ESTIMATE FOR CONSTRUCTION OF PROPOSED MODERN SCIENCE LABORATORY AT LUMI SECONDARY SCHOOL

ITEM	DESCRIPTION	UNIT	QTY	RATE	SHS. CTS
	ELEMENT NO.1 **SUBSTRUCTURES** **ALL PROVISIONAL.** **EXCAVATIONS AND EARTH WORKS** **Site clearance**				
A.	Clear site of all bushes, shrubs and undergrowth, up root and burn all the arising	M^2	209		
B.	Excavate vegetable soil average 200mm deep and cart away as directed.	M^2	209		
C.	Excavate foundation trench not exceeding 1.5m deep commencing from stripped level.	M^3	51		
D	Excavate to reduce levels 150mm deep	M^3	8		
E.	Extra over excavation for excavating in hard rock exceeding 1.5m but not exceeding 3.0m	M^3	15		
F.	Allow for keeping the whole of the excavations free from all water including spring and running water.	ITEM			
G.	Allow for planking and strutting to sides of excavations.	ITEM			
H.	Return fill and ram selected excavated material.	M^3	40		
I.	Cart away surplus excavated material.	M^3	75		
J.	300mm thick approved hardcore well compacted in layers not exceeding 150mm deep.	M^2	164		
K	50mm thick murram blinding to surface of hardcore.	M^2	164		
	TOTAL CARRIED TO COLLECTION				-

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS. CTS
	INSECTICIDE TREATMENT				
A.	Treat surface of blinded hardcore with **Termidor** or any other equal and approved insecticides with ten year guarantee as per the manufacturers printed instructions.	M^2	164		
B.	500 gauge polythene sheet damp proof membrane lay with 150mm side and end laps.	M^2	164		
	CONCRETE WORKS				
C.	50mm Thick blinding to Strip foundations	M^2	51		
D.	Insitu reinforce concrete (1:2:4) to foundation trenches	M^3	5		-
	BEDS				-
E.	100mm Thick surface bed	M^2	164		
F.	200mm Ditto	M^2	9		
	SAWN FORM WORK TO:				
G.	Edges of slab 75 to 150mm high	LM	54		
	High steel reinforcement to b.s 4461 including tying wire spacer blocks.				
H.	8mm ditto	KGS	109		
I.	12mm ditto	KGS	246		
J	B.R.C Mesh BS 4483 ref.A 98 200 X 200mm wgt 1.89kgs/m^2 measured net no allowance made for laps including bends tying wire and distance	M^2	164		
	Substructure walling				-
K	200mm thick natural stone block walling in cement and sand mortar (1:3) reinforced with and including 20swg x 25mm wide hoop iron in every alternative course.	M^2	135		
	CARRIED TO COLLECTION				-

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS. CTS
	PLINTHS				-
A	15mm thick cement and sand(1:4) rendering to plinth walls.	22	M^2		
B	Two coats bituminous paint to rendered plinth walls.	22	M^2		
C	B.S 743; Type A bitumen hessian 200mm (no allowance made for laps) for horizontal ; 1NO layer ;200 wide	62	LM		
					-
	P.C.C PAVING SLABS.				-
D	600 x600 x50 mm thick precast concrete paving slabs around the building including 100mm thick bed of murram.	22	M^2		
	CARRIED TO COLLECTION				-
	COLLECTION				
1	From Page KC /S/01				-
2	From Page KC /S/02				-
3	From Page above				-
TOTAL FOR ELEMENT NO .1 CARRIED TO SUMMARY					**-**

