

BILL OF QUANTITY FOR CONSTRUCTION OF INZONE EDUCATIONAL CENTER

Notes: The Contractor is reminded to visit the site before filling the tender to ascertain the extent of the conditions of site. All quantified works in the tender are provisional and payment shall be made based on the actual work executed at the site and agreed upon by all parties. The contractor is advised to constantly seek the UNHCR Engineer instructions at each phase of the work and if required, before filling the tender. All unit rate shall be deemed to include all elements of supplying and construction work that is labour and other overheads eg security, profit and overheads, cost of materials, wastages, transport etc.

Construction of 2 Offices

BILL NO 1 PRELIMINARY WORKS

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSH)	AMOUNT (KSH)
<i>The contractor shall provide, erect and maintain all safety measures requirements according to specifications, including protecting the scaffolding with special cloth or fabric, and work plan for all items should be submitted before starting any activity. The contractor is reminded to supply crushed machine ballast for any concrete works at the site.</i>					
1.1	Provision for building site office and temporary store as directed by site Engineer on site. Cost to include erecting corrugated iron sheet along the site compound to act as hoarding and any cost to be incurred in preparation	item	1.00		-
1.2	Clear the site to remove trees and top soil to an average depth of 150mm. The work includes mobilization, site clearing the scrubs, removal any tree and roots,	item	1.00		-
Total Bill No.1 (Carried to Summary)					-

BILL NO 2 EXCAVATION AND EARTHWORKS

2.1	Excavate starting from stripped level a 600mm wide foundation trench to an average depth of 1500mm (1.5m) in normal soil to be approved by site Engineer	cum	8.28		-
2.2	Excavate starting from stripped level a column base foundation as per foundation layout to an average depth of 1500mm (1.5m) in normal soil to be approved by site Engineer	cum	12.96		-
2.3	Supply all materials and cast 50mm concrete for blinding concrete ratio 1:4:8	cum	1.00		-
2.4	Return fill in and ram excavated material around foundations as directed by Engineer on site	cum	7.88		-
2.5	Cart-away surplus excavated materials to where directed by Engineer	cum	13.36		-
2.6	Allow for keeping excavations free from underground, or storm water	item	1.00		-
Total Bill No.2 (Carried to Summary)					-

BILL NO 3 SUBSTRUCTURE WORKS

The following items include supply and cast of concrete, shuttering, tie rods, spacers, supply and placing of concrete, vibrating, steel reinforcement shaping and fixing, curing, steel reinforcement, and supply and cast the required concrete, using mechanical vibrators, curing, testing steel reinforcement and concrete, and all other requirements and workmanship as per specifications, drawings and engineers instructions.

3.1	Supply and handpark 300mm hardcore filling well watered and compacted to receive murrum (m.s) as directed on site.	cum	14.13		-
3.2	Supply and lay 50mm thick murrum blinding well compacted to receive floor bed(m.s)	sq.m	47.04		-
Concrete works					
<i>Vibrated reinforced concrete 1:2:4 to:-</i>					
3.3	Supply all materials and cast 150mm thick floor slab	cum	7.06		-
3.4	Supply all materials and cast 450mm grade beam	cum	1.48		-
3.5	Supply all materials and cast 200mm thick strip foundation footing.	cum	1.12		-
3.6	Supply all materials and cast 200mmx200mm columns(foundation column height 1.5m) according to structural drawings upon approval by Site Engineer	cum	0.29		-
3.7	Supply all materials and cast 200mm thick column bases to be approved by Engineer and according structural drawings	cum	1.730		-
Reinforcement details					
3.8	Supply and fix one layer B.R.C ref. No. A 142 fabric reinforcement with 150mm end laps tying wire and spacer blocks weighing 2.22kg/sm (measured nett, allow for laps)	sq.m	47.04		-
3.9	Supply and fix strip steel reinforcement round bars to B.s 4449 including all cutting to size, binding wire and spacer blocks in strip to be placed according to the structural drawings provided or as advised by Structural Site Engineer	kg	461.00		-
Sawnform work to:-					
3.10	Supply and fix formwork for sides of stub columns, strip footing formworks and edges of base columns	sq.m	5.76		-
3.11	Supply and fix formwork for sides and edges of floor bed 75-160mm high	lm	28.00		-
Walling					
3.12	200mm thick natural machine cut stone grade1(Njiru quarry stone) walling in cement sand mortar 1:3 with and including hoop-iron after every 2nd alternate course.	sq.m	19.68		-
3.13	Premise 200cc" or any other equal and approved anti-termite treatment applied as per manufactures	sq.m	47.04		-
Damp proofing					
3.14	500mm gauge polythene damp proof membrane with 150mm (Min) end and side laps	sq.m	47.04		-

	<u>3 ply hessian based bituminous felt damp proof course bedded on mortar including leveling:-</u>				
3.15	Supply and fix 200mm wide damp proof course under walls.	lm	16.40		-
	<u>Plinths</u>				
3.16	Supply and fix 12mm thick rendering in cement sand mortar 1:4	sq.m	9.84		-
3.17	Prepare and apply 3 coats black bituminous paint	sq.m	9.84		-
Total Bill No.3 (Carried to Summary)					-
BILL NO 4 SUPERSTRUCTURE WORKS					
<p>1- Supplying , placing, workmanship, mortar, scaffolds, filling mastic for expansion joints and all other required materials, equipment and tools to complete the work according to specifications and directions of supervisor engineer.</p> <p>2 -Contractor to provide samples for approval and all the required tests.</p> <p>3-The following items include supply and cast of concrete, shuttering, tie rods, spacers, supply and placing of concrete, vibrating, steel reinforcement shaping and fixing, curing, steel reinforcement, and supply and cast the required concrete, using mechanical vibrators, curing, testing steel reinforcement and concrete, and all other requirements and workmanship as per specifications, drawings and engineers instructions. The contractor has to submit shop drawings for approval prior to work.</p>					
	<u>Vibrated reinforced concrete 1:2:4 (20/20) in:-</u>				
4.1	Supply all materials and cast ring beams & Lintols as per structural design drawings	cum	1.48		-
4.2	Supply all materials and cast columns as per structural design drawings attached work to be approved by Engineer	cum	0.58		-
	<u>Formwork</u>				
4.3	Supply and fix formwork for sides of columns	sq.m	11.52		-
4.4	Supply and fix formwork on sides and soffites of ringbeams	sq.m	14.76		-
	<u>Reinforcement works</u>				
4.5	Assorted for beam reinforcement	kg	148.00		-
4.6	Assorted for column reinforcement	kg	58.00		-
	<u>Walling</u>				
4.7	200mm thick natural machine dressed stone grade 1 (Njiru quarry stone) walling in cement mortar 1:4 with and including hoop-iron after every 2nd alternate course	sq.m	48.75		-
4.8	Provide and fix for the veranda, 100mm diameter, 3mm thick galvanised mild steel CHS with welded flat top mild steel plate to take wall plate. Cost to include connection, welded lugs and priming metal surface with one coat red oxide primer. The contractor is also reminded to include in his pricing, the cost of supply, cutting waste and erecting.	l.m	15.50		-
Total Bill No.4 (Carried to Summary)					-
BILL NO 5 DOORS					
<p>All works must be according to drawings, specification and engineer instructions.Rates shall include:-</p> <p>1- Submitting samples for steel section for approval of material, accessories, color and fixation method</p> <p>2- Steel frames should be filled with fine aggregate mortar concrete, for fixation</p> <p>3- Hardware, ironmongery and accessories should be approved before supply the materials</p> <p>4-All required tests for painting materials.</p>					
	<u>Steel casement doors</u>				
5.1	Mild Steel Door - 1200 x 2300mm high grille door comprising 50 x 50 x 3 mm RHS frame all round; 2 No. 50 x 50 x 3mm middle and bottom rail infilled with 16 x 16mm mild steel bars spaced at 100mm centers vertically and fixed into wall or concrete with staple, 6No. tower bolts, 3 No. heavy duty pin hinges 2 No. locking eye for padlock, apply paint before fixing	no	2.00		-
Total Bill No.5 (Carried to Summary)					-
BILL NO 6 WINDOWS					
<p>All works must be according to drawings, specification and engineer instructions.Rates shall include:-</p> <p>1- Submitting samples for window section for approval of material, accessories, color and fixation method</p> <p>2- Steel frames should be filled with fine aggregate mortar concrete, for fixation</p> <p>3- Hardware, ironmongery and accessories should be approved before supply the materials</p> <p>4-All required tests for painting materials.</p>					
6.1	Supply and fix Steel casement windows (measuring 1800 x 1500mm inclusive frame), 5mm window glass complete with UV protective film (blue shade), high quality lever fasteners, sliding insect screen (coffee tray and heavy duty P.V.C mesh on aluminium frame) with rubber backing.	no			-
Total Bill No.6 (Carried to Summary)					-
ELEMENT NO. 7 ROOFING					
<p>The contractor is reminded to include in his pricing, the cost of supply, cutting waste and erecting. Timber to be treated as described in the specifications.</p> <p>All roofing timber should be 2nd grade cellcured cypress, straight, well seasoned, free from knots and insect attacks.</p> <p>All steel trusses to be approved before installation</p>					
7.1	Supply fix 28 IT5 Gauge Galvanized corrugated Iron sheet pre-painted - Blue. Secured with approved	sq.m	51.00		-
7.2	Supply and fix matching barrel end 150mm half round ridge capping.	lm	8.40		-

