM REMOTE RECEIVER KIT</b> Operating voltage 12vdc. Operating range more than 200m radius. Dip-switch coding facility Momentary/latching relay contacts Complete with two remote buttons.	NO	1		
<b>E.</b>	Extra Remotes Buttons	NO	0		
<b>F.</b>	<b>SIREN</b> Complete unit with built-in strobe Operating voltage 10-14.5vdc with reverse polarity protection. current(hold-off) siren-230mA(typical) Siren output-11dBA@1M,standby 108dBA@1M. Strobe flash rate-120/min, standby 30/min.	NO	1		
	<b>Total Carried to collection Page 1 Kisii Stores Alarms</b>				

**KISII STORES ALARMS BILL OF QUANTITIES PAGE 2**

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ITEM	DESCRIPTION	UNIT	QTY	RATE	KSHS
A.	A GSM Monitoring Tablet	NO	1		
B.	Cabling, cabinets and associated accessories	Lot	1		
C.	<b>CEILING MOUNT MOTION DETECTOR</b> detection range 12m(40ft) adjustable height(between 1.5m-5.1m) Dual MW + PIR technologies Microprocessor controlled Patented true temperature compensation Superior fluorescent interference rejection Superior RFI immunity LED walk test display Alternate polarity pulse count		2		
D.	<b>PANIC BUTTONS</b> Strong mechanical composition.	No.	4		
E.	<b>ADVANCED GSM/GPRS MODULE</b> Central station events reporting Via Voice/sms/E-mail To transmit zone activations and other alarm events such as specific alarm activation zones, arm/disarm users plus time of arm/disarm, loss of power on the system, system failure/restore and others. Support both prepaid and post-paid SIM Cards. Support remote upload and download.	No.	1		
F.	Guard Monitoring unit Complete with 10 Clocking Points as per the Specifications	Lot	1		
G.	HD Magnetic Contacts	No	1		
	<b>Total Carried to collection Page 2 Kisii Stores Alarms</b>				



**SUMMARY PAGE KISII STORES ALARMS**

No	Item Description	Amount
		KES
1.	Total Carried to collection Page 1 Kisii Stores Alarms	
2.	Total Carried to collection Page 2 Kisii Stores Alarms	
	Sub-total Kisii Stores Alarms	
	<b>TOTAL CARRIED TO COLLECTION KISII DEPOT STORES ALARMS</b>	

**CATEGORY/LOT 6: INSTALLATION OF INTRUDER ALARMS/INTRUSION DETECTION**

**SYSTEMS COMMERCIAL OFFICES**

**WESTLANDS SUBSTATION ELECTRIC FENCE BILL OF QUANTITIES**

Bill of Quantities Westlands Substation Page 1							
No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
	<b>ELECTRIC FENCE ABOVE MASONRY WALLING</b> The following in electric fence to cover 224m Perimeter comprising 8 strands spaced 100mm centers above the walling and comprising necessary accessories in conformity with relevant standards and general good practice and allow for works to be installed, tested and Commissioned to client's satisfaction with the following :						
A	Adequate mains energizer DRUID 15 Nemtek 4.6J Output or equal and approved complete with back-up battery and Keypad as per the specifications.	No.	1				
B	GSM/IP Module as per detailed specifications	No	1				
C	Lead out under gate cable including excavating in road works with necessary ducting and making good	M	200				
	<b>Total Carried to Collection Westlands Substation page 1</b>						

**Bill of Quantities Westlands Substation Page 2**

<b>No</b>	<b>Item Description</b>	<b>Unit</b>	<b>QTY</b>	<b>Countr y of origin</b>	<b>Rate in KES(Vat Exc)</b>	<b>Amount</b>	<b>Part Numbers</b>
A	<b>High tensile 1.6mm fence wire ( HT )</b>	M	2500				
B	<b>Fence Poles</b> Double Galvanized Electroplated, double galvanized square tube 25 x 25 x 1.5mm thick steel Hollow Square Tube for W and S insulators posts with plastic top caps. Apply Metal primer before installing and 2 finishing coats of 1st quality gloss paint "Crown" including embedding 200mm deep in the reinforced columns and walls Complete with metal lugs and approved by the client.	No.	130				
C	<b>Siren Kit complete with box, sounder and strobe</b> 12V,DC Security sounder and strobe with a range of 1 km as per detailed specifications.	No.	1				
D	<b>W-Insulators</b> High density porcelain UV stabilized plastic polythene insulators to adequately cover the installations as per IEE standards	Item	1				
<b>Total Carried to Collection Westlands Substation page 2</b>							

