



**COUNTY GOVERNMENT OF BUSIA
DEPARTMENT OF
INFRASTRUCTURE AND ENERGY
P.O. BOX PRIVATE BAG – 50400
BUSIA, KENYA**



DIRECTORATE OF PUBLIC WORKS

**PROPOSED CONSTRUCTION OF BCRH ANNEX SPECIALIZED
HOSPITAL.**

COST ESTIMATE

**PREPARED AND ISSUED BY,
DIRECTORATE OF PUBLIC WORKS,
P.O BOX PRIVATE BAG,
BUSIA (K).**

**CLIENT,
DEPARTMENT OF HEALTH AND SANITATION
P.O. BOX 1040 - 50400.
BUSIA, KENYA.**

MARCH-2026

PRELIMINARIES

ITEM	DESCRIPTION	AMOUNT	CTS
	<u>PRELIMINARIES</u>		
A	Water	200,000.00	
B	Electricity	250,000.00	
C	Signboard	100,000.00	
D	Site hoarding	400,000.00	
E	Security of works	250,000.00	
F	Project managers office ,store and equipping	1,743,750.00	
G	Registration with government regulatory bodies (NEMA etc)	850,000.00	
H	Performance Security	450,000.00	
J	Insurance	350,000.00	
K	Allow for a provisional sum of Kenya Shillings Three million (Ksh3,000,000) only for Project management by public works technical team	3,000,000.00	
	Carried to Collection	7,593,750.00	

BUILDER'S WORK

Item	Description	Quantity	Unit	Rate	Amount Kshs
	<u>PROPOSED CONSTRUCTION OF BCRH ANNEX SPECIALIZED HOSPITAL</u>				
	<u>ELEMENT NO.1</u>				
	<u>SUBSTRUCTURE (ALL PROVISIONAL)</u>				
	<u>GENERAL NOTES</u>				
	<i>Note: The work in the element includes all work up to and including the ground floor slab (all measurement in accordance to SMM 2008 Edition)</i>				
	<u>Site Clearance</u>				
A	Clear site of bushes, shrubs and undergrowth including grubbing up roots and clearing away	2,352	SM	80	188,160.00
B	Cutting down of trees of overall girth of 1200-1500mm(including necessary approvals.	10	No	5,500	55,000
C	Uprooting of existing stumps of overall girth of 1500-1800mm	5	No	8,500	42,500
	<u>Excavations and Earthworks</u>				
D	Excavate over site to remove existing worn out murrum or top vegetable soil average 150mm thick, load and remove from site.	2,352	SM	150	352,800.00
E	Excavate to reduce levels commencing at stripped level	470	CM	400	188,000.00
F	Allow for destroying any white ants' nests found in the vicinity of buildings or in tunnels exposed during the course of excavation, taking out and destroying queen ants, depositing cyanide lumps in holes, tunnels and filling with ballast murrum, packed and sealed	1	ITEM	20,000	20,000.00
G	Excavate foundation trenches up to depths not exceeding 1.5 m deep from the reduced level	576	CM	400	230,400.00
H	Ditto: pit for column and lift bases	715	CM	400	286,000.00
J	Excavate foundation trenches up to depths exceeding 1.5 m deep and not exceeding 3.0m deep	384	CM	450	172,800.00
K	Ditto: pit for column and lift bases	479	CM	450	215,550.00
L	Extra over excavation for excavating in rock irrespective of the class	477	CM	1,500	715,500.00
	<u>Disposal of excavated material</u>				
M	Backfill and compact in 150 mm layers: selected excavated materials	1,396	CM	300	418,800.00
N	Load and cart away surplus excavated materials at least 100m from site as per NEMA guidelines with and including obtaining requisite permissions and documentation from the relevant Authorities	749	CM	500	374,500.00
	Carried to collection				3,260,010.00