7.3	Supply and fabricate timber trusses spaced @ 1500 c/c along wall plate using 100mm x 50mm thick timber members for trusses, rafters, struts and collars	lm	75.66		-
7.4	Supply and fix 100 x 50mm wall plate secured on the wall using bolts and fixed with hoop iron to ring beam.	lm	20.73		-
7.5	50mm x 50mm cypress timber for purlins spaced @ 375 mm across the trusses and secured to the truss rafters	lm	47.64		-
7.6	200 x 25mm fascia board (apply wood primer on back of timber before fixing fascia board.	lm	16.80		-
Total Bill No.7 (Carried to Summary)					-
BILL NO 8 FINISHES					
<p><i>All works must be according to specification and engineer instructions. Rates shall include :</i></p> <p>1-Supply of all needed materials, including galvanized angles for the corners as well as the use of galvanized wire mesh between concrete</p> <p>2-Preparation works by covering all conduits of electricity, water supplies ,between existing walls and slabs ... etc, with a galvanized wire mesh at least 20cm width coated by mortar (1:1) cement : sand and the work includes removal of wires and nails and cleaning of surfaces to be ready for plastering .This should be done prior to commencement of plastering and after obtaining a written approval from the supervision engineer.</p> <p>3-Contractor shall take into consideration that all – direct and indirect works and expenses required for the completion of the coming items are included in the unit price.4-Curing with water for at least three days for each coat.</p> <p>5-Price of plastering shall include all required materials and works, mixing, scaffolds, cleaning the site, required equipment and workmanship to complete the work according to specifications and directions of the engineer</p> <p>6- Price of tiling works shall include supply of all materials, mixing the cement paste, cutting the tiles to the required shapes and dimensions, cleaning the site ,required equipment & workmanship to complete the work according to specifications and directions of the engineer.</p>					
Floors					
8.1	Supply all materials and screed 25mm thick cement sand screed 1:2 steel backing to receive tiles	sq.m	47.04		-
8.2	Supply and fix 8mm thick, 330 x 330mm coloured non slip floor "SAJ & RAK" tiles or any other equal and approved with appropriate grout. Contractor to include cost for PVC corner strip	sq.m	47.04		-
Walls					
8.3	15mm thick cement sand plaster on internal walls	sq.m	260.52		-
8.4	Supply all materials and screed 15mm thick cement sand plaster rendered to external beams and columns	sq.m	11.12		-
8.6	Supply all materials and key to all other masonry works	lm	164.00		-
Total Bill No.8 (Carried to Summary)					-
BILL NO 9 PAINTING AND DECORATIONS					
<p><i>Rates include: 1- Any painting materials must have a valid certificate confirming that the paint materials meet with Kenya Beaura (KeBs) stranded and specification , tested by approved local laboratory and have the final approved from the supervisor engineer.</i></p> <p>2- The surface must be dry and clean before painting.</p> <p>3- All painting works should provide the required coverage.</p> <p>4. All paint works must be according to specifications , drawings and supervisor engineer instructions.</p> <p>5- Contractor shall take into consideration that all – direct and indirect works and expenses required for the completion of the coming items are included in the unit price.</p> <p>6- Smoothen surfaces of existing plastering before the Commencement paint using sand paper.</p> <p>7- Price of painting shall include supply of all materials, cleaning the site, required equipment and workmanship to complete the work according to specifications and directions of the engineer.</p>					
9.2	Supply, prepare and apply 3 coats smooth velvet emulsion paint as "crown" or any other equal and approved paint to Plastered walls	Sm	260.52		-
Total Bill No.9 (Carried to Summary)					-
GRAND SUMMARY					
1	PRELIMINARIES				-
2	EXCAVATION AND EARTHWORKS				-
3	SUBSTRUCTURE				-
4	SUPERSTRUCTURE				-
5	DOORS				-
6	WINDOWS				-
7	ROOF				-
8	FINISHES				-
9	PAINTING AND DECORATIONS				-
GRAND TOTAL FOR THE OFFICES					-
Construction of Classroom and Day Care					
BILL NO 1 PRELIMINARY WORKS					
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSH)	AMOUNT (KSH)
<p><i>The contractor shall provide, erect and maintain all safety measures requirements according to specifications, including protecting the scaffolding with special cloth or fabric, and work plan for all items should be submitted before starting any activity. The contractor is reminded to supply crushed machine ballast for any concrete works at the site.</i></p>					
1.1	Clear the site to remove trees and top soil to an average depth of 150mm. The work includes mobilization, site clearing the scrubs, removal any tree and roots,	item	1.00		-
Total Bill No.1 (Carried to Summary)					-

