

PROPOSED CIVIL WORKS FOR SGR 33KV TAKE-OFF BAY AT MAUNGU 132/33 KV SSTN					
Item	Description	Unit	Qty	Rate	Amount (Kshs)
ELEMENT No.1					
PRELIMINARIES AND ENABLING WORKS					
A	Allow for a temporary site office		1		
B	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		
C	Allow for security and insurance for the proposed works	ITEM	1		
B	Allow for clean water for the works	ITEM	1		
E	Allow for temporary sign post for the proposed works	ITEM	1		
F	Allow for temporary supply of power connection for use for the works.	ITEM	1		
G	Allow for all the necessary statutory approvals for the works by relevant county departments, replication of drawings to required formats, Endorsement by relevant professional persons; and submit a set of approved drawings before commencement and as built drawings to client on completion, including site and project registration with NCA.	ITEM	1		
I	Allow for Kenya power personnel to do earthing prior to blinding all the excavated bases	ITEM	1		
J	Allow facilitation for kplc supervisors on communications and data	ITEM	1		
K	Allow for development and generation of shop drawings for existing structures for fabrication based on site assesment by contractor	ITEM	1		
ELEMENT No.2					
SWITCH - GEAR FOUNDATION PLINTHS(Substructure Worka -All provisional)					
The following in 1No. Two legged 33kv post insulators, 2Nos two legged 33kv Air-Break Swiches, 1 no busbar foundation, Typical 1No. 33kv Circuit- Breaker two legged, 33kv Current Transformers - three legged and 1No. Transition structure-two legged foundations; 33KV take off column lattice;-33kv busbar leg extension support;3 no 33kv VTs Total 18Nos. foundation plinths					
A	Clear site of all existing ballast and black polythene membreane and set asde the ballast for re-use as shall be necessary	SM	390		
B	Excavate foundation pits commencing from ground level and not exceeding 1.5m deep	CM	30		
C	Ditto Exceeding 1.5m but not exceeding 3.0m	CM	20		
D	Extra -Over for excavating in all classes of rock	CM	30		
E	Allow for all necessary plunking and strutting	ITEM	1		
Total to this page and carried to Summary page 1					




Item	Description	Unit	Qty	Rate	Amount (Kshs)
F	Allow for disposal of general water by pumping, bailing or otherwise	ITEM	1		
G	Return, Ram and Fill Selected Excavated materials around the foundations	CM	27		
H	Load and Cart-Away surplus excavated materials from site to County Government Approved dumping site	CM	12		
I	Level and Compact bases of pits to receive blinding.	SM	12		
	<u>Blinding(Plain Concrete Class 15)</u>				
J	50mm thick (1:4:8) Concrete blinding to pit bottoms	SM	24		
	<u>Vibrated Reinforced Concrete Class 25/20 mm Aggregates In:</u>				
K	200mm Thick base	CM	4		
L	Stub columns	CM	25		
	<u>High yieled steel reinforcement bars including cutting,bending, tying and fixing in place, spacer blocks and tying wires to BS 4449.</u>				
M	Y8-16mm	KG	2500		
	<u>Fair - Face FormWork to:</u>				
N	To vertical sides of bases -(150-225mm)	LM	80		
O	To vertical sides of stub-Columns	SM	150		
P	Provide averagelly 300mm thick selected and approved imported murrum fill in switchyard, compacted in layers not exceeding 150mm thick using a 10 tonne vibrating roller and finally finishing the top 200mm to achieve slope to receive polythene membrane and ballast	CM	117		
Q	Prepare and apply Gradiator 4TC or equal and approved insecticide to surfaces of murrum fill and blinding as per Manufacturer's written instructions	SM	390		
R	Apply suitable weed killer, herbicide to surfaces of blinding as per the Manufacture's written instructions	SM	390		
S	1000 gauge polythene or other equal and approved mebrane laid on compacted and treated murrum with welted laps of 200mm wide.	SM	390		
T	Re-Use Set aside ballast and spread Uniformly in switch- yard and Top up with new ones to Client Approval.	SM	390		
	Total to this page and carried to Summary page 2				