**Bill of Quantities Westlands Substation Page 3**

No	Item Description	Unit	QTY	Countr y of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
A	<b>Strain –S-insulators</b> STF Black-High density porcelain UV stabilized plastic polythene insulators to adequately cover the installations as per IEE standards	Item	1				
B	Earthing of the Electric fence as per the IEE regulations and to be done at intervals of 30M	Item	1				
C	Hatari signs	No	30				
D	Provide for power and Alarm cable as per IEE Standards	Item	1				
E	Supply and fix Razor wire at the top of the boundary wall conforming to the following specifications:- coil size - 450mm diameter, Blade profile - Ripper Razor Wire, Stretch factor - maximum of 10M per coil and secured with steel plates at 1M centers (Galvanized)	M	291				
<b>Total Carried to Collection Westlands Substation page 3</b>							

**Bill of Quantities Westlands Substation Page 4**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Number s
A	<b>Energizer Cabinet with following specs:</b> Energizer steel cabinet 500x500x250mm fabricated from 25x25x3mm angle line framing and 3mm thick plain sheet with lockable door including painting and mounting to Clients approval.	No.	1				
B	AVS 30A voltage guard	No.	1				
C	Allow for installation, configurations, Training, Testing and Commissioning to clients satisfaction. Installation to include all necessary civil and electrical works. Contractor to submit 3no identical handover box files will all correspondences of works and including drawings, layouts, manuals. To be done in consultation with the client for more details and format.	Item	1				
<b>Total Carried to Collection Westlands Substation page 4</b>							

	<b>SUMMARY PAGE WESTLANDS SUBSTATION ELECTRIC FENCE BILL OF QUANTITIES</b>		
<b>1.</b>	<b>Total Carried to Collection Westlands Substation page 1</b>		
<b>2.</b>	<b>Total Carried to Collection Westlands Substation page 2</b>		
<b>3.</b>	<b>Total Carried to Collection Westlands Substation page 3</b>		
<b>4.</b>	<b>Total Carried to Collection Westlands Substation page 4</b>		
	<b>SUB-TOTAL- WESTLANDS SUBSTATION ELECTRIC FENCE</b>		

**CATEGORY/LOT 6: INSTALLATION OF INTRUDER ALARMS/INTRUSION DETECTION  
SYSTEMS COMMERCIAL OFFICES  
NAIROBI NORTH SUBSTATION ELECTRIC FENCE**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
	<b>ELECTRIC FENCE ABOVE MASONRY WALLING</b> The following in electric fence to cover 922m Perimeter comprising 8 strands spaced 100mm centers above the walling and comprising necessary accessories in conformity with relevant standards and general good practice and allow for works to be installed, tested and Commissioned to client's satisfaction with the following						
A	Adequate mains energizer DRUID Nemtek 8J Output or equal and approved complete with back-up battery and Keypad as per the specifications.	No.	2				
B	GSM/IP Module as per detailed specifications.	No	1				
C	Lead out under gate cable including excavating in road works with necessary ducting and making good No.	M	800				
	<b>Total Carried to Collection Nairobi North Substation page 1</b>						