Item	Description	Quantity	Unit	Rate	Amount Kshs
	<u>Sundries</u>				
	<u>Planking and strutting</u>				
A	Allow for Planking and strutting to sides of all excavations: keep excavations free from all fallen materials	1	ITEM	50,000	50,000.00
	<u>Disposal of water</u>				
B	Allow for keeping all excavation clear of mud, surface and running water by bailing, pumping or otherwise	1	ITEM	50,000	50,000.00
	<u>Fillings</u>				
	<u>Hardcore or other approved filling, as described</u>				
C	300mm thick murrum filling to make up levels; levelling and grading to slopes	1504	SM	680	1,022,720.00
D	300 mm Crushed granite stone hardcore: hand packed deposited, spread; well watered levelled and compacted in layers not exceeding 150mm thick under floors to level and slope as required.	1,504	SM	500	752,000.00
E	50 mm Stone dust blinding to surfaces of hardcore rolled smooth to receive polythene damp proofing membrane (m/s)	1,504	SM	250	376,000.00
F	Termidor EC' chemical anti termite treatment to top surfaces of hardcore blinding executed by Insecta Limited or other equal and approved anti termite treatment under a ten-year guarantee	1,600	SM	200	320,000.00
	<u>In situ mass concrete class 1:4:8: vibrated: to</u>				
G	50 mm Blinding under strip foundation	384	SM	500	192,000.00
H	Ditto column bases	472	SM	500	236,000.00
G	Ditto under lift shaft base	7	SM	500	3,500.00
	<u>Vibrated reinforced insitu concrete 25/20;minimum cube crushing of 25N/mm².</u>				
J	Strip foundations	77	CM	15,500	1,193,500.00
K	Column bases	189	CM	15,500	2,929,500.00
L	Foundation columns	24	CM	15,500	372,000.00
L	200mm thick lift shaft walls	30	SM	3,100	93,000.00
M	150 mm Floor slab	1,600	SM	2,325	3,720,000.00
	Carried to collection				11,310,220.00

Item	Description	Quantity	Unit	Rate	Amount Kshs
	<u>Reinforcement (All Provisional)</u>				
	<u>Supply, cut, bend and fix the following High Tensile Ribbed reinforcement bars including tying wire, stirrups and spacer blocks to B.S. 4449:2015 & KS ISO 6935- 2: 2007</u>				
A	Assorted bars	47,360	KG	200	9,472,000.00
	<u>Damp Proofing</u>				
B	1000 Gauge black polythene paper as damp proof membrane with 150mm (min) end and side laps. paving slabs.	1,600	sm	200	320,000.00
	<u>Mesh fabric reinforcement to B.S. 4483: BRC reference A142 weighing 2.22 kilograms per square metre: in</u>				
C	Floor bed: 200 mm laps <u>Sawn formwork: to</u>	1,600	SM	500	800,000.00
D	Vertical sides: foundations	256	SM	400	102,400.00
E	Vertical sides of column bases	378	SM	400	151,200.00
F	Ditto: lift shaft base	8	SM	400	3,200.00
G	Ditto columns	284	SM	400	113,600.00
H	Ditto: lift shaft walls	60	SM	400	24,000.00
J	Edges of floor slab: over 75 but not exceeding 150 mm high	277	LM	200	55,400.00
	<u>Medium chisel dressed natural stone walling with a minimum of 7.0 N/mm² average compressive strength to B.S 5390; bedded and jointed in cement and sand (1:4) mortar ; reinforced with 25 x 3 mm hick hoop iron strips at alternate courses to: -</u>				
K	200 mm Thick walls	1,578	SM	1,200	1,893,600.00
	<u>Plinth Finishes</u>				
L	12 mm Wood floated cement and sand (1:3) render: on concrete or stonework	78	SM	480	37,440.00
M	Prepare and apply one undercoat and two finishing coats of bituminous paint or other equal an approved water resistant paint; on rendered plinths (m.s.)	78	SM	450	35,100.00
	<u>Paving slabs.</u>				
N	600x600x50mm Thick pre-cast concrete (1:2:4) slabs laid on and including 50mm thick consolidated sand, jointed and pointed in cement and sand (1:4) mortar plinth.	116	sm	1,710	198,360.00
	Carried to collection				13,206,300.00

Item	Description	Quantity	Unit	Rate	Amount Kshs
	Expansion Joint				
A	Provide 25 mm thick styrofoam at every expansion joint which as shown in the structural drawings	59	SM	800	47,200.00
B	Provide and apply approved sealant on the expansion joints	98	LM	300	29,400.00
	Carried to collection				76,600.00
	COLLECTION				
	From page 2/1				3,260,010.00
	From page 2/2				11,310,220.00
	From page 2/3				13,206,300.00
	From page 2/4				76,600.00
	TOTAL SUBSTRUCTURE CARRIED TO MAIN SUMMARY PAGE				27,853,130.00

