

PROPOSED 1 STOREY OF A TWIN LAB AND 4 CLASSES AT LUGUSI SEC SCHOOL

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>BILL NO 2</u>				
	<u>SUBSTRUCTURE(ALL PROVISIONAL)</u>				
	<u>EXCAVATION AND EARTHWORKS</u>				
	<u>SITE PREPARATION</u>				
	clearing site vegetation, grubbing up roots and filling up voids left with selected excavated material				
A	Bushes, shrubs ,undergrowth or the like and cart away from site	496	SM		
	<u>EXCAVATION</u>				
B	excavating vegetable soil for preservation, average 200mm thick	433	SM		
C	load up and store on site, later level and spread as directed on site and cart away surplus excavated material	152	CM		
D	<u>Excavating surface to reduce level</u> over 300mm deep	148	CM		
	Excavating trenches: to receive foundations starting from reduce level				
E	Not exceeding 1.50M deep	217	CM		
	Breaking out existing material; extra over all kinds of excavations irrespective of depth				
F	Rock irrespective of class	10	CM		
G	Excavate pit for column bases starting from stripped level n.e 1.5 metres deep	135	CM		
H	Ditto exceeding 1.5M but not exceeding 3M deep	45	CM		
	Carried to collection page 5				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>Disposal</u>				
A	Excavated material;backfilling depositing and compacting in layers maximum 150mm thick	550	CM		
B	Surplus excavated material;removing from site	220	CM		
	DISPOSAL OF WATER				
C	Labour and materials;keeping excavation free from general water	1	ITEM		
	PLANKING AND STRUTTING				
D	Labour and materials ;to uphold sides of excavation generally	1	ITEM		
	FILLING				
	<u>Cutting and filling</u>				
E	Excavate material to make up levels depositing and compacting in layers maximum 150mm thick	70	CM		
	<u>Hardcore</u>				
F	300mm thick depositing and compacting layers maximum 150mm thick in making up levels	199	CM		
	<u>Murram</u>				
G	Blinding surface of fill 50mm thick	396	SM		
	ANTI-TERMITE AND HERBICIDE TREATMENT				
	<u>Applying "termidor 25 EC"Solution or other equal and approvedsprayed evenly</u>				
H	To surface of fill and tops of foundation wall base	432	SM		
	carried to collection page 5				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>CONCRETE WORK</u>				
	<u>INSITU CONCRETE;REINFORCEMENT</u>				
A	Plain mix 1:4:8 in foundation strip blinding 50mm thick	144	SM		
B	Ditto in column bases & retaining wall base	90	SM		
C	Ditto mix 1:3:6 in steps	5	CM		
	<u>Normal :class 20/20mm):vibrated (1:2:4)</u>				
D	foundation strips irrespective of thickness	30	CM		
E	Column Bases	27	CM		
F	Columns generally	10	CM		
G	vibrated floor beds 150mm thick	432	SM		
	<u>REINFORCEMENT</u>				
	<u>Bars :high tensile steel;cold worked;</u>				
	<u>BS 4461 including bends.hooks.tying wire,</u>				
	<u>distance blocks and spacers</u>				
H	8mm diameter bars in any location	600	KG		
I	Ditto 10mm	250	KG		
J	12 diameter;in any location	300	KG		
K	Ditto 16mm	2200	KG		
	<u>Fabric;B.S 4483</u>				
L	Reference A142 mesh 200x200mm weight 2.22kgs per square meter(measured net-no allowance made for laps);including bends,tying wire and distance blocks in any location	432	SM		
	carried to collection page 5				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>SAWN FORMWORK TO INSITU CONCRETE</u>				
A	Edges of floor bed 75 to 150mm wide	150	LM		
B	Sides of foundation strips and steps;horizontal	56	SM		
C	Sides of vertical columns	150	SM		
D	edges of column bases	94	SM		
	<u>WALLING</u>				
E	225mm thick approved local stone,roughly squared; bedding and jointing in cement mortar(1:4);reinforced with hoop iron gauge 500 in every alternate course	430	SM		
	<u>DAMP PROOF MEMBRANE</u>				
	<u>Polythene;500 gauge ,150mm laps,no allowance made for laps</u>				
F	Horizontal 1 no layer (s) over 300mm wide	432	SM		
	<u>PLINTH FINISHES</u>				
	<u>Render,cement and sand (1:4),wood floated</u>				
G	12mm thick 2 no coat work ,to Stone walling or block (m/s),generally external	45	SM		
H	Ditto 20 mm paving in steps finished smooth	45	SM		
	<u>Painting 3 coats black bituminous paint to;</u>				
I	Rendered surface externall	45	SM		
	carried to collection page 5				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
A	<p><u>PAVING SLAB AROUND THE STRUCTURE</u></p> <p>600mm wide cast in situ paving slab laid on murrum blinding in foundation depth 200mm deep</p>	65	SM		
	Carried to collection				
	<p>COLLECTION</p> <p>Brought forward from page 1</p> <p>Brought forward from page 2</p> <p>Brought forward from page 3</p> <p>Brought forward from page 4</p> <p>Brought down from above</p>				
	TOTAL SUBSTRUCTURES CARRIED TO SUMMARY				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>WALLING</u>				
	<u>WALLING:NATURAL STONE WORK OR APPROVED</u>				
	<u>Approved Local stone;squared,fine chisel dressed one side bedding and jointing and recessed pointing one side in cement sand mortar(1:4) as work proceeds</u>				
A	Walls 200mm thick reinforced with hoop iron gauge 500 in every alternate course	285	SM		
B	Ditto 150mm thick for side benches(bricks)	90	SM		
C	Labour and materials in eaves filling 200mm thick 250mm mean height	71	LM		
D	Raking cutting to 150mm thick walling	40	LM		
	<u>DAMP PROOF COURSE</u>				
	<u>B.S 743 type A ,Bitumen hessian base 150mm laps no allowance made for laps</u>				
E	200mm wide,bedded in cement mortar(1:3)	150	LM		
TOTAL GROUND FLOOR WALLING CARRIED TO SUMMARY					

