PAVING OF KWALE TRADE OFFICES JUNCTION - KWALE HIGH COURT ROAD					
BILL NO. 1: PRELIMINARIES & GENERAL ITEMS					
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**UNIT RATE (Kshs)**	**AMOUNT (Kshs)**
1.01	Prime Cost Sum for testing of materials as instructed by the Engineer in approved independent testing laboratory	PC Sum	1	100,000.00	100,000.00
1.02	E.O. item 1.01 for Contractor's overheads and profits.	% of item	100,000		
1.03	Prime Cost Sum for costs of the Employer's and Engineer's supervision staff assigned to the Project including wages, transport, communication, meeting allowances, etc as instructed by the Engineer.	PC Sum	1	600,000.00	600,000.00
1.04	E.O. item 1.03 for Contractor's overheads and profits.	% of item	600,000		
1.05	Allow a Prime Cost Sum of Kshs.100,000 for the RE's miscellaneous account to be spent in whole or part as directed by the RE against receipts.	PC Sum	1	100,000.00	100,000.00
1.06	E.O. item 1.05 for Contractor's overheads and profits.	%	100,000		
1.07	Allow for payments demanded by the Authorities for relocation / diverson of existing services (water, sewer, power, telecom etc.)	PC Sum	1	100,000.00	100,000.00
1.08	E.O. item 1.07 for Contractor's overheads and profits.	%	100,000		
1.09	Provide, erect and maintain publicity signs as directed by the Engineer.	No	1		
	Bill No. 1 Total Carried Forward to Grand Summary				

PAVING OF KWALE TRADE OFFICES JUNCTION - KWALE HIGH COURT ROAD					
BILL NO. 4: SITE CLEARANCE AND TOP SOIL STRIPPING					
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**UNIT RATE (Kshs)**	**AMOUNT (Kshs)**
4.01	Clear site on road reserve including removal of all growths, bushes,hedges, trees, stumps, grub up roots, vegetation and/or deleterious organic materials, level site and back-fill with approved material to 100% MDD(AASHTO T99) in accordance with the specifications or as directed by the Engineer.	Ha.	0.11		
4.02	Strip top soil upto 0.2m in thickness along alignment or material sites including removal of all grass and other vegetation,transport to spoil and spread or stock pile for re-use as directed by the Engineer.	m^3	223		
4.03	Stripping off existing road surface, milling and mixing with base gravel or carting away to an approved spoil area as shall be directed by the Engineer	m^2	400		
	Bill No. 4 Total Carried Forward to Grand Summary				

PAVING OF KWALE TRADE OFFICES JUNCTION - KWALE HIGH COURT ROAD					
BILL NO. 5: EARTHWORKS					
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**UNIT RATE (Kshs)**	**AMOUNT (Kshs)**
	NOTE:All costs and charges connected with haulage are to be included within the unit rates entered against the items described in this Bill of Quantities. No overhaul shall be paid for this items and shall be deemed to have been included in the Contractor's rates				
5.01	Fill in soft material including benching of shoulders and embankments and compaction to 95% MDD (AASHTO T99) in layers not exceeding 150mm	m^3	1,405.02		
5.02	Cut to spoil in soft material	m^3	759.50		
5.03	Processing insitu material after cleaning stripped surface and compaction of 150mm original ground below fills to 95% MDD.(AASHTO T99)	m^3	351.00		
	Bill No. 5 Total Carried Forward to Grand Summary				

PAVING OF KWALE TRADE OFFICES JUNCTION - KWALE HIGH COURT ROAD					
BILL NO. 8: CULVERTS AND DRAINAGE WORKS					
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**UNIT RATE (Kshs)**	**AMOUNT (Kshs)**
	Note: No separate payments shall be made for gravel, for blinding, hauling to spoil unsuitable excavation materials, reinforcement of conrete with BRC, excavations and Backfilling of culverts with gravel and the cost of such shall be included in the rates and prices				
8.01	Excavation in soft material for side drains, cut off drains, pipe culverts,headwalls, wingwalls, apron,toewalls,and drop inlets and compact as directed by the Engineer	m^3	450.0		
8.02	Provide,lay and joint 600mm dia. concrete pipes (precast to BS 5911 Parts 1 & 3) as directed by the Engineer	m	20.0		
8.03	As in item 8.02 but 900mm dia. concrete pipes (precast to BS 5911 Parts 1 & 3) as directed by the Engineer	m	12.0		
8.04	Provide and place class 15/20 concrete to beds, surround and haunches	m^3	25.26		
8.05	Provide, place and compact class 25/20 concrete for headwalls, wingwalls, aprons, and toewalls to access and cross pipe culverts, miscellenous ramps including all form work and the provision and placing of reinforcement as shown in the drawings.	m^3	9.0		
8.06	Excavate, provide, lay and install 300mm inner diameter invert block drains (IBDs) including class 20/20 concrete for haunching as directed by the Engineer	m	140.0		
8.07	Prepare surface, provide and lay side slabs to the drains	m^2	140.0		
8.08	Provide and place class 20/20 concrete for blinding and haunching and storm water drainage lining in accordance with the specifications including excavation,bedding, reinforcement and backfilling with necessary materials as directed by the Engineer	m^3	3.1		
	Bill No. 8 Total Carried Forward to Grand Summary				