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
<u>PROPOSED CONSTRUCTION OF BCRH ANNEX SPECIALIZED HOSPITAL</u>					
<u>GROUND FLOOR</u>					
<u>ELEMENT NO. 1</u>					
<u>REINFORCED CONCRETE SUPERSTRUCTURE</u>					
<u>Vibrated reinforced insitu concrete 25/20;minimum cube crushing of 25N/mm².</u>					
A	Ring beams	98	CM	15,500	1,519,000.00
B	Columns	28	CM	15,500	434,000.00
C	150mm thick suspended slab	1,330	SM	2,325	3,092,250.00
D	Stairs	5	CM	15,500	77,500.00
E	175mm thick suspended Ramp	54	SM	2,710	146,340.00
F	175mm thick suspended landing	14	SM	2,710	37,940.00
<u>Vibrated reinforced insitu concrete class 30 (C30/M30) ;minimum cube crushing of 30N/mm².</u>					
G	200mm thick concrete wall (elevator shaft)	36	SM	4,120	148,320.00
<u>Reinforcement (All Provisional)</u>					
<u>Supply, cut, bend and fix the following High Tensile Ribbed reinforcement bars including tying wire, stirrups and spacer blocks to B.S. 4449:2015 & KS ISO 6935- 2: 2007</u>					
H	Assorted bars	55,436	KG	200	11,087,200.00
<u>Marine Ply sawn formwork to:</u>					
J	Soffites of suspended slab	1,330	SM	690	917,700.00
K	Sides and soffits: beams	971	SM	690	669,990.00
L	Vertical sides of columns	403	SM	690	278,070.00
M	Soffites of openings	38	SM	690	26,220.00
N	Vertical sides of elevator shaft	36	SM	690	24,840.00
P	Edges of suspended slab 150-225mm girth	277	LM	180	49,860.00
<u>Staircase and Ramp</u>					
Q	Soffites of stairs	72	SM	690	49,680.00
R	Soffites of landing	14	SM	690	9,660.00
S	Risers and steps,75-150mm girth	92	LM	130	11,960.00
T	Soffites of ramp	54	SM	690	37,260.00
U	Edges of ramp's waist;150-225mm girth	49	LM	180	8,820.00
TOTAL REINFORCED CONCRETE CARRIED TO SUMMARY PAGE					18,626,610.00

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
	<u>ELEMENT NO. 2</u>				
	<u>WALLING</u>				
	<u>EXTERNAL WALLS</u>				
	<u>Natural hard machine cut stone walling well dressed with a minimum of 7.1 N/mm² average compressive strength to B.S 5390; bedded and jointed in cement and sand (1:3) mortar ;reinforced with 25 x 3 mm hick hoop iron strips at alternate courses to: -</u>				
A	200 mm Thick machine cut walls	548	SM	2,200	1,205,600.00
	<u>Damp - proof course: bituminous felt: bedded in cement and sand (1:3) mortar: 300 mm laps</u>				
B	Horizontal: 200 mm wide	240	LM	150	36,000.00
	<u>Vent Blocks.</u>				
C	200mm thick pre-cast concrete louver vent block bedded and jointed in cement and sand (1:4) mortar.	92	Sm	1,800	165,600.00
	<u>INTERNAL WALLS</u>				
	<u>Natural hard machine cut stone walling well dressed with a minimum of 7.1 N/mm² average compressive strength to B.S 5390; bedded and jointed in cement and sand (1:3) mortar ;reinforced with 25 x 3 mm hick hoop iron strips at alternate courses to: -</u>				
D	200 mm Thick machine cut walls	612	SM	2,200	1,346,400.00
E	150mm thick ditto	598	SM	1,800	1,076,400.00
F	100mm thick ditto	122	SM	1,500	183,000.00
	<u>Damp - proof course: bituminous felt: bedded in cement and sand (1:3) mortar: 300 mm laps</u>				
G	Horizontal: 200 mm wide	187	LM	150	28,050.00
H	Horizontal: 150 mm wide	173	LM	120	20,760.00
J	Horizontal: 100 mm wide	55	LM	100	5,500.00
	<u>Expansion Joint</u>				
K	Provide 25 mm thick styrofoam at every expansion joint which as shown in the structural drawings	59	SM	800	47,200.00
L	Provide and apply approved sealant on the expansion joints	98	LM	300	29,400.00
	TOTAL WALLING CARRIED TO SUMMARY PAGE				4,143,910.00