ITEM	DESCRIPTION	UNIT	QTY	RATE	SHS. CTS
	ELEMENT NO. 02				
	SUPERSTRUCTURES WORKS				
	CONCRETE WORKS				
	Insitu; concrete; reinforced normal; concrete (1:2:4); vibrated				
A	Beams	M^3	4		
	Suspended slab				
B	150mm thick fume chamber	M^2	8		
C	150mm thick slab at ditto	M^2	22		
	Gas chamber				
D	100mm thick	M^2	2		
	REINFORCEMENT				-
	Fabric B.S. 4483				-
	Reference A98; 50 x50mm; wgt 0.54kgs/m2 (measured net no allowance made for laps) including bend, tying wires and distance blocks				-
	in any location				-
	Bars; m.s; high yield; cold worked; B.S 4461 including bend, tying wires and distance blocks and spacers in any location				-
E	8mm Diameter	KGS	205		
F	12mm Diameter	KGS	282		
G	Mesh wire medium gauge measured net no allowance made for laps including bends tying wire and distance	M^2	22		
	FORMWORK				
	Sawn formwork to soffits and sides				
H	Beams	M^2	54		
I	Worktops	M^2	22		
TOTAL FOR SUPERSTRUCTURE CARRIED TO MAIN SUMMARY					-

ITEM	DESCRIPTION	UNIT	QTY	RATE	SHS. CTS
	ELEMENT NO. 3 **WALLING.** **MACHINE DRESSED NATURAL STONEWORK** **Approved local stone, fine chisel dressed all sides; reinforced with hoop iron G500 in every alternate course; bedding and jointing in cement sand mortar (1:3)**				
	EXTERNAL WALL				
A.	200mm thick	M^2	158		
B.	Eaves fillings	LM	34		
C.	Ditto gable	M^2	30		
D	Raking cutting 200mm thick stone walling for slope	LM	29		
E.	200 x 200mm piers	LM	36		
	SOAK PIT				
F	Allow for construction of a soak pit to detail to the approval of project manager	SUM	1		-
					-
					-
					-
					-
					-
					-
TOTAL ELEMENT NO.3 WALLING CARRIED TO SUMMARY.					-

ITEM	DESCRIPTION	UNIT	QTY	RATE	SHS. CTS
	ELEMENT NO. 4				
	ROOFING. **Structural timbers; sawn cypress; pressure impregnated.**				
	The following in 11NO. Single pitch trusses; 1500mm clear span; including hoisting and fixing in position approx. 3000mm above ground floor; including all necessary jointing				
A	100 x 50mm rafters	LM	163		
B	150 x 50mm tie beam	LM	139		
C	100 x 50mm king post	LM	39		
D	Ditto struts and ties	LM	179		
E	100x50mm wall fixed with hoop iron straps at 1.0m centers cast in concrete.	LM	34		
F	100 x50mm verandah joist	LM	18		
G	200 x 25mm facial board	LM	67		
H	100 x 25mm eaves nailed to rafters or bearer at 100mm c/c	M^2	8		
I	Prepare stop and apply three coats glass oil paint or equal and approved to timber surfaces exceeding 200mm but not exceeding 300mm girth.	LM	67		
					-
	COVERING				-
	Pre-painted galvanized box profile sheeting as resin cot or other equal and approved manufacturer.				-
J	Gauge 30 G.C.I. roofing sheets.	SM	236		
K	Ditto half round ridge capping	LM	18		
TOTAL CARRIED TO COLLECTION					-

ITEM	DESCRIPTION	UNIT	QTY	RATE	SHS. CTS
	RAINWATER INSTAALLATIONS				
	Gutter work; G24;m.s; purpose made; box profile; gutters; soldered joint in running length; fixing with metal brackets at 900mm c/c				
A	100 x 100mm	LM	36		
B	locked ends with outlet for 75mm pipe 2800mm long	NO	4		
C	90 Degrees bend	NO	4		-
	Down pipe; G26; m.s; purpose made; box profile; pipe work; soldered joint in running length; fixing with metal brackets at 900mm c/c background requiring plugging				-
D	75mm Diameter	LM	14		
E	1200mm long swan neck	NO	4		
F	500mm long horse shoes	NO	4		
	One undercoat; two coats gloss finish oil paint; crown solo; paints or equal and approved to metal surfaces				
G	over 300mm girth	M^2	21		
H	Pipes	M^2	8		
	CARRIED TO COLLECTION				-
	COLLECTION				
	From Page KC /SL/06				-
	From Page above				-
TOTAL FOR ROOFS CARRIED TO MAIN SUMMARY					-