Item	Description	Unit	Qty	Rate	Amount (Kshs)
ELEMENT No.3					
CABLE TRENCHES AND DUCTS (All Provisional)					
<i>Trench (600x600mm deep) length approx. 15 metres at various locations</i>					
A	Excavate for cable trench 1,2m wide from ground level not exceeding 1.0m metres deep.	CM	30		
B	Load and cart- away excess excavated materials from site to County Government Approved dumping site	CM	15		
C	Backfill and ram selected excavated materials around trench walls.	CM	10		
D	50mm plain concrete(1:4:8) blinding on cable trench base	SM	15		
E	Allow for all necessary plunking and strutting	ITEM	1		
F	Allow for disposal of general water by pumping. Bailing or otherwise.	ITEM	1		
G	Vibrated reinforced concrete class 20/25 1:2:4 as described in;				
H	150mm thick trench base.	CM	3		
I	150mm thick trench walls with fairly smooth face finish.	CM	8		
J	Allow for connecting the new cable trenches to the old trenches including hacking and cutting old reinforced concrete works to merge with the new ones	ITEM	1		
K	Provide and put in place (900x300x75mm) thick precast concrete trench covers reinforced 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.	50		
L	Supply and fix steel fabricated cable trays 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 400 c/c to form cable tray and with 200mm high vertical triangular support stands spaced at 400mm c/c	ITEM	25		
	High yielded steel reinforcement bars including cutting, tying, bending and fixing in place, spacer blocks and tying wires to BS 4449.				
M	Y 8 and Y10 in cable trench	KG	400		
	Fair Face - Form work to:				
N	Vertical sides of trench walls.(Internally and Externally)	SM	72		
O	Vertical side of trench base-(75-150mm)	LM	30		
Total to this page and carried to Summary page 3					

Item	Description	Unit	Qty	Rate	Amount (Kshs)
ELEMENT No. 4					
REHABILITATION WORKS (Approx. 100 sq. metres Affected by movements caused by new bay)					
A	Carefully remove ballast from the affected areas and set-aside for re-use	SM	100		
B	Re-Instate the affected areas with approximately 150mm thick Imported Murrum and compact to client approval using a tone vibratory roller.	CM	100		
D	Prepare and apply Gradiator 4TC or equal and approved insecticide to surfaces of murrum fill and blinding as per Manufacturer's written instructions	SM	100		
E	Apply suitable weed killer, herbicide to surfaces of blinding as per the Manufacture's written instructions	SM	100		
F	1000 gauge polythene or other equal and approved mebrane laid on compacted and treated murrum with weltd laps of 200mm wide.	SM	100		
G	Re-Use Set aside ballast and spread Uniformly in switch- yard and Top up with new ones to Client Approval.	SM	100		
ELEMENT No. 5					
GALVANIZED FOUNDATION BOLTS					
A	Allow for supplying, fixing and 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 25mm diameter). as per structures detail	ITEM	1		
ELEMENT No. 6					
Galvanized Steel Structures for Supporting Various Equipments					
A	Supply and erect 16nos. GALVANIZED lattice support steel structures made of angle sections 50x50x6mm, base plates 20mm thick not exceeding 7m high, compllte with base and top plates and necessary stiffeners welded to main post complete with bolts and nuts - to match-existing bays.	ITEM	1		
B	Supply and erect 2nos. GALVANIZED lattice support 33kv take off gantries made of angle sections 50x50x6mm, base plates 20mm thick not exceeding 12m high, compllte with base and top plates and necessary stiffeners welded to main post complete with bolts and nuts - to match-existing bays. (complete assembly of 2 legs and 1 no 4m guider 'boom' TO MATCH EXISTING	NO	1		
C	Supply and fix 150mm dia HD pvc ducts and 105 DEGREE BENDS to receive cables from equipment to trenches including haunching with 150mm class 15 mass concrete and self supportes to levels not exeeding 1m from the ground ;each installation to link to nearest trench point to terminate at CT/VT/ES/LTX/CB	ITEM	1		
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SUMMARY PAGE.				
TOTAL FROM PAGE 1				
TOTAL FROM PAGE 2				
TOTAL FROM PAGE 3				
TOTAL FROM PAGE 4				
SUB TOTAL				
16%VAT				
GRAND TOTAL				
AMOUNT IN WORDS				
COMPANY STAMP				
SIGN:				
NAME & ADDRESS:				
CONTRACT PERIOD: -				