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
	<u>ELEMENT NO. 3</u>				
	<u>WINDOWS</u>				
	<u>Precast concrete units class 20 (19 mm aggregates):</u>				
A	265 x 75 mm Thick weathered and throated window cill: fair faced on exposed surfaces: bedded jointed and pointed in cement and sand (1:4) mortar	166	LM	650	107,900.00
	<u>STEEL WINDOWS</u>				
	<u>Supply and fix the following purpose made mild steel casement windows with 2.5 mm thick "Z" section framing, for both openable and fixed panels and 20x6mm thick flat bars burglar proofing at 150mm centres to the inside behind (M/S) the 25 mm T - sections ;window panes size 500 x 150mm high generally including all coupling mullions etc.; and complete with bronze handles, peg stays and other ironmongery; factory primed with red oxide primer including cutting and pinning fixing lugs to concrete or masonry work jambs; bedding in cement and sand (1:3) mortar, pointing all round frames in mastic, easing, oiling and adjusting opening lights on completion to Architect's details</u>				
B	Window size 3000mm x 11000mm mm high (W11)	1	NO	214,500	214,500.00
C	Window size 1100mm x 12000mm mm high (W9)	2	NO	85,800	171,600.00
D	Window size 1100mm x 11000mm mm high (W10)	4	NO	78,650	314,600.00
E	Window size 1100mm x 10900mm mm high (W7)	1	NO	77,935	77,935.00
F	Window size 1100mm x 10200mm mm high (W5)	2	NO	72,930	145,860.00
G	Window size 4000mm x 2400mm mm high (W1)	27	NO	62,400	1,684,800.00
H	Window size 3000mm x 2400mm mm high (W8)	1	NO	46,800	46,800.00
J	Window size 4000mm x 1200mm mm high (W6)	4	NO	31,200	124,800.00
K	Window size 1800mm x 2400mm mm high (W4)	1	NO	28,080	28,080.00
L	Window size 2000mm x 2100mm mm high (W2)	1	NO	27,300	27,300.00
M	Window size 1500mm x 1500mm mm high (W3)	5	NO	14,625	73,125.00
	<u>Finishes at reveals</u>				
N	15mm thick cement sand render (1:3) to surfaces 100-200mm girth	691	LM	100	69,100.00
	<u>MILD STEEL, KS 02-18</u>				
P	Burglar proofing grille to suit opening composed of 20mm diameter x 3mm thick steel tubes framing all round and middle rail, infilled with 15mm diameter solid vertical bars at 125mm centres, all joints welded including all necessary hanging to wall and priming with red oxide	448	SM	4,000	1,792,000.00
	Carried to collection				4,878,400.00

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
	<u>5mm Thick one way tinted sheet glass and glazing to metal with putty</u>				
A	In panes over 0.1 but not exceeding 0.5 square metres	417	SM	3,560	1,484,520.00
	<u>5mm Thick obscure sheet glass and glazing to metal with putty</u>				
B	In panes not exceeding 0.1 square metres;	31	SM	3,560	110,360.00
	<u>Painting and Decorating</u>				
	<u>Prepare, touch up primer and apply three coats gloss oil paint: on metal: to</u>				
C	General surfaces: windows (measured overall both sides)	896	SM	450	403,200.00
D	General surfaces: grilles (measured overall both sides)	896	SM	450	403,200.00
E	Prepare and apply three coats of first grade emulsion paint to rendered and plastered surfaces 100-200mm girth	691	LM	80	55,280.00
	<u>Curtain rail</u>				
F	"Silent Gliss" Standard I-section light duty brass single curtain track screwed to concrete/bock work with brass plated screws, one bracket runner per 75mm of rail, two end stops per length and complete accessories to approval	166	LM	1,500	249,000.00
G	Decorative basket ends to curtain rods	60	NO	250	15,000.00
	Carried to collection				2,720,560.00
	COLLECTION				
	From page 3/3				4,878,400.00
	From page 3/4(Above)				2,720,560.00
	TOTAL WINDOWS CARRIED TO SUMMARY PAGE				7,598,960.00