BILL NO 2 EXCAVATION AND EARTHWORKS					
2.1	Excavate starting from stripped level a 600mm wide foundation trench to an average depth of 1500mm (1.5m) in normal soil to be approved by site Engineer	cum	17.46		-
2.2	Excavate starting from stripped level a column base foundation as per foundation layout to an average depth of 1500mm (1.5m) in normal soil to be approved by site Engineer	cum	27.33		-
2.3	Supply all materials and cast 50mm concrete for blinding concrete ratio 1:4:8	cum	2.11		-
2.4	Return fill in and ram excavated material around foundations as directed by Engineer on site	cum	16.12		-
2.5	Cart-away surplus excavated materials to where directed by Engineer	cum	28.18		-
2.6	Allow for keeping excavations free from underground, or storm water	item	1.00		-
Total Bill No.2 (Carried to Summary)					-
BILL NO 3 SUBSTRUCTURE WORKS					
<i>The following items include supply and cast of concrete, shuttering, tie rods, spacers, supply and placing of concrete, vibrating, steel reinforcement shaping and fixing, curing, steel reinforcement, and supply and cast the required concrete, using mechanical vibrators, curing, testing steel reinforcement and concrete, and all other requirements and workmanship as per specifications, drawings and engineers instructions.</i>					
3.1	Supply and handpark 300mm hardcore filling well watered and compacted to receive murrum (m.s) as directed on site.	cum	29.81		-
3.2	Supply and lay 50mm thick murrum blinding well compacted to receive floor bed(m.s)	sq.m	99.21		-
Concrete works					
<i>Vibrated reinforced concrete 1:2:4 to:-</i>					
3.3	Supply all materials and cast 150mm thick floor slab	cum	14.88		-
3.4	Supply all materials and cast 450mm grade beam	cum	3.12		-
3.5	Supply all materials and cast 200mm thick strip foundation footing.	cum	2.36		-
3.6	Supply all materials and cast 200mmx200mm columns(foundation column height 1.5m) according to structural drawings upon approval by Site Engineer	cum	0.65		-
3.7	Supply all materials and cast 200mm thick column bases to be approved by Engineer and according structural drawings	cum	3.654		-
Reinforcement details					
3.8	Supply and fix one layer B.R.C ref. No. A 142 fabric reinforcement with 150mm end laps tying wire and spacer blocks weighing 2.22kg/sm (measured nett, allow for laps)	sq.m	99.21		-
3.9	Supply and fix strip steel reinforcement round bars to B.s 4449 including all cutting to size, binding wire and spacer blocks in strip to be placed according to the structural drawings provided or as advised by Structural Site Engineer	kg	972.56		-
Sawnform work to:-					
3.10	Supply and fix formwork for sides of stub columns, strip footing formworks and edges of base columns	sq.m	12.15		-
3.11	Supply and fix formwork for sides and edges of floor bed 75-160mm high	lm	59.05		-
Walling					
3.12	200mm thick natural machine cut stone grade I (Njiru quarry stone) walling in cement sand mortar 1:3 with and including hoop-iron after every 2nd alternate course.	sq.m	41.51		-
3.13	Premise 200cc" or any other equal and approved anti-termite treatment applied as per manufactures	sq.m	99.21		-
Damp proofing					
3.14	500mm gauge polythene damp proof membrane with 150mm (Min) end and side laps	sq.m	99.21		-
<i>3 ply hessian based bituminous felt damp proof course bedded on mortar including leveling:-</i>					
3.15	Supply and fix 200mm wide damp proof course under walls.	lm	34.59		-
Plinths					
3.16	Supply and fix 12mm thick rendering in cement sand mortar 1:4	sq.m	20.75		-
3.17	Prepare and apply 3 coats black bituminous paint	sq.m	20.75		-
Total Bill No.3 (Carried to Summary)					-
BILL NO 4 SUPERSTRUCTURE WORKS					
<i>1- Supplying , placing, workmanship, mortar, scaffolds, filling mastic for expansion joints and all other required materials, equipment and tools to complete the work according to specifications and directions of supervisor engineer.</i>					
<i>2 -Contractor to provide samples for approval and all the required tests.</i>					
<i>3-The following items include supply and cast of concrete, shuttering, tie rods, spacers, supply and placing of concrete, vibrating, steel reinforcement shaping and fixing, curing, steel reinforcement, and supply and cast the required concrete, using mechanical vibrators, curing, testing steel reinforcement and concrete, and all other requirements and workmanship as per specifications, drawings and engineers instructions. The contractor has to submit shop drawings for approval prior to work.</i>					
Vibrated reinforced concrete 1:2:4 (20/20) in:-					
4.1	Supply all materials and cast ring beams & Lintols as per structural design drawings	cum	3.12		-
4.2	Supply all materials and cast columns as per structural design drawings attached work to be approved by Engineer	cum	1.22		-
Formwork					
4.3	Supply and fix formwork for sides of columns	sq.m	24.30		-

4.4	Supply and fix formwork on sides and soffites of ringbeams	sq.m	31.13		-
	Reinforcement works		0.00		-
4.5	Assorted for beam reinforcement	kg	312.13		-
4.6	Assorted for column reinforcement	kg	122.32		-
	Walling				-
4.7	200mm thick natural machine dressed stone grade 1 (Njiru quarry stone) walling in cement mortar 1:4 with and including hoop-iron after every 2nd alternate course	sq.m	102.81		-
4.8	Provide and fix for the veranda, 100mm diameter, 3mm thick galvanised mild steel CHS with welded flat top mild steel plate to take wall plate. Cost to include connection, welded lugs and priming metal surface with one coat red oxide primer. The contractor is also reminded to include in his pricing, the cost of supply, cutting waste and erecting.	l.m	21.70		-
Total Bill No.4 (Carried to Summary)					-
BILL NO 5 DOORS					
<i>All works must be according to drawings, specification and engineer instructions.Rates shall include:-</i>					
<i>1- Submitting samples for steel section for approval of material, accessories, color and fixation method</i>					
<i>2- Steel frames should be filled with fine aggregate mortar concrete, for fixation</i>					
<i>3- Hardware, ironmongery and accessories should be approved before supply the materials</i>					
<i>4-All required tests for painting materials.</i>					
	Steel casement doors				
5.1	Mild Steel Door - 1200 x 2300mm high grille door comprising 50 x 50 x 3 mm RHS frame all round; 2 No. 50 x 50 x 3mm middle and bottom rail infilled with 16 x 16mm mild steel bars spaced at 100mm centers vertically and fixed into wall or concrete with staple, 6No. tower bolts, 3 No. heavy duty pin hinges 2 No. locking eye for padlock, apply paint before fixing	no	2.00		-
Total Bill No.5 (Carried to Summary)					-
BILL NO 6 WINDOWS					
<i>All works must be according to drawings, specification and engineer instructions.Rates shall include:-</i>					
<i>1- Submitting samples for window section for approval of material, accessories, color and fixation method</i>					
<i>2- Steel frames should be filled with fine aggregate mortar concrete, for fixation</i>					
<i>3- Hardware, ironmongery and accessories should be approved before supply the materials</i>					
<i>4-All required tests for painting materials.</i>					
6.1	Supply and fix Steel casement windows (measuring 1800 x 1500mm inclusive frame), 5mm window glass complete with UV protective film (blue shade), high quality lever fasteners, sliding insect screen (coffee tray and heavy duty P.V.C mesh on aluminium frame) with rubber backing.	no			-
Total Bill No.6 (Carried to Summary)					-
ELEMENT NO. 7 ROOFING					
<i>The contractor is reminded to include in his pricing, the cost of supply, cutting waste and erecting. Timber to be treated as described in the specifications.</i>					
<i>All roofing timber should be 2nd grade cellcured cypress, straight, well seasoned, free from knots and insect attacks.</i>					
<i>All steel trusses to be approved before installation</i>					
7.1	Supply fix 28 IT5 Gauge Galvanized corrugated Iron sheet pre-painted - Blue. Secured with approved	sq.m	107.56		-
7.2	Supply and fix matching barrel end 150mm half round ridge capping.	lm	12.30		-
7.3	Supply and fabricate timber trusses spaced @ 1500 c/c along wall plate using 100mm x 50mm thick timber members for trusses, rafters, struts and collars	lm	160.00		-
7.4	Supply and fix 100 x 50mm wall plate secured on the wall using bolts and fixed with hoop iron to ring beam.	lm	43.80		-
7.5	50mm x 50mm cypress timber for purlins spaced @ 375 mm across the trusses and secured to the truss rafters using appropriate bolts, nuts and washers	lm	100.48		-
7.6	200 x 25mm fascia board (apply wood primer on back of timber before fixing fascia board).	lm	25.00		-
Total Bill No.7 (Carried to Summary)					-
BILL NO 8 FINISHES					

