Item	Description	Unit	Qty	Rate	Amount (Kshs)
	ELEMENT No.1				
	PRELIMINARIES AND ENABLING WORKS				
A	Allow for temporary site office, notice-board, shelves, store for materialsand tools storage and changing room for operatives and able to accommodate 10 people, furniture and meeting accessories including refreshments etc. during meetings	ITEM	1		
B	Allow for all necessary statutory approvals for the works by relevant County Authorities, replication of drawings to required formats by county government, endorsement by relevant proffessional persons and submit a set of approved drawings to client before commencement of the works.	ITEM	1		
C	Allow for registration of site/project and staff (foreman, Masons, Capenters, etc) with National Construction Authority (NCA).	ITEM	1		
D	Allow for a qualified person conversant with Kenya Power safety regulations with capacity to receive safety electrical permits and to double up as 'Safety Officer' for the entire contract period	ITEM	1		
E	Allow for prompt communication and updates facilitation to client supervision team including communication and project data storage faclities, laptops, hard drives, airtime etc(Minimun 3 nos)	ITEM	1		
F	Allow for security and insurance for the proposed works	ITEM	1		
G	Allow for temporary sign post for the proposed works.	ITEM	1		
H	Allow for temporary hoarding where necessary for the proposed works	ITEM	1		
I	Allow for temporary metered electricity supply for the works (Lv suppy within site)	ITEM	1		
J	Allow for clean water on site for the construction works.	ITEM	1		
K	Allow for rehabilitation of existing guard-house and pit-latrine including connection of electricity supply,replacing the wooden doors with steel doors ,replace the broken window panes and paint a fresh with kplc colours.	ITEM	1		
L	Allow for provision of groumd spotheights,levels and contours.	ITEM	1		
	TOTAL TO SUMMARY PAGE				

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Item	Description	Unit	Qty	Rate	Amount (Kshs)
	ELEMENT No.2				
	SWITCH YARD REHABILITATION				
A	Clear site of all existing bushes, shrubs and under-growth including grubbing up roots and burning the arising	SM	1000		
B	Excavate oversite vegetable soil average depth 400mm including Scooping any existing ballast within the live switch-yard and cart way to Municipal Council designated damping site.	CM	400		
C	Level and Compact bottom of excavation as before described to receive approved imported murrum fill to approval including keeping it free from surface water	SM	1000		
D	Provide averagelly 700mm thick selected and approved imported murram fill in switchyard, compacted in layers not exceding 150mm thick using a 10 tonne vibrating roller and finally finishing the top 200mm to achieve slope and receive ballast	CM	700		
E	Prepare and apply Gradiator 4TC or equal and and approved insecticide to surfaces of murram fill and blinding as per Manufacturer's written instructions (certificate of application to be provided to the client)	SM	1000		
F	Apply suitable weed killer, herbicide to surfaces of blinding as per the Manufacture's written instructions(Certicate of application to be provided to the client)	SM	1000		
G	1000 gauge polythene or other equal and approved mebrane laid on compacted and treated murram with welted laps of 200mm wide.	SM	935		
H	Supply and spread uniformly 150mm thick 'one inch ' (50mm) ballast in switchyard	SM	935		
	TOTAL TO SUMMARY PAGE				