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>REINFORCED CONCRETE FRAME</u>				
	<u>CONCRETE WORK</u>				
	INSITU CONCRETE;REINFORCEMENT				
	<u>Normal:class 20/20mm vibrated</u>				
A	Beams	18	CM		
B	columns	10	CM		
C	Arches and sunbreakers generally	2	CM		
D	150mm thick suspended slab	415	SM		
E	Lab side benches and worktops	50	SM		
	<u>REINFORCEMENT</u>				
	<u>Bars high yield steel:cold worked B.S 4461</u>				
	<u>including bends,hooks,tying wire distance blocks</u>				
	<u>and spacers</u>				
F	8 mm diameter,in any location	1800	KG		
G	10mm ditto	2200	KG		
H	12mm ditto	3000	KG		
I	16mm ditto	1800	KG		
J	20mm ditto	2200	KG		
	Carried to collection page 9				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>SAWN FORMWORK TO INSITU CONCRETE</u>				
A	Horizontal soffites of suspended slab	415	SM		
B	column sides,vertical or battering generally	200	SM		
C	Sides and soffittes of beams	250	SM		
D	sides and soffitees of arches and sun breakers general	15	SM		
E	Edges of floor bed 75 to 150mm wide	130	LM		
	<u>STAIRS & BALUSTRADING(TWO NUMBER)</u>				
	<u>Vibrated reinforcement</u> <u>class 20/20mm) aggregate as described</u>				
F	Steps and risers	3	CM		
G	150mm thick horizontal suspended landing	6	SM		
H	Slopping waist 175mm thick	10	SM		
	<u>Sawn formwork as described to horizontal soffites of suspended</u>				
I	Landing	6	SM		
J	Slopping soffites of stair waist	10	SM		
K	Edges of suspended landing 75-150mm high	9	LM		
L	Slopping edge of staircase open string cut to profile of treads and risers 300mm maximum width	9	LM		
F	Edges of risers 75-150mm high	60	LM		
	Carried to collection page 9				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>BALUSTRADES</u>				
A	30X30X3mm thick square hollow section balusters welded to handrail on one side the other built in concrete including making good in cement and sand grout 300mm centres	150	LM		
B	Make holes in reinforced concrete 30x30mm balusters	36	NO		
C	30X30X3mm thick square hollow section Mild railing welded to 30x30x3mm thick baluster on both ends at 300mm centres	100	LM		
D	100X25mm thick wrot hardwood handrail moulded and grooved and screwed to balusters and ends in concrete	32	LM		
E	Extra over railing for grouting ends into concrete	17	NO		
F	Extra over Handrails for wreath	17	NO		
	<u>PAINTING AND DECORATING</u>				
	<u>ONE UNDERCOAT TWO COATS OIL PAINTFULLGLOSS FINISH TO CROWN PAINTS OR EQUAL AND APPROVED</u>				
G	Metal surfaces 100 to 200 mm girth	250	LM		
	<u>ONE UNDERCOAT TWO COATS POLYURETHANE VARNISH</u>				
H	Timber surfaces 100-200mm girth	32	LM		
	Total Carried to collection				
	<u>COLLECTION</u>				
	Brought forward from page 7				
	Brought forward from page 8				
	Brought down from above				
	TOTAL FOR REINFORCED CONCRETE FRAME CARRIED TO SUMMARY				