<p><i>All works must be according to specification and engineer instructions. Rates shall include :</i></p> <p>1-Supply of all needed materials, including galvanized angles for the corners as well as the use of galvanized wire mesh between concrete</p> <p>2-Preparation works by covering all conduits of electricity, water supplies ,between existing walls and slabs ... etc, with a galvanized wire mesh at least 20cm width coated by mortar (1:1) cement : sand and the work includes removal of wires and nails and cleaning of surfaces to be ready for plastering .This should be done prior to commencement of plastering and after obtaining a written approval from the supervision engineer.</p> <p>3-Contractor shall take into consideration that all – direct and indirect works and expenses required for the completion of the coming items are included in the unit price.4-Curing with water for at least three days for each coat.</p> <p>5-Price of plastering shall include all required materials and works, mixing, scaffolds, cleaning the site, required equipment and workmanship to complete the work according to specifications and directions of the engineer</p> <p>6- Price of tiling works shall include supply of all materials, mixing the cement paste, cutting the tiles to the required shapes and dimensions, cleaning the site ,required equipment & workmanship to complete the work according to specifications and directions of the engineer.</p>					
Floors					
8.1	Supply all materials and screed 25mm thick cement sand screed 1:2 steel backing to receive tiles	sq.m	99.21		-
8.2	Supply and fix 8mm thick, 330 x 330mm coloured non slip floor "SAJ & RAK" tiles or any other equal and approved with appropriate grout. Contractor to include cost for PVC corner strip	sq.m	99.21		-
Walls					
8.3	15mm thick cement sand plaster on internal walls	sq.m	549.44		-
8.4	Supply all materials and screed 15mm thick cement sand plaster rendered to external beams and columns	sq.m	23.45		-
8.6	Supply all materials and key to all other masonry works	lm	345.60		-
Total Bill No.8 (Carried to Summary)					-
BILL NO 9 PAINTING AND DECORATIONS					
<p><i>Rates include: 1- Any painting materials must have a valid certificate confirming that the paint materials meet with Kenya Beaura (KeBs) stranded and specification , tested by approved local laboratory and have the final approved from the supervisor engineer.</i></p> <p>2- The surface must be dry and clean before painting.</p> <p>3- All painting works should provide the required coverage.</p> <p>4- All paint works must be according to specifications , drawings and supervisor engineer instructions.</p> <p>5- Contractor shall take into consideration that all – direct and indirect works and expenses required for the completion of the coming items are included in the unit price.</p> <p>6- Smoothen surfaces of existing plastering before the Commencement paint using sand paper.</p> <p>7- Price of painting shall include supply of all materials, cleaning the site, required equipment and workmanship to complete the work according to specifications and directions of the engineer.</p>					
9.2	Supply, prepare and apply 3 coats smooth velvet emulsion paint as "crown" or any other equal and approved paint to Plastered walls	Sm	549.44		-
Total Bill No.9 (Carried to Summary)					-
GRAND SUMMARY					
1	PRELIMINARIES				-
2	EXCAVATION AND EARTHWORKS				-
3	SUBSTRUCTURE				-
4	SUPERSTRUCTURE				-
5	DOORS				-
6	WINDOWS				-
7	ROOF				-
8	FINISHES				-
9	PAINTING AND DECORATIONS				-
GRAND TOTAL FOR THE Classroom and Day Care					
Construction of Conference Hall and Library					
BILL NO 1 PRELIMINARY WORKS					
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSH)	AMOUNT (KSH)
<p><i>The contractor shall provide, erect and maintain all safety measures requirements according to specifications, including protecting the scaffolding with special cloth or fabric, and work plan for all items should be submitted before starting any activity. The contractor is reminded to supply crushed machine ballast for any concrete works at the site.</i></p>					
1.1	Clear the site to remove trees and top soil to an average depth of 150mm. The work includes mobilization, site clearing the scrubs, removal any tree and roots,	item	1.00		-
Total Bill No.1 (Carried to Summary)					-
BILL NO 2 EXCAVATION AND EARTHWORKS					
2.1	Excavate starting from stripped level a 600mm wide foundation trench to an average depth of 1500mm (1.5m) in normal soil to be approved by site Engineer	cum	17.46		-
2.2	Excavate starting from stripped level a column base foundation as per foundation layout to an average depth of 1500mm (1.5m) in normal soil to be approved by site Engineer	cum	27.33		-
2.3	Supply all materials and cast 50mm concrete for blinding concrete ratio 1:4:8	cum	2.11		-
2.4	Return fill in and ram excavated material around foundations as directed by Engineer on site	cum	16.12		-
2.5	Cart-away surplus excavated materials to where directed by Engineer	cum	28.18		-
2.6	Allow for keeping excavations free from underground, or storm water	item	1.00		-
Total Bill No.2 (Carried to Summary)					-
BILL NO 3 SUBSTRUCTURE WORKS					

The following items include supply and cast of concrete, shuttering, tie rods, spacers, supply and placing of concrete, vibrating, steel reinforcement shaping and fixing, curing, steel reinforcement, and supply and cast the required concrete, using mechanical vibrators, curing, testing steel reinforcement and concrete, and all other requirements and workmanship as per specifications, drawings and engineers instructions.

3.1	Supply and handpark 300mm hardcore filling well watered and compacted to receive murrum (m.s) as directed on site.	cum	29.81		-
3.2	Supply and lay 50mm thick murrum blinding well compacted to receive floor bed(m.s)	sq.m	99.21		-
Concrete works					
<u>Vibrated reinforced concrete 1:2:4 to:-</u>					
3.3	Supply all materials and cast 150mm thick floor slab	cum	14.88		-
3.4	Supply all materials and cast 450mm grade beam	cum	3.12		-
3.5	Supply all materials and cast 200mm thick strip foundation footing.	cum	2.36		-
3.6	Supply all materials and cast 200mmx200mm columns(foundation column height 1.5m) according to structural drawings upon approval by Site Engineer	cum	0.65		-
3.7	Supply all materials and cast 200mm thick column bases to be approved by Engineer and according structural drawings	cum	3.654		-
Reinforcement details					
3.8	Supply and fix one layer B.R.C ref. No. A 142 fabric reinforcement with 150mm end laps tying wire and spacer blocks weighing 2.22kg/sm (measured nett, allow for laps)	sq.m	99.21		-
3.9	Supply and fix strip steel reinforcement round bars to B.s 4449 including all cutting to size, binding wire and spacer blocks in strip to be placed according to the structural drawings provided or as advised by Structural Site Engineer	kg	972.56		-
Sawnform work to:-					
3.10	Supply and fix formwork for sides of stub columns, strip footing formworks and edges of base columns	sq.m	12.15		-
3.11	Supply and fix formwork for sides and edges of floor bed 75-160mm high	lm	59.05		-
Walling					
3.12	200mm thick natural machine cut stone grade1(Njiru quarry stone) walling in cement sand mortar 1:3 with and including hoop-iron after every 2nd alternate course.	sq.m	41.51		-
3.13	Premise 200cc" or any other equal and approved anti-termite treatment applied as per manufactures	sq.m	99.21		-
Damp proofing					
3.14	500mm gauge polythene damp proof membrane with 150mm (Min) end and side laps	sq.m	99.21		-
<u>3 ply hessian based bituminous felt damp proof course bedded on mortar including leveling:-</u>					
3.15	Supply and fix 200mm wide damp proof course under walls.	lm	34.59		-
Plinths					
3.16	Supply and fix 12mm thick rendering in cement sand mortar 1:4	sq.m	20.75		-
3.17	Prepare and apply 3 coats black bituminous paint	sq.m	20.75		-
Total Bill No.3 (Carried to Summary)					

BILL NO 4 SUPERSTRUCTURE WORKS

1- Supplying , placing, workmanship, mortar, scaffolds, filling mastic for expansion joints and all other required materials, equipment and tools to complete the work according to specifications and directions of supervisor engineer.
2 -Contractor to provide samples for approval and all the required tests.
3-The following items include supply and cast of concrete, shuttering, tie rods, spacers, supply and placing of concrete, vibrating, steel reinforcement shaping and fixing, curing, steel reinforcement, and supply and cast the required concrete, using mechanical vibrators, curing, testing steel reinforcement and concrete, and all other requirements and workmanship as per specifications, drawings and engineers instructions. The contractor has to submit shop drawings for approval prior to work.