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Item	Description	Unit	Qty	Rate	Amount (Kshs)
	ELEMENT No. 3				
	TRANSFORMER PLINTHS 2Nos.				
A	Excavate for 2No. transformer plinths pits sizes (4500x3500)mm, depths n.e. 1.5m from reduced levels.	CM	271		
B	Ditto exceeding 1.5m but n. e. 3m	CM	90		
C	Extra over excavation in rock.	CM	94		
D	Allow for keeping excavated pits water free by pumping, bailling or otherwise.	ITEM	1		
E	Allow for planking and strutting to uphold the foundations.	ITEM	1		
F	Return,fill and ram selected excavated materials around transformer plinths.	CM	124		
G	Removing excess excavated materials from Site and disposing off.	CM	237		
H	Compacting bases of the transformer plinths foundation bases and blinding with concrete mix (1:4:8 - 50 mm thick)	SM	98		
	Vibrated Reinforced Concrete Class 25/20 mm Aggregates In:				
I	300mm Thick Base	CM	24		
J	Vertical/Pedestal walls	CM	15		
K	300mm Thick Cover Slab	CM	22		
L	Sump Walling	CM	10		
	Hard-Core Filling				
M	Approved hardcore filling compacted to approval; WITH COMPACTION in layers to 95 MDD or equivalent; minimum layers in 200mm layers	CM	84		
N	Blind and Level surface of hardcore to receive cover slab	SM	33		
	High yieled steel reinforcement bars including cutting,bending, tying and fixing in place, spacer blocks and tying wires to BS 4449.				
O	Y8-10	KG	2400		
P	Y12-16	KG	7200		
	Fair - Face FormWork to:				
Q	Vertical Sides of Base	LM	56		
R	Vertical Sides of Pedestals and Sump wall	SM	320		
S	Vertical Sides of Cover Slab	LM	36		
T	Supply and fix fabricated 1000 mm wide X 54000mm, heavy duty grating of deformed ribbed Iron fixed to75x50x4mm thick mild steel angle iron fastened to concrete with 10mm thick mild steel plate and fish tailed lugs, with full welds, painted with zinc/red-oxide primer base coat and final Alluminium leafing paint to cover the transformer oil spillage sump.	ITEM	1		
	TOTAL TO SUMMARY PAGE				

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Item	Description	Unit	Qty	Rate	Amount (Kshs)
	ELEMENT No. 4				
	The following in 2Nos Transformer Ground Anchors .(1.0m x 1.0m)				
A	Excate pits commencing from ground level n.e 1.5m	CM	14		
B	Excavate Ditto exceeding 1.5m but n.e 3.0m	CM	3		
C	Extra over for excavating in all classes of rock at any depth	CM	2		
D	Level and blind pit bottoms to receive concrete base	SM	6		
E	Allow for keeping excavation free from general water.	ITEM	1		
F	Allow for all necessary planking and struting	ITEM	1		
G	Back-Fill selected excavated materials around the concrete Anchor plinth and compact	CM	5		
H	Level and blind pit bottoms to receive concrete base	SM	6		
I	Cart-Away Excess excavated materials from site and deposit at designated places by local County government	CM	9		
	Vibrated Reinforced Concrete Class 25/20 mm Aggregates In:				
J	300mm Thick base	CM	3		
K	Stub columns	CM	10		
	Fair - Face FormWork to:				
L	To vertical sides of bases -(225-300mm)	LM	7		
M	To vertical sides of stub-Columns	SM	15		
	High yieled steel reinforcement bars including cutting,bending, tying and fixing in place, spacer blocks and tying wires to BS 4449.				
N	Y10	KG	77		
O	Y12	KG	284		
P	Supply and Cast together with the reinforced Concrete 2Nos per plinth 3m long, 150x75x8mm thick Mild steel U-Channel hot formed welded back to back complete with 1 hole 50mm diameter on the channel protruding about 200mm above top of concrete, fish tailed mild steel angle lugs 50x50x6mm thick with appropriate length welded onto the U-Channels .	ITEM	1		
	TOTAL TO SUMMARY PAGE				