FIRST FLOOR

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>WALLING</u>				
	<u>WALLING:NATURAL STONE WORK OR APPROVED</u>				
	<u>Approved Local stone;squared,fine chisel dressed one side bedding and jointing and recessed pointing one side in cement sand mortar(1:4) as work proceeds</u>				
A	Walls 200mm thick reinforced with hoop iron gauge 500 in every alternate course	285	SM		
B	Labour and materials in eaves filling 200mm thick 250mm mean height	71	LM		
C	Raking cutting to 150mm thick walling	40	LM		
	<u>DAMP PROOF COURSE</u>				
	<u>B.S 743 type A ,Bitumen hessian base 150mm laps no allowance made for laps</u>				
D	200mm wide,bedded in cement mortar(1:3)	143	LM		
E	Form or leave 250X250mm opening in 200mm walling	30	NO		
F	225mmX225mm precast concrete permanent vent mosquito gauzed laid in cement sand 1:3 mortar	60	NO		
	<u>GALVANISED STEEL PIPES (BLACK PIPE)</u>				
G	75mm thick galvanised steel pipe to reinforce the verandah/roof 3000mm long complete with 150x150x3 mm ms plate and 50x50x100mm deep u plate	50	LM		
	TOTAL F.F WALLING CARRIED TO SUMMARY				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>ROOFING</u>				
	ROOF COVERING				
A	Gauge 30 GCI Sheets fixed to purlins.galsheet resincoat blue in colour box profile	535	SM		
B	Gauge 30 G.I Ridge cap	43	LM		
	<u>CARPENTRY</u>				
	<u>Sawn cypress grade II</u>				
	<u>Well seasoned and treated timber</u>				
C	100X50mm wall plate bedded in cement sand (1:3) mortar bolted to concrete with and including 16mm diameter bolts cast into concrete at 1000mm centers	100	LM		
D	150X50mm tie beams spaced @1200mm c/c	420	LM		
E	100X50mm rafters	500	LM		
F	100X50mm ties and struts	450	LM		
G	75X50 mm purlins	720	LM		
	<u>BOARDING</u>				
	<u>Wrought cypress,prime grade,pressure impregnated</u>				
H	200X25mm thick fascia board	145	LM		
	Carried to collection page 12				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>RAINWATER INSTALLATIONS</u>				
	<u>Gutterwork,28 gauge galvanised mild steel box gutter and fittings;purpose made</u>				
A	75X100mm gutter overlapped joints in the running lenghs,fixing with metal brackets at 1000mm center	85	LM		
B	Extra over gutters for100mm pipe outlet	12	NO		
C	Ditto stopped end	12	NO		
	<u>Rainwater pipework,2upvc pressure pipes and fittings,purpose made</u>				
D	100mm diameter pipes connections in the running lengh,fixing with metal holderbatsat 1000mm centers to backgrounds requiring plugging	150	LM		
E	Extra over pipework for shoes	12	NO		
F	Ditto swanneck	12	NO		
	<u>PAINTING AND DECORATING</u>				
	<u>ONE UNDERCOAT TWO COATS OIL PAINT FULL GLOSS FINISH TO CROWN PAINTS OR EQUAL AND APPROVED</u>				
G	General timber board surfaces	145	LM		
	Total carried to collection				
	COLLECTION				
	Brought forward from page 11				
	Brought from above				
	TOTAL ROOFING CARRIED TO SUMMARY				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>WINDOWS</u>				
	<u>Precast concrete,normal class 20/20mm vibrated</u>				
A	Sills 250 X 75 mm thick,once weathered, once throated ,reinforced as necessary for handling,bedding,jointing and pointing in cement mortar(1:4)	75	LM		
	<u>METAL WORK</u>				
	<u>PURPOSE MADE UNITS</u>				
	<u>Casement window in standard metal casement sections ,permanet ventilators comprising T-bar gauze and metal hood to full width of window one coat primer by manufacturer complete with all necessary ironmongery ,steel for glazing with putty lugs to two jams ,cutting and pinning to concrete or blockwork ,fixing to head and sill with screws and plugging.all windows should have strong grills</u>				
B	Overall size1500 X 1200mm high	43	NO		
	<u>Windows cont'd</u>				
C	Welded metal grill burglar proofing in 20mmx 20mmx1.5mm thick SHS bars with one coat primer including welding to metal in approved pattern	13	SM		
	<u>GLAZING</u>				
D	3mm thick clear sheet glass to metal with putty 1.00 to 1.50 square meters	77	SM		
	<u>PAINTING AND DECORATING</u>				
	<u>ONE UNDERCOAT TWO COATS OIL PAINTFULL GLOSS FINISH TO CROWN PAINTS OR EQUAL AND APPROVED</u>				
E	Metal window surfaces over 300mm girth internal and exte	154	SM		
F	Concrete surfaces 200-300 mm girth external	75	LM		
TOTAL WINDOWS CARRIED TO SUMMARY					