**Bill of Quantities Nairobi North Substation Page 2**

<b>No</b>	<b>Item Description</b>	<b>Unit</b>	<b>QTY</b>	<b>Country of origin</b>	<b>Rate in KES(Vat Exc)</b>	<b>Amount</b>	<b>Part Numbers</b>
A	<b>High tensile 1.6mm fence wire ( HT )</b>	M	10,000				
B	<b>Fence Poles</b> Double Galvanized Electroplated, double galvanized square tube 25 x 25 x 1.5mm thick steel Hollow Square Tube for W and S insulators posts with plastic top caps. Apply Metal primer before installing and 2 finishing coats of 1st quality gloss paint "Crown" including embedding 200mm deep in the reinforced columns and walls Complete with metal lugs and approved by the client.	No.	430				
C	<b>Siren Kit complete with box, sounder and strobe</b> 12V, DC Security sounder and strobe with a range of 1 km as per detailed specifications.	No.	1				
D	<b>W-Insulators</b> High density porcelain UV stabilized plastic polythene insulators to adequately cover the installations as per IEE standards	Item	1				
<b>Total Carried to Collection Nairobi North Substation page 2</b>							



**Bill of Quantities Nairobi North Substation Page 3**

<b>No</b>	<b>Item Description</b>	<b>Unit</b>	<b>QTY</b>	<b>Coun try of origin</b>	<b>Rate in KES(Vat Exc)</b>	<b>Amount</b>	<b>Part Number s</b>
A	<b>Strain –S-insulators</b> STF Black-High density porcelain UV stabilized plastic polythene insulators to adequately cover the installations as per IEE standards	Item	1				
B	Earthing of the Electric fence as per the IEE regulations and to be done at intervals of 30M	Item	1				
C	Hatari signs	No	40				
D	Provide for power and Alarm cable as per IEE Standards	Item	1				
E	Supply and fix Razor wire at the top of the boundary wall conforming to the following specifications:- coil size - 450mm diameter, Blade profile - Ripper Razor Wire, Stretch factor - maximum of 10M per coil and secured with steel plates at 1M centers (Galvanized)	M	430				
<b>Total Carried to Collection Nairobi North Substation page 3</b>							

**Bill of Quantities Nairobi North Substation Page 4**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
A	<b>Energizer Cabinet with following specs:</b> Energizer steel cabinet 500x500x250mm fabricated from 25x25x3mm angle line framing and 3mm thick plain sheet with lockable door including painting and mounting to Clients approval.	No.	1				
B	AVS 30A voltage guard	No.	1				
C	Allow for installation, configurations, Training, Testing and Commissioning to clients satisfaction. Installation to include all necessary civil and electrical works. Contractor to submit 3no identical handover box files will all correspondences of works and including drawings, layouts, manuals. To be done in consultation with the client for more details and format.	Item	1				
<b>Total Carried to Collection Nairobi North Substation page 4</b>							

	<b>SUMMARY PAGE NAIROBI NORTH SUBSTATION ELECTRIC FENCE BILL OF QUANTITIES</b>		
<b>1.</b>	<b>Total Carried to Collection Nairobi North Substation page 1</b>		

2.	Total Carried to Collection Nairobi North Substation page 2		
3.	Total Carried to Collection Nairobi North Substation page 3		
4.	Total Carried to Collection Nairobi North Substation page 4		
	<b>SUB-TOTAL- NAIROBI NORTH SUBSTATION ELECTRIC FENCE</b>		

**CATEGORY/LOT 6: INSTALLATION OF INTRUDER ALARMS/INTRUSION DETECTION  
SYSTEMS COMMERCIAL OFFICES**

**WEBUYE SUBSTATION ELECTRIC FENCE BILL OF QUANTITIES**

Bill of Quantities Webuye Substation Page 1							
No	Item Description	Unit	QTY			Amount	

				Country of origin	Rate in KES(Vat Exc)	KES(Vat Exc)	Part Numbers
	<b>ELECTRIC FENCE ABOVE MASONRY WALLING</b> <b>The following in electric fence to cover 417m Perimeter comprising 8 strands spaced 100mm centers above the walling and comprising necessary accessories in conformity with relevant standards and general good practice and allow for works to be installed, tested and Commissioned to client's satisfaction with the following :</b>						
A	Adequate mains energizer DRUID 15 Nemtek 4.6J Output or equal and approved complete with back-up battery and Keypad as per the specifications.	No.	1				
B	GSM/IP Module as per detailed specifications	No	1				
C	Lead out under gate cable including excavating in road works with necessary ducting and making good	M	200				
	<b>Total Carried to Collection Webuye Substation page 1</b>						