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
	<u>ELEMENT NO. 4</u>				
	<u>DOORS</u>				
	Steel Doors				
	Purpose made mild steel double leaf door ; consisting of 525 x 2000mm high 2 No. openable leaves; 1050mm wide x 350mm high - 1.5mm thick fixed steel louvers blades bent and welded in fanlight; each leaf shall have 525 x 725mm high x 4mm thick one way glass mounted on 20 x 20 x 3mm thick zed Tee mentions; 300mm high x 1.5mm thick plate both sides on 50 x 50 x 3mm top and bottom bearers; bottom section 1000mm high shall have 1.5mm thick plate bent to shape and welded on 50 x 30 x 1.2mm thick RHS welded together at 50mm centres to form a panel; including hinges, hasp, staple and fixing door to wall with lugs detailed to Architect's schedule (D1)				
A	Steel door; overall size 4000 x 3000 mm high;	1	NO	132,000	132,000.00
B	Ditto 1800x3000mm high.	6	NO	59,400	356,400.00
	<u>Flush Door</u>				
	<u>45 mm (finished) Semi-solid core flush door to BS 459 faced on both sides with 5 mm thick mahogany veneer and 15 mm x 15 mm hardwood beadings pinned and glued to door on both faces to form grids to architect's details and approval; hard wood lipped on all edges to approval;</u>				
C	Door size 900 x 2100mm high	10	NO	8,250	82,500.00
D	Door size 1200 mm x 2100 mm high - Swing door	6	NO	12,000	72,000.00
	<u>Panel Door</u>				
	<u>50 mm (finished) mahogany panel door comprising moulded and rebated 150 x 50 mm top rail, 150 x 50 mm stiles, and 200 x 50 mm bottom rail: in filled with 45 mm thick moulded panels alternated with 15 mm diameter wrought iron, tongued and grooved into stiles and rails: all joints glued and clamped including necessary reinforcement, beads and fixed in position as described in;</u>				
E	Double door size 1500x3000mm high	8	NO	71,000	568,000.00
F	Single door size 900x3000mm high	36	NO	42,800	1,540,800.00
	<u>Mahogany Frames and linings : selected and kept clean</u>				
G	150 x 50 mm Frames: Three labours: plugged	363	LM	1,900	689,700.00
H	150 x 50mm transom with four labours	45	LM	1,900	85,500.00
J	Ditto mullion	5	LM	1,900	9,500.00
K	25 x 50 mm Architrave: screwed to frame and pelleted	363	LM	180	65,340.00
L	25 x 25 mm Quadrant beading: one labours: ditto	363	LM	150	54,450.00
	Carried to collection				3,656,190.00

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
	<u>Iron mongery</u> <u>Supply and fix the following ironmongery to timber complete with matching screws and keys as per 'UNION' manufacturers or other equal and approved.</u>				
A	100 mm high double washer brass butt hinges	93	PRS	490	45,570.00
B	5-Lever mortice lock and set of lever handle furniture	8	NO	9,500	76,000.00
C	3-Lever mortice lock and set of lever handle furniture	36	NO	5,260	189,360.00
D	DS-002-SNP SN Oval Satin nickel floor mounted door stop.	74	NO	1,500	111,000.00
E	Pressed steel indicator ref: 8094 bolt stop, Satin nickel finish	10	NO	2,700	27,000.00
F	Kick plate ref. KP- 800-200 AS	10	NO	5,500	55,000.00
G	Male or female pictogram ref. MS/SF - 150 - 75 SA	10	NO	2,500	25,000.00
H	Hat and Coat hook as 'Union 8704' with black rubber buffer	10	NO	850	8,500.00
J	Automatic heavy duty overhead door closer: 'LEB-241'	44	NO	9,500	418,000.00
K	Mortice bathroom lock as 'Union 2294' complete with brass handles	10	NO	2,500	25,000.00
L	Double action spring hinges	18	NO	1,450	26,100.00
	<u>Glazing</u>				
M	6mm Thick tinted sheet glass and glazing fanlight	27	SM	1,800	48,600.00
	<u>Painting and decorating</u>				
	<u>Thoroughly Prime backs of wood with one coat of approved primer before fixing; prepare and apply two coats of clear polyurethane varnish or other approved stain on:</u>				
N	Flush and panel doors: general surfaces	322	SM	450	144,900.00
P	Frames,mullion & transome : not exceeding 300 mm girth	413	LM	130	53,690.00
Q	Architraves: not exceeding 100 mm girth	363	LM	40	14,520.00
R	Quadrant beading : not exceeding 100 mm girth	363	LM	40	14,520.00
	<u>Prepare and apply three coats gloss oil paint to:</u>				
S	General surfaces: steel doors	89	SM	450	40,050.00
	<u>LEAD LINING DOOR (X-RAY ROOM)</u>				
	<u>Supply and install X-ray room protective radiation light X Rya shielding automatic sliding door complete with frame as per specialist specifications and approval.</u>				
T	Lead lined sliding door size 900x3000mm high,with 5 lever mortice lock complete with handle.	1	NO	400,000	400,000.00
U	Sliding gear for the above door as manufactured by FAFELE or equal and approved.	1	NO	30,000	30,000.00
	Carried to collection				1,752,810.00
	COLLECTION				
	From page 3/5				3,656,190.00
	From page 3/6(Above)				1,752,810.00
	TOTAL DOORS CARRIED TO SUMMARY PAGE				5,409,000.00