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>STEEL DOORS</u>				
	<u>standars steel door complete with all necessary ironmongery,permanent vent with mosquito gauze& sheet hood assembled and fixed to opening includng cutting and pinning lugs to concrte or sand mortar (1:4) all primed with grey oxide before fixing</u>				
A	1200X2400 mm steel casement door in two equal leaves comprising 50X50X50X3mm fixed frame;16G mild steel plate built into panels complete with 5-lever mortice lock 3NO tower bolt	5	NO		
B	Ditto 900x2400mm high	4	NO		
	<u>GLAZING</u>				
C	3mm thick clear sheet glass to metal with putty 1.00 to 1.50 square meters	10	SM		
	<u>TIMBER DOOR</u>				
D	single core door 45mm thick 900X2400mm high, flush door	6	NO		
	<u>PAINTING AND DECORATING</u>				
	<u>ONE UNDERCOAT TWO COATS OIL PAINTFULL GLOSS FINISH TO CROWN PAINTS OR EQUAL AND APPROVED</u>				
E	Metal surfaces over 300mm girth external/internal	46	SM		
F	Ditto 0- 100mm girth	54	LM		
G	timber surfaces over 300mm girth external/internal	24	SM		
H	Ditto 0-100mm girth	34	LM		
	Carried to collection page 15				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	IRONMONGERY				
	<u>Supply and fix the following</u>				
A	steel butt hinges 100mm	9	PRS		
B	Three lever mortice lock catalogue No. 2237 complete with set lever handle furniture Indicator bolt	6	NO		
C	225 X 25 x 3 mm thick door fixing cramps one end bent and twice screwed to frame and the other end	28	NO		
D	Door stops No 8400	12	NO		
	JOINERY				
	<u>Frames:wrot mahogany or equall and approved</u>				
E	150X50mm rebated	34	LM		
F	ditto quadrant	34	LM		
G	45x25mm architrave	34	LM		
	Total carried to collection				
	COLLECTION				
	Brought forward from page 14				
	Brought from above				
	TOTALDOORS CARRIED TO SUMMARY				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>FINISHES</u>				
	<u>FLOOR,WALL AND CEILING FINISHES</u>				
	<u>FLOORS</u>				
A	24mm thick ,cement sand (1:3) Screed wood floated to receive terrazzo paving m/s	800	SM		
B	15mm thick polished terrazzo floor finishes	800	SM		
C	25x3mm plastic dividing strips laid in an approved pattern	1300	LM		
D	15mm thick 100mm high polished terrazzo skirting	470	LM		
	<u>PLASTERWORKS</u>				
E	12mm thick ,2 no coatwork plaster 1:2:6 to Dressed stones (m/s) generally,internal	630	SM		
F	Ditto 15mm thick external(key pointing)	570	SM		
G	15mm thick 2 no coatwork cement sand (1:4) rendered reveals jambs and openings	40	SM		
H	Ditto soffitt of slab	405	SM		
I	Ditto beams	45	SM		
J	12mm thick backing to receive tiles(worktops)	107	SM		
	<u>SUPPLY AND FIX</u>				
K	16mm thick white glazed ceramic tiles on CS backing (m/s) in worktops	107	SM		
	Total Carried to collection				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>CEILING</u>				
A	50X75mm moulded cornice	245	LM		
B	50x50mm & 50X 75mm brandering	1650	LM		
C	12mm thick Soft board "celotex" ceiling fixing with nails heads punched and puttied butt ve joints set to pattern to and including timber brandering in sawn cypress celcured sizes 50x50mm and 75*50mm both ways	408	SM		
D	600X600mm door trap	3	NO		
	<u>PAINTING AND DECORATING</u>				
	<u>THREE COATS PVA BASED EMULSION PAINT TO CROWN PAINTS OR EQUALL AND APPROVED</u>				
E	Plastered walls surfaces over 300mm girth internal	630	SM		
F	Ditto external	570	SM		
G	Ditto to reveals jambs and openings	40	SM		
H	Ceilling board surfaces	408	SM		
I	Cornices	245	LM		
J	Soffitte of slab	405	SM		
K	Ditto beams	45	SM		
	Total Carried to collection				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>STAIRCASE FINISHES</u> <u>Terrazo paving on screed beds measured separtely</u> <u>with polished surfaces</u>				
A	20mm thick landing	9	SM		
B	ditto treads 180mm wide	66	LM		
C	ditto on risers 150mm high	72	LM		
D	100x20mm thick skirting	39	LM		
E	extra over treads for 25x1'2 mm carborrhundum non slips inserts <u>cement sand screed(1:4)screed as described:</u>	56	LM		
F	24mm thick ,cement sand (1:3) Screed wood floated to receive terrazzo paving m/s		SM		
G	Ditto to treads 180mm wide	66	LM		
H	Ditto to risers 150mm high <u>Gauged plaster as described:</u>	72	LM		
I	12mm thick on horizontal siffittes of landing	8	SM		
J	Ditto on sloping soffittes of stairs	12	SM		
K	Ditto to edges of staircases string	19	SM		
L	Prepare and apply 3 coats plastic emulsion paint on plastered surfaces internally	40	SM		
	Total carried to collection				
	COLLECTION Brought forward from page 16 Brought forward from page 17 Brought forward from above				
	TOTAL FINISHES CARRIED TO SUMMARY				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>RAMP CONSTRUCTION</u>				
	<u>EXCAVATION AND EARTHWORKS</u>				
A	excavating vegetable soil for preservation, average 200mm thick	36	SM		
B	load up and store on site, later level and spread as directed on site and cartaway surplus excavated material	20	CM		
	Excavating trenches: to receive foundations starting from reduce level				
C	Excavate pit for column bases starting from stripped level n.e 1.5 metres deep	40	CM		
D	Ditto exceeding 1.5M but not exceeding 3M deep	40	CM		
	<u>REINFORCEMENT</u>				
	<u>Bars :high tensile steel:cold worked;</u>				
	<u>BS 4461 including bends, hooks, tying wire,</u>				
	<u>distance blocks and spacers</u>				
E	8mm diameter bars in any location	0	KG		
F	Ditto 10mm	0	KG		
G	Ditto 12mm	900	KG		
	<u>CONCRETE WORKS</u>				
	<u>Normal: class 20/20mm vibrated</u>				
H	Beams	1.5	CM		
I	columns	2	CM		
J	150-175mm thick ramp	60	SM		
	<u>SAWN FORMWORK TO INSITU CONCRETE</u>				
K	Edges of floor bed 75 to 150mm wide	60	LM		
L	Ditto soffittes	60	SM		
	TOTAL RAMP CARRIED TO SUMMARY				

ITEM	DESCRIPTION	QTY	AMOUNT	
	<u>SUMMARY OF ELEMENTS</u>		Labour	full contract
1	SUBSTRUCTURE			
2	GROUND FLOOR WALLING			
3	REINFORCED CONCRETE FRAME			
4	FIRST FLOOR WALLING			
4	ROOFING			
5	WINDOWS			
6	DOORS			
7	FINISHES			
8	RAMP			
TOTAL FOR BUILDING WORKS CARRIED TO GRAND SUMMARY				