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Item	Description	Unit	Qty	Rate	Amount (Kshs)
	ELEMENT No.5				
	FOUNDATION PLINTHS **Foundation plinths for the conversion of the following 33 and 11kv KPLC wooden structures to steel structures on the existing bays cast in situ consisting of ,28Nos Fnds. for A/B switch structures, 2Nos Fnds. for Neutral CT structures, 4Nos Fnds. for Post insulator structures, 4Nos Fnds for CBs, 8Nos Fnds. for CTs structures, 8Nos Fnds. for lightning arresters, 12Nos Fnds. for future 11kv feeder bays (as requested by the County/Regional team) and 6Nos Fnds. for single legged Bus-Bar lattice structure as per the General arrangement drawing (GA) and all to structural engineers details-; Total 72 No. plinths**				
A	Excavate for 66No. Structure plinths foundation pits size (1200x1200) and 6No. Bus bar foundations size (2200x1800) depths not exceeding 1.5m from reduced level.	CM	233		
B	Ditto exceeding 1.5m but n.e 3.0m.	CM	90		
C	Extra over excavation in rock.	CM	48		
D	Allow for keeping excavated pits water free by pumping, bailling or otherwise.	ITEM	1		
E	Allow for planking and strutting to uphold the foundations.	ITEM	1		
F	Compacting bases of pits and blinding with concrete mix (1:4:8 - 50 mm thick)	SM	131		
G	Class 25(20) concrete in stub column foundation bases and bus bars bases.	CM	86		
H	Class 25(20) concrete in stub columns plinths and Bus-Bars	CM	40		
I	Return,fill and ram selected excavated materials around stub columns and bus bars.	CM	217		
J	Removing excess excavated materials from Site and disposing off.	CM	106		
	High yieled steel reinforcement bars including cutting,bending, tying and fixing in place, spacer blocks and tying wires to BS 4449.				
K	Y10	KG	2500		
L	Y12	KG	5736		
M	Steel/ wooden formwork to sides of stub columns to produce a fairly smooth concrete surface finish to stub columns faces.	SM	100		
	TOTAL TO SUMMARY PAGE.				

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Item	Description	Unit	Qty	Rate	Amount (Kshs)
N	Grouting the foundtion bolts in stub columns by setting to precision and securing them in place when pouring concrete. (Bolts provided by client approx. size 600mm long and 20mm diameter).	PCS	396		
O	Allow for making holes sizes (250x250X1200 depth)mm in the 8No. Lightning arresters and other plinths during casting.	ITEM	1		
	20MM DIA flexible pvc conmduit for eartting protection	LM	300		
P	Surface finish smooth trowelled including 25mm chamfer all round on all plinths.	SM	48		
	ELEMENT No. 6				
	ACCESS ROAD (Paving Blocks)				
A	Excavate for a 5m wide access road depth not exceeding 750mm starting from the reduced levels and cart away the spoil.	CM	150		
B	Level and compact Road Base with imported and approved murrum to an average thickness of 150mm in layers of 50mm thick to receive hardcore	SM	160		
C	Approved handpacked hardcore fill, average depth of 450mm and well compacted in layers of 150mm using a 10 tonne vibrating roller.	SM	160		
D	50mm thick approved and well compacted quarry dust blinding on hardcore surfaces	SM	160		
E	Heavy duty industrial concrete paving blocks size (210x105x80mm) minimum strength 49N/mm square laid to slope on quarry dust and compacted.	SM	160		
F	125 x 250 mm Splayed kerb to BS 340 including 125 x 100 mm channel on and including concrete Class 'E' foundation and 100 mm haunching to back of a kerb including all necessary excavation, formwork and disposal.	LM	100		
G	Ditto curved to plan.	LM	20		
H	Extra over for junction between straight and curved kerbs.	NO	8		
I	Prepare surfaces and apply three coats of approved road marking paint: to Kerb stones and parking 75-150mm girth with kenya power branded colours.	LM	100		
J	Supply and install as shall be directed by client, 150mm diameter medium gauge PVC pipes as ducts for cables crossing the access road including all necessry excavations, concrete bedding , haunching and surround to ducts .	LM	130		
K	Allow for 150mm diameter medium duty pvc bends on selected equipment plinths as shall be directed by client including bedding and haunching with (1:3:6) mass concrete to approval	No.	54		
	TOTAL TO SUMMARY PAGE.				