**Bill of Quantities Webuye Substation Page 2**

No	Item Description	Unit	QTY	Countr y of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
A	<b>High tensile 1.6mm fence wire ( HT )</b>	M	7000				
B	<b>Fence Poles</b> Double Galvanized Electroplated, double galvanized square tube 25 x 25 x 1.5mm thick steel Hollow Square Tube for W and S insulators posts with plastic top caps. Apply Metal primer before installing and 2 finishing coats of 1st quality gloss paint "Crown" including embedding 200mm deep in the reinforced columns and walls Complete with metal lugs and approved by the client.	No.	181				
C	<b>Siren Kit complete with box, sounder and strobe</b> 12V, DC Security sounder and strobe with a range of 1 km as per detailed specifications.	No.	1				
D	<b>W-Insulators</b> High density porcelain UV stabilized plastic polythene insulators to adequately cover the installations as per IEE standards	Item	1				
<b>Total Carried to Collection Webuye Substation page 2</b>							

**Bill of Quantities Webuye Substation Page 3**

No	Item Description	Unit	QTY	Countr y of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
A	<b>Strain –S-insulators</b> STF Black-High density porcelain UV stabilized plastic polythene insulators to adequately cover the installations as per IEE standards	Item	1				
B	Earthing of the Electric fence as per the IEE regulations and to be done at intervals of 30M	Item	1				
C	Hatari signs	No	45				
D	Provide for power and Alarm cable as per IEE Standards	Item	1				
E	Supply and fix Razor wire along the free- stranding electric fence, conforming to the following specifications:- 980mm diameter coil size Double Galvanized Razor wire ; Blade profile - Ripper Razor Wire; Stretch factor - maximum of 10M per coil and secured with steel plates at 1M centers and with two coatings to prevent rust.	M	417				
<b>Total Carried to Collection Webuye Substation page 3</b>							

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
A	<b>Energizer Cabinet with following specs:</b> Energizer steel cabinet 500x500x250mm fabricated from 25x25x3mm angle line framing and 3mm thick plain sheet with lockable door including painting and mounting to Clients approval.	No.	1				
B	AVS 30A voltage guard	No.	1				
C	Allow for installation, configurations, Training, Testing and Commissioning to clients satisfaction. Installation to include all necessary civil and electrical works. Contractor to submit 3no identical handover box files will all correspondences of works and including drawings, layouts, manuals. To be done in consultation with the client for more details and format.	Item	1				
<b>Total Carried to Collection Webuye Substation page 4</b>							

	<b>SUMMARY PAGE WEBUYE SUBSTATION ELECTRIC FENCE BILL OF QUANTITIES</b>		
<b>1.</b>	<b>Total Carried to Collection Webuye Substation page 1</b>		

2.	Total Carried to Collection Webuye Substation page 2		
3.	Total Carried to Collection Webuye Substation page 3		
4.	Total Carried to Collection Webuye Substation page 4		
	<b>SUB-TOTAL- WEBUYE SUBSTATION ELECTRIC FENCE</b>		



**CATEGORY/LOT 6: INSTALLATION OF INTRUDER ALARMS/INTRUSION DETECTION SYSTEMS  
COMMERCIAL OFFICES**

**TECHNICAL TRAINING BILL OF QUANTITIES**

<b>Bill of Quantities CATEGORY/LOT 6-Technical Training Page 1</b>							
<b>No</b>	<b>Item Description</b>	<b>Unit</b>	<b>QTY</b>	<b>Country of origin</b>	<b>Rate in KES(Vat Exc)</b>	<b>Amount</b>	<b>Part Numbers</b>
<b>A</b>	<b>Manufacturers Training: Factor costs as follows:</b>						
i)	Manufacturers Training at the manufacturers for 3no technical persons (Factor only the cost of training i.e venue ,trainers, transport to and from the training venue and certification)	LOT	1				
ii)	Travelling and accommodation for 3no technical persons	LOT	1		<b>3,500,000.00</b>	<b>3,500,000.00</b>	
	<b>Total Carried to collection Bill of Quantities CATEGORY/LOT 6-Technical Training Page 1</b>						