MECHANICAL WORKS

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>BILL NO.1BIOLOGY/CHEMISTRY</u>				
	<u>LABORATORY</u>				
	<u>LABORATORY SINKS</u>				
A	Supply,deliver and install polypropylene laboratory sinks as vulcathene black injection moulded polyprolyne sink with self drainage base and an outlet to accept the waste described below as cat no.602 complete with: vultex labline bench mounted i-way outlet fitting with inlet for supply and side valve havng swivel nozzle and spout. "vulcathene waste,plug back,nut,butyl,rubber,gasket grating and chain as cat.504 provision c/w diameter valcathene bottle trap	30	NO		
B	20mm diameter 650mm high laboratory sink tap as swan neck in valcathene or equal and approved equivalent	30	No		
	<u>FUME CUPBOARD</u>				
C	Supply,deliver and install fume cupboard with sliding plexiglass face with a 12"work opening running full width of cabinet with cabinet,conter balance weight at the back base cabinet with sliding doors,an 8" diameter excaust coller connections,over head instrument control panel and shall incorporate a vulcathene sink,l.p gas outlet and a non corrosive bulk head light fume cupboard to be lined with epoxy coated aluminium on working surface and sides to be as nimrod F3000 or equal and approved equivalent.diamensions (1200wx1000dx2400h)	1	No		
	<u>Fume cupboard extract fan</u>				
D	supply,deliver and install a fume cupboard extract fan capble of 0.4m3 /s against a system pressure drop of 50n/m2 casing of fan to be in rigid pvc, impellers molded in phonelic resin and motor protected by sealing coat of polyurethane compound fan to be complete with motor starter,electrical control panel fixed near the fume cupboard with on/off and trip and manual override in the plant room,flexible c connections and anti-vibration mountings.	1	No		
TOTAL CARRIED FORWARD TO THE COLLECTION PAGE 5					

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	fume cupboard extra for duct work				
A	install 200mm diameter upvc duct work for the fume cupboard above				
B	200mm diameter upvc pipework class "D"	12	Lm		
C	holder bats for 200mm diameter pipework	2	No		
D	200mm diameter bends	2	No		
E	200mm diameter ventilating cowl	1	No		
F	weathering apron for 200mm dia pipe	1	No		
G	neoprene fan connections	1	NO		
	supports antivibration mounting for fan and any other necessary items	1	Item		
	water supply				
J	controll valve as vultex labline ref.no v12105 bench mounting outlet complete with back nut,spout as vultex labline ref no v12107/D	1	No		
K	allow for 1000mm long 12mm diameter copper tube and nuts	1	No		
	gas supply				
L	controll valve as vultex labline ref.no v12109	1	No		
M	back nut and nozzle as vultex labline ref no v12110D	1	No		
N	allow for 1000mm long 12mm diameter copper tube and nuts	1	No		
	drainage				
o	1 1/4" diameter waste complete with intergral grating, removable chained plug and back nut as vulcathene ref no.504	1	No		
TOTAL CARRIED FORWARD TO THE COLLECTION PAGE 5					

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Laboratory L.p Gas Installation				
	L.P Gas supply				
A	25mm diameter GMS class B pipe	24	LM		
B	50mm diameter GMS class B pipe for sleeve	12	LM		
C	50mm diameter GMS bend	5	NO		
D	25mm diameter ditto	5	NO		
E	25mm diameter tee	5	NO		
F	25x15mm dia reducer	4	NO		
G	l.p gas Pressure gauge	1	NO		
	copper tube				
H	6/8mm diameter solid drawn heavy duty copper tubes	36	NO		
I	8/10mm ditto	30	NO		
J	10/12mm ditto	30	NO		
K	12mm ditto	24	NO		
	extra over copper tubes				
L	10mm dia copper socket/nipple	20	NO		
M	10/8 dia adaptors	10	NO		
N	10x8mm copper jointing regulator	12	NO		
O	15mm dia first stage gas pressure regulator rego2403 V.9complete with connections and brackets for 1 no gas cylinder tank	1	NO		
P	15m dia second stage gas pressure regulator as rego 2503B for supply:	1	NO		
	Change over valves				
q	12mm diameter L.P heavy gauge change over valve gas valves	1	NO		
R	6/8mm diameter approved quarter turn,lever operated ball valve to BS 5154 and joints to copper gas outlet	4	NO		
S	Low pressure L.P gas outlet with a safety drop lever to prevent accidental "turn on" 2CFM at 2p.s.i, 4mm diameter outlet and 1/4" BSP tail with back nut the outlet shall be as vultex labline 2 way bench mounted with 2 cocks spaced at 900angle model no VL2601/D	14	NO		
T	10x8mm dia coupler	10	NO		
U	10x6mm copper tees c/w nuts	10	NO		
V	10x8mm ditto	10	NO		
W	10x8mm copper flare nuts	10	NO		
X	10x6mm ditto	10	NO		
	TOTAL CARRIED FORWARD TO THE COLLECTION PAGE 5				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	burners and accessories				
A	install standard school two way 180 degrees bench gas tap push and operation with fixed nozzle as method BM 405-1 or approved equivalent complete with isolating valve clips , rubber hose tubes,etc including all accessories and attachments	12	No		
B	ditto but 90degrees	3	No		
	Valves cocks and controls				
C	15mm diameter liquified petroleum gas gauge isolating Valves	1	No		
D	22mm ditto	1	No		
E	25mm ditto	1	No		
F	32mm dia gas cock				
	Change over valves				
G	12mm diameter L.P heavy gauge change over valve	2	No		
H	allow for builders work for the above	item	Item		
TOTAL CARRIED FORWARD TO THE COLLECTION PAGE 5					