<u>Vibrated reinforced concrete 1:2:4 (20/20) in:-</u>					
4.1	Supply all materials and cast ring beams & Lintols as per structural design drawings	cum	3.12		-
4.2	Supply all materials and cast columns as per structural design drawings attached work to be approved by Engineer	cum	1.22		-
Formwork					
4.3	Supply and fix formwork for sides of columns	sq.m	24.30		-
4.4	Supply and fix formwork on sides and soffites of ringbeams	sq.m	31.13		-
Reinforcement works					
4.5	Assorted for beam reinforcement	kg	312.13		-
4.6	Assorted for column reinforcement	kg	122.32		-
Walling					
4.7	200mm thick natural machine dressed stone grade 1 (Njiru quarry stone) walling in cement mortar 1:4 with and including hoop-iron after every 2nd alternate course	sq.m	102.81		-
4.8	Provide and fix for the veranda, 100mm diameter, 3mm thick galvanised mild steel CHS with welded flat top mild steel plate to take wall plate. Cost to include connection, welded lugs and priming metal surface with one coat red oxide primer. The contractor is also reminded to include in his pricing, the cost of supply, cutting waste and erecting.	l.m	21.70		-
Total Bill No.4 (Carried to Summary)					

BILL NO 5 DOORS

<p><i>All works must be according to drawings, specification and engineer instructions. Rates shall include:-</i></p> <p>1- Submitting samples for steel section for approval of material, accessories, color and fixation method</p> <p>2- Steel frames should be filled with fine aggregate mortar concrete, for fixation</p> <p>3- Hardware, ironmongery and accessories should be approved before supply the materials</p> <p>4- All required tests for painting materials.</p>					
	Steel casement doors				
5.1	Mild Steel Door - 1200 x 2300mm high grille door comprising 50 x 50 x 3 mm RHS frame all round; 2 No. 50 x 50 x 3mm middle and bottom rail infilled with 16 x 16mm mild steel bars spaced at 100mm centers vertically and fixed into wall or concrete with staple, 6No. tower bolts, 3 No. heavy duty pin hinges 2 No. locking eye for padlock, apply paint before fixing	no	2.00		-
Total Bill No.5 (Carried to Summary)					-
BILL NO 6 WINDOWS					
<p><i>All works must be according to drawings, specification and engineer instructions. Rates shall include:-</i></p> <p>1- Submitting samples for window section for approval of material, accessories, color and fixation method</p> <p>2- Steel frames should be filled with fine aggregate mortar concrete, for fixation</p> <p>3- Hardware, ironmongery and accessories should be approved before supply the materials</p> <p>4- All required tests for painting materials.</p>					
6.1	Supply and fix Steel casement windows (measuring 1800 x 1500mm inclusive frame), 5mm window glass complete with UV protective film (blue shade), high quality lever fasteners, sliding insect screen (coffee tray and heavy duty P.V.C mesh on aluminium frame) with rubber backing.	no	6.00		-
Total Bill No.6 (Carried to Summary)					-
ELEMENT NO. 7 ROOFING					
<p><i>The contractor is reminded to include in his pricing, the cost of supply, cutting waste and erecting. Timber to be treated as described in the specifications.</i></p> <p><i>All roofing timber should be 2nd grade cellcured cypress, straight, well seasoned, free from knots and insect attacks.</i></p> <p><i>All steel trusses to be approved before installation</i></p>					
7.1	Supply fix 28 IT5 Gauge Galvanized corrugated Iron sheet pre-painted - Blue. Secured with approved	sq.m	107.56		-
7.2	Supply and fix matching barrel end 150mm half round ridge capping.	lm	12.30		-
7.3	Supply and fabricate timber trusses spaced @ 1500 c/c along wall plate using 100mm x 50mm thick timber members for trusses, rafters, struts and collars	lm	160.00		-
7.4	Supply and fix 100 x 50mm wall plate secured on the wall using bolts and fixed with hoop iron to ring beam.	lm	43.80		-
7.5	50mm x 50mm cypress timber for purlins spaced @ 375 mm across the trusses and secured to the truss rafters using appropriate bolts, nuts and washers	lm	100.48		-
7.6	200 x 25mm fascia board (apply wood primer on back of timber before fixing fascia board).	lm	25.00		-
Total Bill No.7 (Carried to Summary)					-
BILL NO 8 FINISHES					
<p><i>All works must be according to specification and engineer instructions. Rates shall include :</i></p> <p>1-Supply of all needed materials, including galvanized angles for the corners as well as the use of galvanized wire mesh between concrete</p> <p>2-Preparation works by covering all conduits of electricity, water supplies, between existing walls and slabs ... etc, with a galvanized wire mesh at least 20cm width coated by mortar (1:1) cement : sand and the work includes removal of wires and nails and cleaning of surfaces to be ready for plastering .This should be done prior to commencement of plastering and after obtaining a written approval from the supervision engineer.</p> <p>3-Contractor shall take into consideration that all – direct and indirect works and expenses required for the completion of the coming items are included in the unit price.4-Curing with water for at least three days for each coat.</p> <p>5-Price of plastering shall include all required materials and works, mixing, scaffolds, cleaning the site, required equipment and workmanship to complete the work according to specifications and directions of the engineer</p> <p>6- Price of tiling works shall include supply of all materials, mixing the cement paste, cutting the tiles to the required shapes and dimensions, cleaning the site ,required equipment & workmanship to complete the work according to specifications and directions of the engineer.</p>					
	Floors				
8.1	Supply all materials and screed 25mm thick cement sand screed 1:2 steel backing to receive tiles	sq.m	99.21		-
8.2	Supply and fix 8mm thick, 330 x 330mm coloured non slip floor "SAJ & RAK" tiles or any other equal and approved with appropriate grout. Contractor to include cost for PVC corner strip	sq.m	99.21		-
	Walls				
8.3	15mm thick cement sand plaster on internal walls	sq.m	549.44		-
8.4	Supply all materials and screed 15mm thick cement sand plaster rendered to external beams and columns	sq.m	23.45		-