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
	<u>ELEMENT NO. 5</u>				
	<u>FINISHES</u>				
	<u>FLOOR FINISHES</u>				
	<u>WET AREAS</u>				
	<u>Cement and sand (1:3) screeds, backings, beds etc</u>				
A	32 mm Thick to receive Ceramic tiles (measured separately)	42	SM	480	20,160.00
	<u>Approved matt ceramic tiles to B.S. 1281; local; non-slip floor tiles to regular or approved other pattern; bedding and jointing in cement sand (1:4) mortar, grouting with white cement</u>				
B	400 x 400 x 8mm thick floors	42	SM	2,200	92,400.00
C	20 mm x 100 mm high skirting squared at top and coved at junction with floor	46	LM	220	10,120.00
D	Labour in cutting and raking around corners	12	LM	250	2,875.00
	<u>Floor Screeding</u>				
	<u>Cement and sand (1:3) screeds, backings, beds etc</u>				
E	25 mm Thick to receive Terrazzo floor finish (measured separately)	1,462	SM	480	701,760.00
F	30x300mm wide paving to treads	96	LM	150	14,400.00
G	30x150mm high risers	15	LM	75	1,125.00
H	10x150mm high skirting	643	LM	50	32,150.00
J	Ditto to profile of treads and risers	15	LM	50	750.00
	<u>Terrazzo Floor finish</u>				
K	15mm thick monolithic floor finish from approved sources; Approved colour; cement and marble chippings (1;2); complete with and including plastic dividing strips set flush with paving; Washed and machine polished.	1,462	SM	2,600	3,801,200.00
L	30x300mm wide paving to treads	96	LM	450	43,200.00
M	30x150mm high risers	15	LM	200	3,000.00
N	10x150mm high skirting	643	LM	100	64,300.00
P	Ditto to profile of treads and risers	15	LM	100	1,500.00
Q	Surface of ramp	53	SM	2,600	137,800.00
R	Skirting of ramp	62	LM	200	12,400.00
S	Extra over treads for non-slip caborandum strip.	325	LM	100	32,500.00
	Carried to collection				4,971,640.00

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
	<u>EXTERNAL WALL FINISH</u>				
	<u>15 mm Thick cement sand (1:3) render: wood floated: on concrete or block work: to</u>				
A	Beams, walls and column surfaces	750	SM	480	360,000.00
	<u>Prepare and apply one coat of exterior quality Ruff n Tuff paint by <i>Crown Paints</i> or other equal and approved on:</u>				
B	Rendered wall surfaces	750	SM	1,300	975,000.00
	<u>INTERNAL WALL FINISHES</u>				
	<u>12 mm (minimum) two-coat plaster; 9 mm first coat of cement and sand (1:6), 3 mm second coat of cement and lime putty (1:10); steel trowelled smooth including skimming plastered surfaces to:</u>				
C	Beams, walls and column surfaces	3,212	SM	480	1,541,760.00
	<u>Prepare and apply three coats of first grade of silk acrylic vinyl paint or other equal and approved paint: on plastered surfaces: to</u>				
D	Plastered and rendered walls,beams and columns	3,212	SM	450	1,445,400.00
E	Soffites of suspended slab	1,487	SM	450	669,150.00
	<u>12 mm Cement and sand (1:4) backings:</u>				
F	Walls: finished to receive glazed tiles	100	SM	480	48,000.00
	<u>250x 400 x 6mm Thick ceramic wall tiles: on backings(m/s) with cement grout and point in matching cement grout: to</u>				
G	Walls	100	SM	1,780	178,000.00
H	Plastic beading for fair edges	78	LM	120	9,360.00
	<u>Lift Finish</u>				
	<u>12 mm Cement and sand (1:4) backings:</u>				
J	Walls: finished to receive glazed tiles	9	SM	480	4,320.00
	<u>12 mm thick coloured polished granite tiles: jointed and pointed with matching adhesive as described on:</u>				
K	Lift Walls	9	SM	12,000	108,000.00
	<u>Plaster; 15mm thick, 2 No. coat work, 12mm first coat of cement sand (1:3); 3mm second coat of cement and lime putty (1:9); steel trowelled to concrete or block work base generally to: -</u>				
L	Soffits of landing	14	SM	480	6,720.00
M	Ditto sloping Soffits of staircase and ramp	126	SM	480	60,480.00
N	Edges of landing and ramp	49	LM	100	4,900.00
	Carried to collection				5,411,090.00