PAVING OF KWALE TRADE OFFICES JUNCTION - KWALE HIGH COURT ROAD					
BILL NO. 9: PASSAGE OF TRAFFIC					
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**UNIT RATE (Kshs)**	**AMOUNT (Kshs)**
	NOTE: Notwithstanding the provision of Section 9 of the Standard Specification, no extra payments shall be due as all costs shall be deemed to be included in the rates inserted herein				
9.01	Allow for the passage of traffic through and around the works	LS	1.0		
	Bill No. 9 Total Carried Forward to Grand Summary				

PAVING OF KWALE TRADE OFFICES JUNCTION - KWALE HIGH COURT ROAD					
BILL NO. 12: NATURAL MATERIAL SUB-BASE AND BASE					
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**UNIT RATE (Kshs)**	**AMOUNT (Kshs)**
	No overhaul will be paid for separately under this item and the cost of hauling will be deemed to have been included in the rates. The rates inserted shall include for all costs for acquiring, site clearance, overburden removal, excavation and hauling to site.				
12.01	Excavate, provide, approved gravel material for subbase lay and compact including all treatments to specifications or as per Engineer's instructions	m^3	259.6		
12.02	Provide G30 gravel base material, haul, spread, compact to at least 100% M.D.D (AASHTO T-180) and shape to level and tolerance.	m^3	259.6		
12.03	Provide, spread, shape and compact approved quarry waste for paving blocks laying course as per the specifications.	m^3	93		
	Bill No. 12 Total Carried Forward to Grand Summary				

PAVING OF KWALE TRADE OFFICES JUNCTION - KWALE HIGH COURT ROAD					
BILL NO. 20: ROAD FURNITURE					
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**UNIT RATE (Kshs)**	**AMOUNT (Kshs)**
20.01	Provide lay and join precast concrete kerbs				
	(a) Straight	m	236		
	(b) Radius 1-5 m	m	0.00		
20.02	As 20.02 but for road channels 100 x 125mm	m	528.75		
20.03	Provide and erect permanent road signs where instructed by the Engineer and in accordance with Special Specifications Clause 2004 as follows:				
	a) warning signs	No.	2.00		
	b) Priority prohibitory and mandatory signs	No.	0.00		
	c) Standard informatory signs	No.	0.00		
20.04	Provide, deliver, paint and mark the road as specified or as directed by the Engineer, with white reflectionized paint from an approved supplier.	m^2	47.3		
20.05	As item 20.03 but for yellow reflectionized paint	m^2	23.6		
20.06	Provide Edge marker posts	No.	4.00		
20.07	Provide and install streetlights as priced In Appendix A	LS	1.0		
	Bill No. 20 Total Carried Forward to Grand Summary				

PAVING OF KWALE TRADE OFFICES JUNCTION - KWALE HIGH COURT ROAD					
BILL NO. 22: DAY WORKS					
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**UNIT RATE (Kshs)**	**AMOUNT (Kshs)**
	The rates inserted herein are to include all operational and Maintenace costs, fuel, oil, grease, drivers/operators wages, supervision, overheads and profit. Only time actually employed upon the work will be paid for and the rates should include for idle time, travelling time and overtime, In accordance with clause 2202 (a) of the specifications. Note: All items of plant must be priced.				
22.01	Double cabin Pick-up for use by the supervision team as shall be directed by the Engineer on site.	V.days	90		
	Bill No. 22 Total Carried Forward to Grand Summary				

PAVING OF KWALE TRADE OFFICES JUNCTION - KWALE HIGH COURT ROAD					
BILL NO. 23: PAVED CONCRETE SURFACES					
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**UNIT RATE (Kshs)**	**AMOUNT (Kshs)**
	Measurements and payment by method "A" as defined in the standard specifications. No separate payments shall be made for the overhaul of material and the cost of such will be deemed to have been included in the rates				
23.01	Provide and lay 80mm thick Interlocking - Heavy duty - plain (Deformed) paving blocks with naturally occuring clean sand or crushed rock fines as a joint filler.	m^2	1,485		
23.02	Provide and lay 60mm thick Interlocking Type S paving blocks for the footpath with naturally occuring clean sand or crushed rock fines as a joint filler.	m^2	354		
	Bill No. 23 Total Carried Forward to Grand Summary				