8.6	Supply all materials and key to all other masonry works	lm	345.60		-
Total Bill No.8 (Carried to Summary)					-
BILL NO 9 PAINTING AND DECORATIONS					
<i>Rates include: 1- Any painting materials must have a valid certificate confirming that the paint materials meet with Kenya Beaura (KeBs) stranded and specification, tested by approved local laboratory and have the final approved from the supervisor engineer. 2- The surface must be dry and clean before painting. 3- All painting works should provide the required coverage. 4- All paint works must be according to specifications, drawings and supervisor engineer instructions. 5- Contractor shall take into consideration that all – direct and indirect works and expenses required for the completion of the coming items are included in the unit price. 6- Smoothen surfaces of existing plastering before the Commencement paint using sand paper. 7- Price of painting shall include supply of all materials, cleaning the site, required equipment and workmanship to complete the work according to specifications and directions of the engineer.</i>					
9.2	Supply, prepare and apply 3 coats smooth velvet emulsion paint as "crown" or any other equal and approved paint to Plastered walls	Sm			-
Total Bill No.9 (Carried to Summary)					-
GRAND SUMMARY					
1	PRELIMINARIES				-
2	EXCAVATION AND EARTHWORKS				-
3	SUBSTRUCTURE				-
4	SUPERSTRUCTURE				-
5	DOORS				-
6	WINDOWS				-
7	ROOF				-
8	FINISHES				-
9	PAINTING AND DECORATIONS				-
GRAND TOTAL FOR Conference Hall and Library					-
Construction of kitchen cafeteria and dining hall					
BILL NO 1 PRELIMINARY WORKS					
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSH)	AMOUNT (KSH)
<i>The contractor shall provide, erect and maintain all safety measures requirements according to specifications, including protecting the scaffolding with special cloth or fabric, and work plan for all items should be submitted before starting any activity. The contractor is reminded to supply crushed machine ballast for any concrete works at the site.</i>					
1.1	Clear the site to remove trees and top soil to an average depth of 150mm. The work includes mobilization, site clearing the scrubs, removal any tree and roots,	item			-
Total Bill No.1 (Carried to Summary)					-
BILL NO 2 EXCAVATION AND EARTHWORKS					
2.1	Excavate starting from stripped level a 600mm wide foundation trench to an average depth of 1500mm (1.5m) in normal soil to be approved by site Engineer	cum	20.88		-
2.2	Excavate starting from stripped level a column base foundation as per foundation layout to an average depth of 1500mm (1.5m) in normal soil to be approved by site Engineer	cum	12.96		-
2.3	Supply all materials and cast 50mm concrete for blinding concrete ratio 1:4:8	cum	16.08		-
2.4	Return fill in and ram excavated material around foundations as directed by Engineer on site	cum	13.13		-
2.5	Cart-away surplus excavated materials to where directed by Engineer	cum	20.71		-
2.6	Allow for keeping excavations free from underground, or storm water	item	1.00		-
Total Bill No.2 (Carried to Summary)					-
BILL NO 3 SUBSTRUCTURE WORKS					
<i>The following items include supply and cast of concrete, shuttering, tie rods, spacers, supply and placing of concrete, vibrating, steel reinforcement shaping and fixing, curing, steel reinforcement, and supply and cast the required concrete, using mechanical vibrators, curing, testing steel reinforcement and concrete, and all other requirements and workmanship as per specifications, drawings and engineers instructions.</i>					
3.1	Supply and handpark 300mm hardcore filling well watered and compacted to receive murrum (m.s) as directed on site.	cum	15.00		-
3.2	Supply and lay 50mm thick murrum blinding well compacted to receive floor bed(m.s)	sq.m	50.00		-
Concrete works					
<i>Vibrated reinforced concrete 1:2:4 to:-</i>					
3.3	Supply all materials and cast 150mm thick floor slab	cum	7.50		-
3.4	Supply all materials and cast 450mm grade beam	cum	2.46		-
3.5	Supply all materials and cast 200mm thick strip foundation footing.	cum	3.28		-
3.6	Supply all materials and cast 200mmx200mm columns(foundation column height 1.5m) according to structural drawings upon approval by Site Engineer	cum	0.65		-
3.7	Supply all materials and cast 200mm thick column bases to be approved by Engineer and according structural drawings	cum	3.654		-
Reinforcement details					

3.8	Supply and fix one layer B.R.C ref. No. A 142 fabric reinforcement with 150mm end laps tying wire and spacer blocks weighing 2.22kg/sm (measured nett, allow for laps)	sq.m	50.00		-
3.9	Supply and fix strip steel reinforcement round bars to B.s 4449 including all cutting to size, binding wire and spacer blocks in strip to be placed according to the structural drawings provided or as advised by Structural Site Engineer	kg	1,005.00		-
	Sawnform work to:-				
3.10	Supply and fix formwork for sides of stub columns, strip footing formworks and edges of base columns	sq.m	12.15		-
3.11	Supply and fix formwork for sides and edges of floor bed 75-160mm high	lm	30.00		-
	Walling				
3.12	200mm thick natural machine cut stone grade1(Njiru quarry stone) walling in cement sand mortar 1:3 with and including hoop-iron after every 2nd alternate course.	sq.m	32.83		-
3.13	Premise 200cc" or any other equal and approved anti-termite treatment applied as per manufactures	sq.m	50.00		-
	Damp proofing				
3.14	500mm gauge polythene damp proof membrane with 150mm (Min) end and side laps	sq.m	50.00		-
	3 ply hessian based bituminous felt damp proof course bedded on mortar including leveling:-				
3.15	Supply and fix 200mm wide damp proof course under walls.	lm	27.36		-
	Plinths				
3.16	Supply and fix 12mm thick rendering in cement sand mortar 1:4	sq.m	16.42		-
3.17	Prepare and apply 3 coats black bituminous paint	sq.m	16.42		-
Total Bill No.3 (Carried to Summary)					
BILL NO 4 SUPERSTRUCTURE WORKS					
<p>1- Supplying , placing, workmanship, mortar, scaffolds, filling mastic for expansion joints and all other required materials, equipment and tools to complete the work according to specifications and directions of supervisor engineer.</p> <p>2 -Contractor to provide samples for approval and all the required tests.</p> <p>3-The following items include supply and cast of concrete, shuttering, tie rods, spacers, supply and placing of concrete, vibrating, steel reinforcement shaping and fixing, curing, steel reinforcement, and supply and cast the required concrete, using mechanical vibrators, curing, testing steel reinforcement and concrete, and all other requirements and workmanship as per specifications, drawings and engineers instructions. The contractor has to submit shop drawings for approval prior to work.</p>					
	Vibrated reinforced concrete 1:2:4 (20/20) in:-				
4.1	Supply all materials and cast ring beams & Lintols as per structural design drawings	cum	2.46		-
4.2	Supply all materials and cast columns as per structural design drawings attached work to be approved by Engineer	cum	1.22		-
	Formwork				
4.3	Supply and fix formwork for sides of columns	sq.m	24.30		-
4.4	Supply and fix formwork on sides and soffites of ringbeams	sq.m	24.62		-
	Reinforcement works				
4.5	Assorted for beam reinforcement	kg	246.00		-
4.6	Assorted for column reinforcement	kg	122.00		-
	Walling				
4.7	200mm thick natural machine dressed stone grade 1 (Njiru quarry stone) walling in cement mortar 1:4 with and including hoop-iron after every 2nd alternate course	sq.m	50.56		-
4.8	Provide and fix for the veranda, 100mm diameter, 3mm thick galvanised mild steel CHS with welded flat top mild steel plate to take wall plate. Cost to include connection, welded lugs and priming metal surface with one coat red oxide primer. The contractor is also reminded to include in his pricing, the cost of supply, cutting waste and erecting.	l.m	21.70		-
Total Bill No.4 (Carried to Summary)					
BILL NO 5 DOORS					
<p>All works must be according to drawings, specification and engineer instructions.Rates shall include:-</p> <p>1- Submitting samples for steel section for approval of material, accessories, color and fixation method</p> <p>2- Steel frames should be filled with fine aggregate mortar concrete, for fixation</p> <p>3- Hardware, ironmongery and accessories should be approved before supply the materials</p> <p>4-All required tests for painting materials.</p>					
	Steel casement doors				
5.1	Mild Steel Door - 1200 x 2300mm high grille door comprising 50 x 50 x 3 mm RHS frame all round; 2 No. 50 x 50 x 3mm middle and bottom rail infilled with 16 x 16mm mild steel bars spaced at 100mm centers vertically and fixed into wall or concrete with staple, 6No. tower bolts, 3 No. heavy duty pin hinges 2 No. locking eye for padlock, apply paint before fixing	no			-
Total Bill No.5 (Carried to Summary)					
BILL NO 6 WINDOWS					