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	COLLECTION PAGE FOR BIO/CHEM LABORATORY				
A	Total carried forward from page 1				
B	Total carried forward from page 2				
C	Total carried forward from page 3				
D	Total carried forward from page 4				
TOTAL CARRIED FORWARD TO THE COLLECTION PAGE 17					

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	PHYSICS LABORATORY				
A	Supply,deliver and install polypropylene laboratory sinks as vulcathene black injection moulded polypropylene sink with self drainage base and an outlet to accept the waste described below as cat no.602 complete with: vultex labline bench mounted i-way outlet fitting with inlet for supply and side valve havng swivel nozzle and spout. "vulcathene waste,plug back,nut,butyl,rubber,gasket grating and chain as cat.504 provision c/w diameter valcathene bottle trap	12	No		
B	20mm diameter 650mm high laboratory sink tap as swan neck in valcathene or equal and approved equivalent	1	No		
	Water supply				
C	Control valve as vultex labline ref.no VL2105 bench mounting outlet complete with back nut spout as vultex labline Ref.no VL2107/D	1	No		
D	Allow for 1000mm long 12mm diameter copper tube and nuts	1	No		
	Gas supply				
E	Control valve as vultex labline ref.no VL2109 back nut and nozzles as vultex labline ref no VL2110D	1	No		
F	Allow for 1000mm long 12mm diameter copper tube and nuts	1	No		
	Drainage				
G	1 1/4" diameter waste complete with intergral grating,removable chained plug and buck nut as vulcathene Ref no .504	1	No		
TOTAL CARRIED FORWARD TO THE COLLECTION PAGE 9					

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Laboratory L.P GAS Installation				
	L.P gas supply				
A	25mm diameter GMS class B pipe	24	Lm		
B	50mm diameter GMS class B pipe for sleeve	12	Lm		
C	50mm diameter GMS bend	5	No		
D	25mm diameter ditto	5	No		
E	25mm diameter tee	5	No		
F	25x15mm dia reducer	4	No		
G	l.p gas Pressure gauge	1	No		
	copper tube				
H	6/8mm diameter solid drawn heavy duty copper tubes	36	No		
I	8/10mm ditto	30	No		
J	10/12mm ditto	30	No		
K	12mm ditto	24	No		
	extra over copper tubes				
L	10mm dia copper socket/nipple	20	No		
M	10/8 dia adaptors	10	No		
N	10x8mm copper jointing	12	No		
	regulator				
O	15mm dia first stage gas pressure regulator rego2403 V.9complete with connections and brackets for 1 no gas cylinder tank	1	No		
P	15m dia second stage gas pressure regulator as rego 2503B for supply:	1	No		
	Change over valves				
Q	12mm diameter L.P heavy gauge change over valve	1	No		
	gas valves				
R	6/8mm diameter approved quarter turn,lever operated ball valve to BS 5154 and joints to copper gas outlet	4	No		
S	Low pressure L.P gas outlet with a safety drop lever to prevent accidental "turn on" 2CFM at 2p.s.i, 4mm diameter outlet and 1/4" BSP tail with back nut the outlet shall be as vultex labline 2 way bench mounted with 2 cocks spaced at 900angle model no VL2601/D	14	No		
T	10x8mm dia coupler	10	No		
U	10x6mm copper tees c/w nuts	10	No		
V	10x8mm ditto	10	No		
W	10x8mm copper flare nuts	10	No		
X	10x6mm ditto	10	No		
TOTAL CARRIED FORWARD TO THE COLLECTION PAGE 9					

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Burners and Accessories				
A	install standard school two way 180 degrees bench gas tap push and operation with fixed nozzle as method BM 405-1 or approved equivalent complete with isolating valve clips , rubber hose tubes,etc including all accessories and attachments	12	No		
B	ditto but 90degrees	3	No		
	Valves cocks and controls				
C	15mm diameter liquified petroleum gas gauge isolating Valves	1	No		
D	22mm ditto	1	No		
E	25mm ditto	1	No		
F	32mm dia gas cock	1	No		
	Change over valves				
G	12mm diameter L.P heavy gauge change over valve	2	No		
H	allow for builders work for the above	Item	Item		
TOTAL CARRIED FORWARD TO THE COLLECTION PAGE 9					

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Bill no.2				
	INTERNAL PLUMBING WORKS				
A	Supply,deliver and install pipes,tubing and fittings as descibed and shown on the drawings The pipes shall be PN 25PPR PIPES Where exposed to adverse whether condition and all conforming to the current european standards for PPR installations and to the engineers approval,[ipe jointing shall beby polyfusion or use of electric coupling,rates must allow for all metal/plastic threaded adaptors where required for the connection of sanitary fixtures,valves,sockets,sliding, and fixed joints , support race ways,isolating sheaths,elastic materials ,expansion arms and bends,crossovers couplings,clippings,connectors,joints etc as required in the running lethghs of pipe work and also where necessary ,for pipe fixing clips ,holder bats plugged and screwed for the proper and satisfactory function of the system.the pipes will be pressure tested before the plastering of the wall as per the manufacturers recommended testing pressures.				
	PPR PIPES				
B	20mm diameter pipe work	60	Lm		
C	25mm ditto	30	Lm		
D	32mm ditto	30	Lm		
E	40mm ditto	0	Lm		
F	50mm ditto	0	Lm		
	Bends				
G	20mm diameter bend	40	No		
H	25mm ditto	40	No		
I	32mm ditto	20	No		
J	40mm ditto	0	No		
K	50mm ditto	0	No		
TOTAL CARRIED FORWARD TO THE COLLECTION PAGE 13					