ITEM	DESCRIPTION	UNIT	QTY	RATE	SHS. CTS
	ELEMENT NO. 5 **DOORS** **METAL WORK – PURPOSE-MADE UNITS** **Mild steel casement doors;100x50x3mm thick frame pegged to concrete or block work with 100mm long fish tail 25 x 25x 2mm thick angle section,50 x 50x3mm thick angle section frames at 300mm centres both sides, angles cut, mitered and welded; panels in filled with glazing(m/s),one coat manufacturer's primer, complete with all necessary iron mongery; all welding ground to smooth finish**				
A	Double door; 1500 x 2400mm high, including 3 pairs 150mm long purpose made hinges; and 2No. 300mm aluminium D handle (m/s); all welded.	NO	2		
B	Single door; 900 x 2400mm high, including 3 pairs 150mm long purpose made hinges; and 1No. 300mm aluminium D handle (m/s); all welded.	NO	1		
	Flush door; B.S 459 part 2 **solid core; 6mm thick internal quality wood facing both sides; hardwood lipping sides**				
C	Single door; 45mm thick; size 900 x 2400mm high. **Wrot cypress timber as described**	NO	1		
D	150mm x 50mm frame rebated; once times moulded	LM	8		
E	40 x 15mm Architrave	LM	8		
F	20 Quadrant	LM	8		
TOTAL FOR DOORS CARRIED TO SUMMARY					

ITEM	DESCRIPTION	UNIT	QTY	RATE	SHS. CTS
	IRON MOGERY				
	Supply and fix the following iron mongering screw to match (Ref is to union dialogue or other equal and approved)Softwood or the like with matching screws				
A	Two levers rebated mortise lock as complete with furniture.	NO	1		
B	100mm butt hinges	PRS	1.5		
	GLAZING				
C	Glass in openings set; clear 4mm thick to metal putty 0.10-0.50mm for windows and doors	M^2	2		-
	PAINTING AND DECORATING				-
	Three coats ; aluminium wood primer; to crown solo or other equal and approved to				-
D	wood surfaces of girth 100- 200mm	LM	8		
	One undercoat; two coats gloss finish oil paint; crown solo; paints or equal and approved metal surfaces				
E	300mm girth	M^2	12		
	CARRIED TO COLLECTION				-
	COLLECTION				
	From Page KC/SL/08				-
	From Page above				-
TOTAL FOR DOORS CARRIED TO SUMMARY					-

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS. CTS
	ELEMENT NO.6				
	WINDOWS				
	Wrot cypress				
A	150 x 25mm Thick board; bull-nosed ledges; 25 x 25mm bearer; plugged; countersunk and flush pelleted	LM	12		
B	15 x 15mm Quadrant bead	LM	12		
					-
	METAL WORK				-
	Purpose made units				-
	Mild steel; ks 02-18 neat cut and welded; all welds ground smooth and to even surfaces				-
	Casement windows; standard metal casement ; section comprising of standard z-section forming, burglar proofing flat bars, transoms, mullions, permanent ventilators, comprising t-bars, gauze and 6G sheet metal hood, 25 x 3mm flats at 100mm c/c both ways, all coupling mullions; complete with bronze handles, pegs stays and all other necessary iron mongering; one coat red primer by manufacturer. Metal; for glazing with putty; cutting and pinning to concrete or masonry jambs, head and cill; bedding in cement sand (1:3) mortar; pointing round frames easing, oiling adjusting opening lights on completion				-
					-
C	Window overall size 1500 x 1500mm; 2NO. openable and 2NO. fixed ends each size 450 x 1500mm high	NO	6	12000	72,000.00
D	Window overall size 1500 x 1500mm; 2NO. openable and 2NO. fixed ends each size 450 x 1500mm high with barglar proofing	NO	2		
TOTAL CARRIED TO COLLECTION					

ITEM	DESCRIPTION	UNIT	QTY	RATE	SHS. CTS
					-
	PAINTING & DECORATION				-
	One undercoat; three coats gloss finish oil paint; to crown solo paints or other equal and approved to				-
					-
A	Metal surfaces girth over 300mm	M^2	18		
B	Burglar proofing over 300mm girth	M2	4.5		
	CARRIED TO COLLECTION				-
	COLLECTION				
	From Page KC/SL/10				
	From Page above				-
TOTAL FOR WINDOWS CARRIED TO MAIN SUMMARY					**-**