<p><i>All works must be according to drawings, specification and engineer instructions. Rates shall include:-</i></p> <p>1- Submitting samples for window section for approval of material, accessories, color and fixation method</p> <p>2- Steel frames should be filled with fine aggregate mortar concrete, for fixation</p> <p>3- Hardware, ironmongery and accessories should be approved before supply the materials</p> <p>4- All required tests for painting materials.</p>					
6.1	Supply and fix Steel casement windows (measuring 1800 x 1500mm inclusive frame), 5mm window glass complete with UV protective film (blue shade), high quality lever fasteners, sliding insect screen (coffee tray and heavy duty P.V.C mesh on aluminium frame) with rubber backing.	no	2.00	15,000.00	30,000.00
Total Bill No.6 (Carried to Summary)					30,000.00
ELEMENT NO. 7 ROOFING					
<p><i>The contractor is reminded to include in his pricing, the cost of supply, cutting waste and erecting. Timber to be treated as described in the specifications.</i></p> <p><i>All roofing timber should be 2nd grade cellcured cypress, straight, well seasoned, free from knots and insect attacks.</i></p> <p><i>All steel trusses to be approved before installation</i></p>					
7.1	Supply fix 28 IT5 Gauge Galvanized corrugated Iron sheet pre-painted - Blue. Secured with approved	sq.m	53.00		-
7.2	Supply and fix matching barrel end 150mm half round ridge capping.	lm	9.20		-
7.3	Supply and fabricate timber trusses spaced @ 1500 c/c along wall plate using 100mm x 50mm thick timber members for trusses, rafters, struts and collars	lm	80.00		-
7.4	Supply and fix 100 x 50mm wall plate secured on the wall using bolts and fixed with hoop iron to ring beam.	lm	26.53		-
7.5	50mm x 50mm cypress timber for purlins spaced @ 375 mm across the trusses and secured to the truss rafters using appropriate bolts, nuts and washers	lm	52.26		-
7.6	200 x 25mm fascia board (apply wood primer on back of timber before fixing fascia board.	lm	20.00		-
Total Bill No.7 (Carried to Summary)					-
BILL NO 8 FINISHES					
<p><i>All works must be according to specification and engineer instructions. Rates shall include :</i></p> <p>1-Supply of all needed materials, including galvanized angles for the corners as well as the use of galvanized wire mesh between concrete</p> <p>2-Preparation works by covering all conduits of electricity, water supplies, between existing walls and slabs ... etc, with a galvanized wire mesh at least 20cm width coated by mortar (1:1) cement : sand and the work includes removal of wires and nails and cleaning of surfaces to be ready for plastering .This should be done prior to commencement of plastering and after obtaining a written approval from the supervision engineer.</p> <p>3-Contractor shall take into consideration that all – direct and indirect works and expenses required for the completion of the coming items are included in the unit price.4-Curing with water for at least three days for each coat.</p> <p>5-Price of plastering shall include all required materials and works, mixing, scaffolds, cleaning the site, required equipment and workmanship to complete the work according to specifications and directions of the engineer</p> <p>6- Price of tiling works shall include supply of all materials, mixing the cement paste, cutting the tiles to the required shapes and dimensions, cleaning the site ,required equipment & workmanship to complete the work according to specifications and directions of the engineer.</p>					
Floors					
8.1	Supply all materials and screed 25mm thick cement sand screed 1:2 steel backing to receive tiles	sq.m	50.00		-
8.2	Supply and fix 8mm thick, 330 x 330mm coloured non slip floor "SAJ & RAK" tiles or any other equal and approved with appropriate grout. Contractor to include cost for PVC corner strip	sq.m	50.00		-
Walls					
8.3	15mm thick cement sand plaster on internal walls	sq.m	43.50		-
8.4	Supply all materials and screed 15mm thick cement sand plaster rendered to external beams and columns	sq.m	23.45		-
8.6	Supply all materials and key to all other masonry works	lm	273.60		-
Total Bill No.8 (Carried to Summary)					-
BILL NO 9 PAINTING AND DECORATIONS					
<p><i>Rates include: 1- Any painting materials must have a valid certificate confirming that the paint materials meet with Kenya Beaufea (KeBs) stranded and specification , tested by approved local laboratory and have the final approved from the supervisor engineer.</i></p> <p>2- The surface must be dry and clean before painting.</p> <p>3- All painting works should provide the required coverage.</p> <p>4- All paint works must be according to specifications , drawings and supervisor engineer instructions.</p> <p>5- Contractor shall take into consideration that all – direct and indirect works and expenses required for the completion of the coming items are included in the unit price.</p> <p>6- Smoothen surfaces of existing plastering before the Commencement paint using sand paper.</p> <p>7- Price of painting shall include supply of all materials, cleaning the site, required equipment and workmanship to complete the work according to specifications and directions of the engineer.</p>					
9.2	Supply, prepare and apply 3 coats smooth velvet emulsion paint as "crown" or any other equal and approved paint to Plastered walls	Sm	43.50		-
Total Bill No.9 (Carried to Summary)					-
GRAND SUMMARY					
1	PRELIMINARIES				-

2	EXCAVATION AND EARTHWORKS				-
3	SUBSTRUCTURE				-
4	SUPERSTRUCTURE				-
5	DOORS				-
6	WINDOWS				-
7	ROOF				-
8	FINISHES				-
9	PAINTING AND DECORATIONS				-
	GRAND TOTAL FOR the kitchen cafeteria and dining hall				-
D	BILL OF QUANTITY FOR CONSTRUCTION OF ONE BLOCK OF 4 UNIT ABLUTION BLOCK				
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KSH)	AMOUNT (KSH)
1	ELEMENT NO.1 SUBSTRUCTURE				
	<u>Site Clearance</u>				
1.01	Clear all vegetation including grass, shrubs and small trees, strip surface up to 200mm deep.	sm	45		-
1.02	Excavate latrine pit of dimensions 1500mm by 7500mm to depth of 5000mm from existing ground level	cum	56.25		-
1.03	Carry away surplus excavated materials to an approved place	cum	56.25		-
1.04	Supply and lay 50mm thick murrum blinding to under strip footing	sm	22		-
1.05	Supply and fix steel bars in foundation concrete work including cutting, bending, hoisting, and tying wire and supporting all in position, 3Y10 @ 200	kg	40		-
1.06	Supply and fix steel bars in foundation concrete work including cutting, bending, hoisting, and tying wire and supporting all in position Y8 @ 200	kg	130		-
1.07	Supply all materials and cast a 200mm thick vibrated reinforced foundation concrete strip (concrete class 20)	cum	3		-
1.08	Supply and build, 200mm thick stone foundation walling in cement and sand mortar (1:3). Reinforce with and including 20swg x 25mm wide hoop iron in every alternative course; height 1.2m.	sm	110		-
	<u>Floor Slab</u>				
1.09	Apply approved anti-termite and herbicide treatment chemicals (Termidor or Gladiator) with a ten year guarantee over foundation walls	sm	30		-
1.1	Supply and fix formwork to all edges and soffits of slab including making provisions for squat holes and left in formwork as directed	sm	16		-
1.11	Supply and fix mesh fabric reinforcement no. A142 size 200 x 200mm weighing 2.22 kg per square metre in floor slab (measured net- no allowance made for laps; including bends tying wire and distant blocks.	sm	24		-
1.12	12mm high tensile square twisted bars; cold worked; BS4461 including bends, hooks, tying wire, distance blocks and spacers for ring beam reinforcement, 4Y12	kg	80		-
1.13	8mm bars, Y8 @ 200mm c/c, ditto	kg	170		-
1.14	Supply all materials and cast a 200mm thick vibrated reinforced concrete slab, mix1:2:4 or class 20/20	cum	4.6		-