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Tees				
A	25mm ditto	20	No		
B	32mm ditto	10	No		
C	40mm ditto	0	No		
D	50mm ditto	0	No		
	Reducers				
E	25x20mmdiameter reducer	20	No		
F	32x20mm ditto	10	No		
G	32x25mm ditto	10	No		
H	40x20mm ditto	12	No		
I	40x25mm ditto	12	No		
J	50x32mm ditto	0	No		
K	50x40mm ditto	0	No		
	Unions				
L	20mm diameter pipe unions	40	No		
M	25mm ditto	30	No		
N	32mm ditto	15	No		
O	40mm ditto	0	No		
P	50mm ditto	0	No		
	Thread fittings				
Q	20mm diameter male/female) 90 degree bend/elbow	10	No		
	plugs				
R	40mm diameter threaded plug	0	No		
S	50mm ditto	0	No		
TOTAL CARRIED FORWARD TO COLLECTION PAGE 13					

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Roof water tanks				
A	2300litres capacity Upvc cylindrical vertical water storage tanks complete with cover and having screwed connections for the inlet,outlets, overflow pipes and drain pipes and any othe necessary item for its proper functioning .The tank shall be mounted according to the structural engineers details it shall be ROTOmodel or approved equivalent.	1	No		
	Valves				
B	25mm diameter approved medium pressure screw down full way non-risingstem wedge gate valve to BS 5154PN for series B rating ,with round male Threaded transition fittings.The gate valve to be as As PEGLER or approved equivalent .	2	No		
C	32mm ditto	1	No		
D	40mm ditto	1	No		
E	50mm ditto	1	No		
F	25mm diameter non-return valve	2	No		
G	32mm ditto	0			
H	25mm diameter medium pressure ball valve	2	No		
I	32mm ditto	0	No		
J	Allow for setting to work ,testing and commisioning of internal plumbing system				
K	allow for builders work for plumbing system.	1	Item		
		1	Item		
TOTAL CARRIED FORWARD TO COLLECTION PAE 13					

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>COLLECTION PAGE FOR BILL NO.2</u> <u>INTERNAL PLUMBING</u>				
A	Total carried forward from page 10				
B	Total carried forward from page 11				
C	Total carried forward from page 12				
TOTAL CARRIED FORWARD TO COLLECTION PAGE 17					

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	BILL NO 3				
	INTERNAL DRAINAGE				
A	supply,deliver and install the following in pvc soil and waste system to BS4515 and 5255 with fittings fixed to manufacturers printed instructions and BS 5572(1978) All PVC branches,tees,reducing tees,reducers etc are to be formed strictly in accordance with the manufacturers printed instructions and tenders must allow for all the various sizes of connectors adaptors, socket reducers,holder bats,clips etc required for the satisfactory functioning of the system				
B	100mm diameter UPVC golden brown soil pipe	48	Lm		
C	100mm diameter UPVC grey soil and waste pipe	48	Lm		
D	40mm diameter grey waste pipe	42	Lm		
E	32mm ditto	42	Lm		
	<u>Extra over UPVC pipework for the following</u>				
G	100mm diameter sweep bend	4	No		
H	100mm diameter gully piece complete with grating	2	No		
I	100x40mm diameter boss connector	8	No		
	Excavation for pipes				
J	Allow for excavation in soil/murram for drainage pipes not exceeding 1500mm deep and average 900mm deep ,part return in fill , ram and surplus cart away.	40	Lm		
TOTAL CARRIED FORWARD TO COLLECTION PAGE 16					

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
A	100x40mm diameter boss connector	4	No		
B	50mm diameter trapped floor gully complete with floor gully inlet	8	No		
C	40x32mm diameter socket reducer	10	No		
D	40mm diameter sweep bend	15	No		
E	32mm ditto	10	No		
F	40mm diameter sweep tee	15	No		
G	32 mm ditto	10	No		
H	40mm diameter access plug	10	No		
I	32mm ditto	10	No		
	<u>Inspection chambers</u>				
J	Allow for excavation ,concreting to class 1:3:6, walling 150mm thick solid concrete block walls with 1:3 mortar and plastering to 1:2 ,medium duty rectangular cover and frame to specification for man hole not exceeding 1500mm depth.	7	No		
	<u>Gully traps</u>				
K	ditto but 100mm diameter gully trap complete with golden brown plastic seal pipe,cast aluminium grating chamber and concrete cover	6	No		
L	allow for setting to work,testing and commisioning of the internal drainage system	1	Item		
M	allow for builders for the above works.	1	Item		
TOTAL CARRIED FORWARD TO COLLECTION PAGE 16					

ITEM	DESCRIPTION	AMOUNT (KSH)
A	Total for chemistry/Biology laboratory	
B	Total for physics	
C	Total for Plumbing	
D	Total for Drainage	
TOTAL FOR MECHANICAL WORKS		