PAVING OF KWALE TRADE OFFICES JUNCTION - KWALE HIGH COURT ROAD					
BILL NO. 25: ENVIRONMENTAL AND SOCIAL SAFEGUARDS					
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**UNIT RATE (Kshs)**	**AMOUNT (Kshs)**
25.01	Allow for creating awareness on E&S risks among the communities and workers	L Sum	1		
25.03	Allow for the implementation of actions in the ESMP	L Sum	1		
28.03	Provide for rehabilitation and restoration of disturbed environments	L Sum	1		
	Bill No. 25 Total Carried Forward to Grand Summary				

PAVING OF KWALE TRADE OFFICES JUNCTION - KWALE HIGH COURT ROAD		
BILL SUMMARY		
ITEM	**DESCRIPTION**	**AMOUNT (Kshs)**
1	Preliminaries and General Items	
4	Site Clearance and Top Soil Stripping	
5	Earth Works	
8	Culverts and Drainage Works	
12	Natural Gravel Base and Subbase	
20	Road Furniture	
22	Day Works	
23	Concrete Surface Paving Blocks	
25	Environmental and Social Safeguards	
(A)	**Sub-total (1)**	
(B)	Add 2% CONTIGENCIES of sub total (1)	
(C)	Sub-total (2) = (A + B)	
(D)	Add 16% of Sub-total 2 for VAT	
(E)	Add 0.03% of Sub-total 2 for PROCUREMENT LEVY	
	GRAND TOTAL CARRIED FORWARD TO FORM OF TENDER	

PAVING OF KWALE TRADE OFFICES JUNCTION - KWALE HIGH COURT ROAD

APPENDIX A: INSTALLATION OF SOLAR POWERED STREET LIGHTS FOR BILL ITEM 20.07

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
	EARTH WORKS				
1	Clear the site off grass, shrub and all vegetables tree branches: cart away and burn all the rising as directed overhanging tree branches	SM	22.50		
	Excavation				
2	Excavate oversite to reduce levels commencing from stripped level average 150mm deep and spread on site av. 100 meters away.	SM	22.50		
3	Excavate pits for foundation bases starting from reduce level not exceeding 1.50 meters deep.	CM	11.58		
5	Extra over Excavation for rock in any position.	CM	4.00		
6	Trim and level bottom of excavation	SM	10.00		
	Disposal of surplus material				
7	Return fill and ram	CM	7.20		
8	Load and cart away	CM	4.38		
	Disposal of water				
9	Keeping all excavations free from all water including spring or running water	ITEM	1.00		
	Plunking and struting				
10	Allow side support for the excavated pit	ITEM	1.00		
	Total Carried forward to Next Page				

APPENDIX A: INSTALLATION OF SOLAR POWERED STREET LIGHTS FOR BILL ITEM 20.07

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
	Total Brought forward from Previous Page				
	SUBSTRUCTURAL WORKS				
	Concrete				
11	50 mm thick mass concrete class Q (1:3:6) to bottom of foundations	SM	10.00		
	Institu Vibrated Reinforced Concrete class 20/20;				
12	To foundation column base 450mm thick and 1m 400mm x 400mm column	CM	6.10		
	Sawn formwork				
13	To sides of the column base and column	SM	34.00		
	Mild tensile steel reinforcement bars to BS 4449:2005 on the structural details as described in:				
14	Assorted bars	KG	313.20		
	Metal work				
15	Supply and fix 300x300x6mm thick mild steel base plate	NO	10.00		
16	Extra over for 6mm thick Gusset plate fixed to Mild steel base plate and steel pole	NO	40.00		
17	Extra over for boring 20 dia holes to Mild steel plate	NO	40.00		
18	Extra over for 300mm long M16 down bolts including nuts and washers to be fixed to reinforcement and steel pole	NO	40.00		
	Total Carried forward to Next Page				

APPENDIX A: INSTALLATION OF SOLAR POWERED STREET LIGHTS FOR BILL ITEM 20.07

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (Kshs)	AMOUNT (Kshs)
	Total Brought forward from Previous Page				
19	**SUPERSTRUCTURE WORKS** A 8.0m height pole of diameter 76/102mm (botton/top), hot dipped galvanized (inside & outside as per BSEN ISO 1461 steel pole with additional polyester coating. 4mm wall thickness, a flange of 450mm*450mm*12mm with a reflective paint at the bottom.	NO	10.00		
20	L930*W365*H160, 300W, solar LED Street Light solar streetlight lamp of the following specifications and firmly mounted on the pole by welding spots excluding the pole:- 1). Materials:Aluminum 2). Solar panel:6v/53W A-level Monocrystalline Silicon 3). LED lamp: Philips SMD 3535 144PCS 4). CCT (Correlated Color Temperature): 3000-6000K (Optional) 5). Battery type: LiFePO4 6.4V 60000mAH 6). Luminous flux: 160lm/W 7). Charging time: 6-8 HOURS 8). Discharging time: 24-36 HOURS 9). Propositional mounting height: 8m 10). Propositional installation distance: 25m 11). Protection Grade: IP65 12). Warranty: 3 Years	NO	10.00		
	Total Carried forward to Bill Item No. 20.05				