	Sub-total 1: Substructure				0.00
2	ELEMENT NO. 2 WALLING				
2.01	Supply and build, 200mm thick stone walling, in 1:3 cement sand mortar. Provide 25mm wide x 20swg Hoop iron at every alternate course including column pillars as shown in the drawing	sm	80		-
2.02	Supply and lay, 150mm wide bituminous based Damp Proof Course, BS743	lm	34		-
2.03	Supply all materials and cast R.C. ring beam, vibrated reinforced concrete class 20	cum	1.6		-
2.04	12mm high tensile square twisted bars; cold worked; BS4461 including bends, hooks, tying wire, distance blocks and spacers for ring beam reinforcement, 4Y12	kg	80		-
2.05	8mm bars, Y8 @ 200mm c/c, ditto	kg	170		-
2.06	Sawn formwork to sides and soffit of beam	sm	20		-
	Sub-total 2: Walling				-
3	ELEMENT NO. 3 ROOFING				
	The contractor is reminded to include in his pricing, the cost of supply, cutting waste and erecting. Timber to be treated as described in the specifications.				
3.01	Supply and fix 28 gauge IT5 pre-painted 2.5 long (approved colour) GCI roof sheet covering nailed to purlins	sm	18.4		-
3.02	Supply and fix 4x2" common rafters for roof support.	lm	10.8		-
3.03	Supply and fix 2x2" purlins	lm	32.4		-
3.04	Supply and fix pre-painted 6x1" fascia and barge board around roof structure	lm	22		-
3.05	Supply and fix 3m long 4" diameter PVC class D vent pipe complete with a fly-trap at the top	no	2		-
	Sub-total 3: Roofing				-
4	ELEMENT NO. 4 DOORS				
4.01	50mm. thick framed batten door (Ledged and Braced) size 800x2100mm. high	no	4		-
4.01	Supply and fix pre-fabricated ventilation window(500mm x 500mm) complete with wooden frame and fly-trap screen.	no	4		-
	Sub-total 4: Doors				-
5	ELEMENT NO. 5 FINISHES				
	Floor finishes				
5.01	25mm thick Cement Sand (1:3) screed premixed with red oxide powder or other approved pigment	sm	30		-
	Wall finishes				
5.02	15mm thick two coat cement sand (1:3) plaster trowelled smooth and comprising 12mm backing and 3mm finishing coat including provision of black board backing plaster. Works include both internal and external	sm	100		-
5.03	Prepare and apply three coats of gloss oil paint; 'Premium Grade brand' to wall surfaces	sm	100		-
5.04	Raking and keying to all masonry walling	sm	288		-
	Sub-total 5: Finishes				-
	SUMMARY FOR CONSTRUCTION OF ONE BLOCK OF 4 UNITS ABLUTION BLOCK				
1	Substructures				-
2	Walling				-
3	Roofing				-
4	Doors				-
5	Finishes				-
	TOTAL FOR CONSTRUCTION OF ONE (1) BLOCK OF FOUR (4) UNIT ABLUTION BLOCK				-
BILL OF QUANTITY FOR FENCING					
Item	Description	Unit	Quantity	RATE	AMOUNT
A	General and Preliminary works				
1	Clear the site to remove trees and top soil to an average depth of 150mm. The work includes mobilization, site clearing the scrubs, removal any tree and roots,	ITEM	1		-
	Sub-total A- General and Preliminary works				-
B	Excavation				
1	Excavate starting from ground level a 300mm diameter pit to an average depth of 600mm (0.6m) at a distance of 3000mm centre to centre in normal soil including stays holes fixed at a distance of 25000mm centre to centre and at all corners	C.M	2		-

2	Excavate 150x100mm trench a long the fence to receive chainlink ground anchor concrete (ms)	CM	2.42		-
Sub-total A- Excavation					-
C FENCING					
1	Supply all materials and cast 0.3m diameter x 0.6m depth concrete; concrete mix 1:3:6 class 15/20 and allow for curing of all concrete works	C.M	1.9		-
2	Supply and fix in concrete foundation 3.0m high 75mm x 75mm x 6mm mild steel angles, top of the angle section cranked a distance of 300 and lower end with welded lugs including drilling 6 holes for straining wire and priming with red oxide primer before delivery to site.	NO	56		-
3	Supply and weld on to the 3.0m long 75mm x 75mm x 6mm mild steel angles described in 2 above, Y shaped galvanised steel of similar section properties, each branch to be 600mm long and with 3 holes on each side to fix barbed wire	NO	56		-
4	Ditto in 2 above, but for strainer post at every corner and after every 6 posts, both sides, but 1.5m long welded on to the post being supported.	NO	8		-
5	Supply and fix 11 Gauge chain link fence 2.4m high tied onto the 50mm x 50mm x 4mm angles(ms) adequately (at 6 points on the individual angle section) by binding wire. Cost should include cost of binding wire, cutting, tying and fixing.	LM	160		-
6	Supply and fix concrete mix 1:3:6 to 100x100mm trench and cast with the chain link to 100mm deep.	CM	2.42		-
7	Provide and fix in place 480mm dia razor wire on the Y using barbed wire gauge 12.5, measured separately.	LM	160		-
8	Supply and fix plain straining wire fixed through the 75mm x 75mm x 6mm mild steel angles standards- 3 lines	LM	480		-
9	Supply and fix plain barbed wire gauge 12.5 fixed through the 75mm x 75mm x 6mm mild steel angles standards- 6 lines	LM	1440		-
10	Supply and fix 6000mm wide double leaf mild steel gate and an attached 1500mm pedestrian gate 2500mm high made from 3mm thick steel plate welded on both sides of the frame. Frame as follows: 75x50x3mm thick RHS external members and 25mm SHS 3mm thick secondary members, fixed onto the concrete columns 500mm square using heavy duty steel pin hinges; with all fastening accessories including all cutting welding, grinding and priming with one coat of grey oxide before fixing. The gate should be lockable and painted (Primer + 3 coats) in 500mm Sky Blue Color skirting and the rest in full white gloss paint.	NO	1		-
Sub-total B - Fencing					-
SUMMARY FOR CONSTRUCTION OF INZONE EDUCATIONAL CENTER					
A	CONSTRUCTION OF OFFICES				-
B	CONSTRUCTION OF CLASSROOM AND DAY CARE				-
C	CONSTRUCTION OF CONFERENCE AND LIBRARY				-
D	CONSTRUCTION OF A KITCHEN AND CAFETERIA				-
E	CONSTRUCTION OF ONE BLOCK OF 4 UNITS ABLUTION BLOCK				-
F	CONSTRUCTION OF 160LM FENCE				-
G	CONSTRUCTION OF NEW GENERATOR HOUSE				-
TOTAL FOR CONSTRUCTION					-