PC AND PROVISIONAL SUMS

ITEM	DESCRIPTION	KSH
A	Allow a provisional sum of kenya shillings five hundred thousand only for purchase of materials and fabrication of 95 metallic lab stools 400x400 tops.14metallic phisics lab tables with block board veneer tops or equall and approved material.provide for 2 office desks with ablock board or equall and approved top with 4 cushioned chairs.	500,000
B	Allow a Provisional sum of Kshs.250,000 Two fifty thousand only)for Technical supervision (ELECTRICAL ENGINEER, PUBLIC HEALTH OFFICER,PUBLIC WORKS ENGINEER,CLERK OF WORKS)	250,000.00
C	Allow a Provisional sum of ksh. 400,000 (four hundred thousand only) for administration(PMC)	400,000.00
D	Allow a sum of kenya shillings fifty thousand only for construction of soak pit to engineers details	50,000.00
E	Allow a Provisional sum of kshs 6,000 (Six thousand only) for project approvals by public health	6,000.00
F	Allow a Provisional sum of Ten thousand(10,000/=) for erection of architectural sign board PP/3	10,000.00
G	Allow a Provisional sum of Twenty thousand(20,000/=) for erection of metallic sign board PP/3	20,000.00
H	Allow a Provisional sum of Ten thousand(10,000/=) for plague and branding PP/4	10,000.00
TOTAL FOR PROVISIONAL SUMS CARRIED TO GRAND SUMMARY.....KSH		1,246,000

ELECTRICAL WORKS

NO	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1	Supply install, test and commission the following Lighting points wired in 1.5mm ² single core PVC insulated copper cables drawn in 20mm concealed H/G PVC conduit and all accessories excluding switches for:				
(a)	One way switching	15	NO		
(b)	Two way switching	3	NO		
2	Lighting fitting complete with tubes, bulbs and all accessories as follows:-				
(a)	1200mmx36w(4Ft) florescent fittings C/W tubes	10	No		
(b)	Ditto 900mmx36w(3ft)	5	NO		
(c)	semi-recessed weatherproof Bulkhead fitting complete with vandal proof enclosure as THORN or approved equivalent	4	NO		
3	10A ivory type plate switch as M.K range or approved equivalent:-				
(a)	1 gang 1 way	3	NO		
(b)	1 gang 2 way weatherproof	2	NO		
4	13A Ring mains circuit power points comprising switched socket outlet wired in 2.5mm ² single core PVC insulated copper cables drawn in concealed 25mm H/G PVC conduit and all accessories being				
(a)	Single	6	NO		
(b)	Twin	4	NO		
5	13A switched socket outlet C/W pilot as CRABTEE and all accessories being.				
(a)	13A Socket outlets twin	10	NO		
6	PME comprising 25mm Ø X1500mm long steel cored copper clad earth electrode 6.0mm ² single core earth lead,earth clamp and all accessories including an inspection pit with removable concrete cover all to the requirments of KPLC	1	LOT		
7	6 way consumers control unit complete with 60A intergral insualtor as CRABTEE or approved equivalent	1	No		
8	MCB's to be installed in the above consumer unit as follows:				
(a)	5 A SP MCB	2	NO		
(b)	30 A SP MCB	1	NO		
(c)	single blanking plates	3	NO		
8	2x6.0mm ² + 1x4.0mm ² single core PVCI Copper submains cable drawn in 32mm Ø concealed H/G PVC conduit from meter box to consumer unit	22	M		
Total carried to collection page 22					

NO	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
9	16SWG Surface mounded and spray painted meter board of sufficient capacity to accommodate 1No single phase powerpower metre 1No cut-out 60A-80A main switch (KMBG) earth bonding and all accessories	1	LOT		
10	Allow for provisional sum for KPLC meter deposit and service line connection.	1	NO		
11	trenching, laying, tiling with concrete HATARI' cable tiles and backfilling in soft ground	30	M		
12	standard cable markers	10	NO		
13	150mm diameter manual fire alarm bell as MENVIER	1	NO		
	<u>Air termination</u>				
14	600mm long X 15mm diameter multiple point copper air terminal with spikes as furse cat no RA 600 mounted on bracket	3	NO		
15	copper air terminal base as furse cat no. SD 105	5	NO		
16	copper junction clamps for tape	5	NO		
	Total from above				
	Brought forward from page 20				
	Brought forward from above				
	TOTAL ELECTRICAL WORKS				

Total amount in words:- **Kenya shillings** :

Tenderes company name.....

VAT PIN CERTIFICATE NO.....

SIGNATURE.....

<u>MAIN PRICES SUMMARY PAGE</u>		AMOUNT (KSH)	
NO	DESCRIPTION		full contract
A	BILL NO 1. PRELIMINARIES PP/5		
B	BILL NO 2. MEASURED WORKS PG/20		
C	BILL NO 3 .MECHANICAL WORKS MW/17		
D	BILL NO 4. PRIME COST& WORKS PC/1 PROVISIONAL SUMS		
E	BILL NO 5. ELECTRICAL WORKS PG 22		
TOTAL AMOUNT CARRIED TO FORM OF TENDER VAT INCLUSIVE			

The tender sum is in the amount of :.....
.....

contractors name.....

Address.....

Date.....

Signature.....

company stamp.....

Witness name.....

Address.....

Date.....