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Item	Description	Unit	Qty	Rate	Amount (Kshs)
	ELEMENT No.7				
	CABLE TRENCHES AND DUCTS (All Provisional)				
	Trench (600x600mm deep) length approx. 130 metres at various locations				
A	Excavate for cable trench 1.0m wide from reduced level not exceeding 0.6 metres deep.	CM	80		
B	Load, cart away excavated materials and dispose at areas designated by local authority.	CM	75		
C	Backfill and ram selected excavated materials around trench walls.	CM	6		
D	50mm plain concrete(1:4:8) blinding on cable trench base	SM	130		
	Vibrated reinforced concrete class 20/25 1:2:4 as described in;				
E	In 150mm thick trench base.	CM	20		
F	In 150mm thick trench walls with fairly smooth face finish.	CM	30		
G	Provide and put in place (900x300x75mm) thick precast concrete trench covers reinfoced with Y8 bars spaced at 100mm both ways with fair face finish on both sides, with all edges protected with 25x25x3mm angle iron. smooth face finish on both sides.	No.	500		
	External Access Road (Murraum)				
H	Excavate commencing from stripped level depth not exceeding 900mm deep for piped culvert and cart away the spoil.	CM	405		
I	50mm thick plain concrete blinding to make up levels for the precast culvert	SM	30		
J	Supply and install 600mm internal diameter concrete pipe culvert and headwall	LM	24		
K	Vibrated mass concrete class 20/25 (1:2:4) in culvert sorrounding thickness 200mm including head and wing wall.	CM	20		
L	Excavate commencing from ground level 6metres wide access road and not exceeding 300mm deep and cart away the spoil.	CM	135		
J	Hand pack and compact hardcore 300mm layer to external road section to existing public road	CM	135		
M	Approved murrum fill 300mm well compacted with vibratory rollers in 150mm thick layers to above road to engineers approval.	CM	135		
N	50mm surfacing of entry road with approved gravel.	SM	450		
O	Allow for connecting the murrum access road with the external public road	ITEM	1		
	TOTAL TO SUMMARY PAGE.				

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Item	Description	Unit	Qty	Rate	Amount (Kshs)
P	Allow for opening up the drainage at the front part of the substation and channeling the storm water along the murrum road to an appropriate out-fall on main tarmac road approximately 200m away in consultation with local County government	ITEM	1		
Q	Supply and fix steel fabricated cable trays **130m length** from 50x50x4mm thick angle irons frame, jointed together with 50x6mm thick galvanized flat iron bars to 600mm long pieces and weld on top of angle iron spaced at 300 c/c to form cable tray and with 200mm high vertical triangular support stands spaced at 300mm c/c	ITEM	1		
	High yieled steel reinforcement bars including cutting, tying, bending and fixing in place, spacer blocks and tying wires to BS 4449.				
R	Y 8 and Y10 in cable trench	KG	2880		
S	***Form work to***				
T	To sides of trench walls.-FAIR FACE-(use marine ply)	SM	485		
	Sub-Station Lighting				
D	Supply 240 watts AC (LIGHT DEPENDENT TYPE) bulky head floodlights with energy saver 100 watts sodium metal halide lamps (for kplc to install on the bus bars)	NO	12		
	ELEMENT No. 8				
	OIL INTERCEPTOR				
A	Excavate starting from ground level a pit size (5mx3mx2m depth)	CM	32		
B	Return,fill and ram selected excavated materials around the intercepter walls	CM	22		
C	Removing excess excavated materials from Site and disposing off.	CM	10		
D	Compacting bases of pit and blinding with concrete mix (1:4:8 - 50 mm thick)	SM	7		
E	Concrete (1:2:4/25) reinforced with BRC Mesh - A142 including 200mm laps, all necessary tying wires and supports in slab 200mm thick.	SM	7		
F	Concrete block walling 225mm thick in cement/sand mortar (1:3) reinforced with 20SWG hoop iron in every two alternating courses.	SM	27		
F	25mm thick cement/sand water proof (1:4) rendering on wall surfaces and floor slab finished smooth and waterproofed.	SM	45		
	TOTAL TO SUMMARY PAGE				