ITEM	DESCRIPTION	UNIT	QTY	RATE	SHS. CTS
	ELEMENT NO. 7 FINISHES				
	FLOOR FINISH				
	Bedding screed; cement and sand (1:3)				
	32mm Thick; 1NO coat bed; steel trowel led; smooth to concrete base (m/s) generally to finished with Terazzo floor finish				
A	Floor; level; internal	M^2	158		
B	Ramps ; slopping; external	M^2	8		
C	Skirting; 100 x 20mm; rounded top and grooved at junction with floor	LM	91		
D	Terrazzo finishing to worktops complete with dividing strips	M^2	22		
	INTERNAL WALL FINISHES.				-
	Plaster; 12mm first coat of cement sand (1:4); 3-5mm; steel trowel led				-
E	Concrete or stone walls.	M^2	178		
F	Supply and fix sliding white board to approval size 6000x1200mm	No	1		
	PAINTING & DECORATING				
G	Three coats of silk vinyl paint; to crown solo or other equal and approved to Plastered surfaces of girth over 300mm.	M^2	178		
	EXTERNAL WALL				
H	A neat recessed keying; horizontal; in 10mm diameter rod in cement sand mortar (1:3) to external walling	M^2	85		
I	15 mm (minimum) two coat lime plaster with wood floated finish as described to masonry beams	M^2	65		
	PAINTING AND DECORATIONS				
J	Three coats silk vinyl paint; to crown solo paint or equal and approved to plastered surfaces of girth over 300mm	M^2	110		
TOTAL FOR FINISHES CARRIED TO MAIN SUMMARY					-

ITEM	DESCRIPTION	UNIT	QTY	RATE	SHS. CTS
	CEILING FINISH **Sawn cypress as described:-**				
A	75x50mm cypress; celcured brandering.	LM	623		
B	12mm thick; set to symmetrical pattern v-joint; fixed to brandering with clout headed nails celotex ceiling fixed into brandering.	M2	164		
C	100 x 25mm thick cornice ; concave moulding; plugged	LM	117		
D	Size 600 x 600; comprising sawn cypress 50 x 50mm joist frame all round; 12mm soft board panel fixed on top of frame with clout and other necessary accessories	NO	2		-
	Three coats aluminium primer to crown solo paints r equal and approved to celotex surfaces				-
E	Over 300mm girth	M^2	164		-
F	0-200mm girth	M	117		
	.				
	CARRIED TO COLLECTION				-
	<u>COLLECTION</u> From Page KC/SL/12				-
	From Page above				-
TOTAL FOR FINISHES CARRIED TO MAIN SUMMARY					-

ITEM	DESCRIPTION	PAGE	SHS.	CTS
	SUMMARY.			
1	SUBSTRUCTURES	KC/SL/03		-
2	SUPERSTRUCTURES	KC/SL/04		-
3	WALLING	KC/SL/05		-
4	ROOF CONSTRUCTION, COVERING AND RAINWATER DISPOSAL	KC/SL/07		-
5	DOORS	KC/SL/09		-
6	WINDOWS	KC/SL/11		-
7	FINISHES	KC/SL/13		-
TOTAL CARRIED TO GRAND SUMMARY				-

ELECTRICAL INSTALLATION WORKS-LABORATORY BLOCK

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Supply, install, test and commission the following:				
	LIGHTING POINTS.				
A	Lighting points wired in 3 x 1.5sq mm single core pvc cables drawn in 20mm diameter h/g concealed conduits all accessories included but excluding switches and fittings	18	NO		
	.				-
					-
	SWITCHES.				-
B	5A white moulded plate switches mounted 1350mm above FFL as MK or approved equivalent as follows:				-
					-
	a) 1 gang1 way	4	NO		
	b) 2 gang2 way	2	NO		
	c) 3 gang 3 way	0	NO		
	Lighting fittings.				
C	Complete with energy saving bulbs and tubes of appropriate wattage and colour rendering:				
					-
	a) 36W flood light lamp	6	NO		
	b) 1200mm batten fluorescent fitting type thorn, Philips.	12	NO		
TOTAL CARRIED TO COLLECTION					-