**SUMMARY PAGE CATEGORY/LOT 6 BILL OF QUANTITIES: INSTALLATION OF  
INTRUDER ALARMS/INTRUSION DETECTION SYSTEMS COMMERCIAL OFFICES**

<b>1.</b>	<b>Sub-Total Eldoret Depot Stores/Office Alarms</b>				
<b>2.</b>	<b>Sub-Total Naivasha Intruder Alarms</b>				
<b>3.</b>	<b>Sub-Total Nairobi South Stores Alarms</b>				
<b>4.</b>	<b>Sub-Total Ukunda Banking hall-Stores Intruder Alarms</b>				
<b>5.</b>	<b>Sub-Total Nairobi South Depot Alarms Intruder Alarms</b>				
<b>6.</b>	<b>Sub-Total Kisii Depot Alarms Intruder Alarms</b>				
<b>7.</b>	<b>Sub-Total Westlands Substation Electric Fence</b>				
<b>8.</b>	<b>Sub-Total Nairobi North Substation Electric Fence</b>				
<b>9.</b>	<b>Sub-Total Webuye Substation Electric Fence</b>				
	<b>Sub-total Total Carried to collection Bill of Quantities CATEGORY/LOT 6- Technical Training Page 1</b>				
	<b>SUB-TOTAL- INSTALLATION OF INTRUDER ALARMS/INTRUSION DETECTION SYSTEMS COMMERCIAL OFFICES</b>				
	<b>Add 16% Vat</b>				
	<b>GRAND TOTAL- CATEGORY/LOT 6: INSTALLATION OF INTRUDER ALARMS/INTRUSION DETECTION SYSTEMS COMMERCIAL OFFICES</b>				

**SCHEDULE OF MAINTENANCE CATEGORY/LOT 6: INSTALLATION OF  
INTRUDER ALARMS/INTRUSION DETECTION SYSTEMS COMMERCIAL OFFICES**

<b>Item</b>	<b>Description</b>	<b>Unit of measure</b>	<b>Quantity</b>	<b>Unit Price VAT Exclusive ( Ksh)</b>	<b>Total Price VAT Exclusive ( Ksh)</b>
1	Allow maintenance for a period of 1 (one) year done quarterly as per Kplc SLA.	No	4		

NB;

To be done after one year warranty of servicing during period

**CATEGORY/LOT 6-RECOMMENDED SCHEDULE OF SPARE PARTS**



**GRAND TOTAL SUMMARY**

<b>ITEM</b>	<b>DESCRIPTION</b>	<b>TOTAL PRICE LOCAL CURRENCY (KSHS. VAT INCLUSIVE)</b>
<b>1</b>	<b>GRAND TOTAL CATEGORY/LOT 1: INSTALLATION OF CCTV MAJOR DISTRIBUTION/ TRANSMISSION SUBSTATION</b>	
<b>2</b>	<b>GRAND TOTAL CATEGORY/LOT 2 BILL OF QUANTITIES: INSTALLATION OF IP-CCTV FOR KEY OFFICES</b>	
<b>3</b>	<b>GRAND TOTAL INSTALLATION OF ACCESS CONTROL IN SUBSTATIONS &amp; KEY OFFICES</b>	
<b>4</b>	<b>GRAND TOTAL CATEGORY/LOT 4 BILL OF QUANTITIES: SECURITY SYSTEMS FOR FACILITIES AND INFRASTRUCTURE</b>	
<b>5</b>	<b>GRAND TOTAL- CATEGORY/LOT 5: INSTALLATION OF ELECTRIC FENCES &amp; INTRUSION SYSTEM FOR KEY SUBSTATIONS</b>	
<b>6</b>	<b>GRAND TOTAL- CATEGORY/LOT 6: INSTALLATION OF INTRUDER ALARMS/INTRUSION DETECTION SYSTEMS COMMERCIAL OFFICES</b>	
<b>GRAND TOTAL CARRIED FORWARD TO FORM OF TENDER</b>		