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Item	Description	Unit	Qty	Rate	Amount (Kshs)
	Sawn Formwork				
G	Vertical sides of slabs and beams girth 150-300 high	LM	40		
H	Soffits of slab	SM	6		
	High yieled steel reinforcement bars including cutting, bending, tying and fixing in place, spacer blocks and tying wires to BS 4449.				
I	In slab and ring beams Y8 and Y10	KG	450		
	Vibrated reinforced concrete class 20/25 1:2:4 as described in;				
K	Slab and beams	CM	10		
L	Provide and fix (600x450)mm heavy duty coated cast iron man-hole covers and frames.	No.	4		
M	soakpit 1.8m dia n.e 25ft deep to seepage laevel includding filling with boulders and loose sand at top 1m layer with provision for inlet point for pvc pipes with cover slab 150mm with BRC layer overlying 3 masonary courses	ITEM	1		
N	Provide and lay 150mm medium gauge PVC pipes with 100mm concrete surround, connecting the plinth sumps to the oil interceptor.	LM	60		
O	Construct on site manholes to M.O.P.W. specifications including heavy duty galvanized (600x450x50mm) composite polymer resin man-hole covers.	No.	4		
	ELEMENT No.9				
	STORM WATER DRAINS (All Provisional)				
A	Excavate on site drain trench not exceeding 1.5m deep including plunking and strutting, disposal of spoil to receive drainage channels and forming sloping sides in well compacted murram bed.	LM	130		
B	Lay (300x450)mm precast concrete invert block drains to suitable fall with grooved edges and tongued, joints filled with cement/sand mortar (1:3) and laid on 75mm concrete bed.	LM	130		
C	Lay on sides of sloped trench (600x300x50mm) precast concrete slabs jointed in 1:3 mortar	SM	240		
D	Stone pitching in 1:3 mortar at various locations as directed by client	SM	113		
E	Allow for mass concrete (1:2;4) mix in drainage channels works	CM	15		
F	Fabricate grating overal size (300x12000mm long) made from angle irons size (50x50x6mm thick),with partitions (Y20) spaced at 100mm including the sides angle irons embeded into drainage trench and three coats of gloss paint.	ITEM	1		
	TOTAL TO SUMMARY				

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Item	Description	Unit	Qty	Rate	Amount (Kshs)
	ELEMENT No.10				
	CHAINKLINK FENCE				
A	(2.4m highx12.5 gauge chainlink) fence on precast concrete posts complete with 4 strands of 3mm galvanised steel wire passing through holes drilled on overall height of 2.4m high and crank with 2 strands of 12.5 gauge barbed wire including securing chainlink to wire strands.	LM	50		
	ELEMENT No.11				
	PPERIMETER WALLING(140M LONG X 2.5M HIGH)				
	Demolition works				
A	Carefully demolish the existing chainlink fence and hand over the recoverables to KPLC and cart away the debris.	ITEM	1		
	Walling				
B	Excavate for foundation trench 1000mm wide commencing from ground level depth not exceeding 1.5m	CM	220		
C	Excavations for widening 48No. column bases size (1.0x1.0)m and a hight of 1.5m spaced at 3.0m c/c	CM	72		
D	Extra over for excavation in all classes of rock at any depth.	CM	35		
E	Fill in and ram selected excavated materials around the substructural walling and columns.	CM	190		
F	Load, cart away from site surplus excavated materials and dispose at areas designated by local authority.	CM	75		
G	Provide all the necessary planking and strutting to uphold sides of trenches.	ITEM	1		
H	Allow for keeping all excavations water free by pumping, bailing or otherwise.	ITEM	1		
I	50mm thick (1:4:8) mass concrete blinding to walling and column bases	SM	140		
	Vibrated reinforced concrete class 20/25 1:2:4 as described in;				
J	Foundation strip size (700x250)mm and columns size (1000x1000)mm.	CM	32		
K	Substructure and superstructure columns (200x200)mm	CM	9		
L	(300x200)mm ground beam and ring beam size (200x200)mm respectively.	CM	15		
	TOTAL TO SUMMARY PAGE.				