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	POWER POINTS				
	SOCKET OUTLETS				
A	Socket outlet points wired in 3 x 2.5sq.mm PVC insulated single core cu cables drawn in 25mm PVC Conduits as follows:				
	a) Twin switched	24	NO		
B	13A socket outlet plates mounted 300mm above worktop as Crabtree or approved equivalent, flush mounted.				
	a)Twin switched	24	NO		
C	Multiple circuit breakers				
	a) 10A SP MCB	2	NO		
	b) 20 SP MCB	2	NO		
	c) 32A SP MCB	2	NO		
D	**EARTHING TO KPLC APPROVAL**				-
	a) 300 x 300 x 300mm concrete earthing chamber complete with concrete cover.	1	NO		
	b) Earth rod (16mm dia 1800mm long) with Earth-rod-cable clamp and Driving Head for Earth rod.	1	NO		-
	c) $10mm^2$ SC/PVC copper cable earth lead in concealed 20mm dia. HP//PVC conduit from the loop-in box to the earth pit	10	LM		
TOTAL CARRIED TO COLLECTION					-

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	INTERNAL POWER DISTRIBUTION.				
A	6way SPN consumer unit with 100A integral isolator as Crabtree or approved equivalent.	1	NO		
	Sub main cables.				
B	Lay 3x16mm^2 PVC/SWA/PVC Sub main copper cable from loop-in box to CU	15	LM		
C	. Standard galvanized cable loop-in box c/w 30Atwin cutout and HRC fuse and connection to consumer unit with 25mm diameter pvc	1	NO		-
D	16.00mm^2 2-core pvc armored underground cable from meter box/cubicle to the loop in box	30	LM		
TOTAL CARRIED TO COLLECTION					-

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	COLLECTION				
A	BROUGHT FORWARD FROM PAGE EW/1				-
B	BROUGHT FORWARD FROM PAGE EW/2				-
C	BROUGHT FORWARD FROM PAGE EW/3				-
TOTAL FOR ELECTRICAL INSTALLATIONS WORKS CARRRIED TO GRAND SUMMARY					-

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS. CTS
	PROVISIONAL & PRIME COST SUMS **The contractor shall include in his tender the following to be deducted in whole or part as directed by the project manager**				
A	**MECHANICAL WORKS** Allow a provisional sum of Kenya shillings six hundred thousand (600,0000) for water reticulation, plumbing, drainage, fire extinguishers(2No. Of different types as directed) and gas installation & supply works to be deducted in whole or part as directed by	0	LS		600,000.00
B	**CONTINGENCIES** Allow a provisional sum of Kenya shillings one hundred thousand(100,000) for contingencies to be deducted in whole or part as directed by the project manager		LS		100,000.00
C	**FUME CHAMBER** Allow a provisional sum of Kenya shillings fifty thousand(50,000) for fume chamber and associated fittings to be deducted in whole or part as directed by the project manager		LS		50,000.00
D	**PROJECT MANAGEMENT** Allow a prime cost sum of Kenya shillings sixty thousand(60,000) for project supervision		LS		60,000.00
E	**PROJECT MANAGEMENT COMMITTEE** Allow a prime cost sum of Kenya shillings sixty thousand(60,000) for project management committee expenses		LS		60,000.00
TOTAL FOR PROVISIONAL & PRIME COST SUMS TO GRAND SUMMARY					**870,000.00**

GRAND SUMMARY

BILL NO	DESCRIPTION	FOR CONTRACTOR'S USE (KSH)
1	PARTICULAR PRELIMINARIES	
2	GENERAL PRELIMINARIES	
3	SCIENCE LABORATORY FROM PAGE KC/SL/14	-
4	ELECTRICAL WORKS FROM PAGE EW/04	-
5	PROVISIONAL SUMS - PS/1	
	SUB TOTAL	
	ADD 16% VAT	
	ADD 0.03% PPRA LEVY	
GRAND TOTAL CARRIED TO FORM OF TENDER		

Amount in words:……

……

Tenderer's Signature and stamp……

Address: ……

Date: ……

Witness's Name: ……

Signature: ……

Description: ……

Address: ……

Date: …… ……