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Item	Description	Unit	Qty	Rate	Amount (Kshs)
	High yieled steel reinforcement bars including cutting, tying, bending and fixing in place, spacer blocks and tying wires to BS 4449.				
M	Y10 in foundation strip spaced @ 200mm both ways, ground beam and ring beams.	KG	1810		
N	Y12 in column bases @ 200mm c/c both ways, and in columns.	KG	1310		
O	Y8 in rings to columns, ground beam and ring beam @ 200mm c/c.	KG	750		
	Sawn/Steel form work to				
P	Vertical sides of substructure and superstructure columns, foundation strip, ground beam and ring beam.	SM	380		
	225mm thick natural stone/machine dressed stones/approved concrete blocks in substructure and superstructure walling in cement sand mortar (1:3) including and reinforcing with 20 SWG hoop iron in every two alternating course.				
Q	225mm thick in substructure walling	SM	240		
R	25mm thick cement/sand (1:4) rendering on plinth area finished smooth to receive bituminous paint-600mm high	SM	85		
S	225mm thick and 2500mm high machine-cut or fair faced dressed natural or approved concrete blocks stone walling in cement/sand (1:3) mortar including 20SWG hoop-iron in every alternate courses.Internally plastered (1:4) cement/sand and trowelled smooth to receive paint. Externally horizontal joints keyed in cement /sand mortar 1:3 and moulds to columns and ring beams externally.	SM	350		
T	Prepare surface and apply three coats of greyish Crown permaplast paint to the boundary wall plastered surfaces.	SM	350		
U	350mm wide pre-cast concrete coping twice weathered and throated fixed to walling.	LM	140		
V	(800x550)mm concrete coping weathered and throated on all sides fixed to double columns.	NO	15		
	TOTAL TO SUMMERY PAGE.				

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Item	Description	Unit	Qty	Rate	Amount (Kshs)
W	(550x450)mm square concrete coping weathered and throated on all sides fixed to columns.	NO	48		
	Expansion Joints 6No.				
X	40mm thick construction joints in flex cell or equally approved expansion joint is including (25x25)mm expedite sealer.	No.	15		
	Razor Wire				
	Supply and fix Razor Wire at the top of boundary wall conforming to the following specifications:				
Y	Coil size-450mm diameter, Blade profile-ripper razor wire,Stretch factor-maximum of 10m per coil and secured to wall with galvanised steel plates @ 1m centres and (1"x1"x3mm thick and 600mm high galvanised SHS fixed on each column to secure the razor wire also.	LM	140		
Z	Allow for extra double Columns (Reinforced concrete) at expansion joints	No.	10		
	Substation Gate				
A	Fabricate and fix a primary substation gate as per the provided drawing	No.	1		
B	Rehabilitate existing trencghes by hacking and making good all defaced walls .including covers and trays WHERE NECCESARY	ITEM	1		
C	Tempotrary FENCE relocation for new wall constrruction and cart away existing chainlink and gate.	ITEM	1		
D	Allow for pedestal 4m x2m x200mm for marshalling kiosk for panel including trench terminations	ITEM	1		
E	Allow for stabilization,compaction,levelling to drain slope including all reinstatements and making good works as neccesary	ITEM	1		
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	TOTAL FROM PAGE 11				
	TOTAL FROM PAGE 12				
	SUB TOTAL				
	NCA FEES(0.5% OF PROJECT COST)				
	ADD 16% VAT				
	GRAND TOTAL				
	AMOUNT IN WORDS:				
	COMPANY STAMP				
	SIGN:				
	NAME & ADDRESS:				
	CONTRACT PERIOD:				

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