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
	<u>Prepare and apply three coats of silk acrylic vinyl paint by <i>Crown Paints</i> or other equal and approved, applied by roller on:</u>				
A	Soffits of landing	14	SM	450	6,300.00
B	Ditto sloping Soffits of staircase and ramp	126	SM	450	56,700.00
C	Edges of landing and ramp	49	SM	100	4,900.00
	<u>Ceiling</u>				
	<u>Acoustic suspended ceilings as Armstrong Tegular Dune or approved equivalent laid on "Donn T37 " white epoxy coated exposed tee suspension system or approved equivalent including galvanised main tees, cross tees, hold-down clips, wedges, etc., all suspended with galvanised 19mm straps at not exceeding 1200mm centres strictly in accordance with the manufacturer's instructions as per architects details:</u>				
D	Horizontal suspended ceilings	1,001	SM	2,400	2,402,400.00
	<u>12mm thick gypsum board ceiling fixed to and including light weight aluminium furring channels plugged to sides and soffits of walls and slab , respectively : all works to be executed by an approved specialist</u>				
F	Horizontal suspended ceilings and bulkheads	486	SM	2,600	1,263,600.00
G	100 x 25mm moulded polysterene cornice	643	LM	210	135,030.00
	<u>Prepare and apply three coats of silk acrylic vinyl paint by <i>Crown Paints</i> or other equal and approved, applied by roller on:</u>				
H	Horizontal suspended ceilings	486	SM	450	218,700.00
J	Cornice	643	LM	100	64,300.00
	<u>Ramp and Staircase Balustrades</u>				
K	1000 mm long, 20mm diameter steel rods, fanged at one end built into concrete, other end welded and ground smooth	110	LM	1,500	165,000.00
	<u>Top and bottom rail</u>				
L	40 x 4mm thick steel flat welded and ground smooth to balustrades	181	LM	1,500	271,500.00
	<u>Intermediate rails</u>				
M	40 x 4mm thick steel flat welded and ground smooth to balustrades	181	LM	1,500	271,500.00
	<u>Wrot mahogany</u>				
N	100 x 50mm moulded handrail screwed to steel flat including countersinking and flush pelleting	91	LM	1,800	163,800.00
	Carried to collection				5,023,730.00

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
	<u>Painting and Decorations</u>				
	<u>To metal surfaces</u>				
	<u>One coat etching primer; one undercoat; two coats super gloss oil paint to "Crown Paints" or other equal and approved</u>				
A	Small pipes	362	LM	120	43,440.00
B	Frames; 100 to 200mm girth	110	LM	120	13,200.00
	<u>To wood surfaces</u>				
	<u>Knot, prime and stop, prepare and apply three coats of two pack polyurethane varnish on: -</u>				
C	Surfaces of handrail and skirting's over 100mm but not exceeding 200mm girth	91	LM	120	10,920.00
	Carried to collection				67,560.00
	COLLECTION				
	From page 3/7				4,971,640.00
	From page 3/8				5,411,090.00
	From page 3/9				5,023,730.00
	From page 3/10 above				67,560.00
	TOTAL FINISHES CARRIED TO SUMMARY PAGE				15,474,020.00

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
	<u>ELEMENT NO. 6</u>				
	<u>FITTINGS AND FIXTURES</u>				
	<u>Insitu concrete class 15(19 mm aggregates): vibrated</u>				
A	50 mm Thick plinth	SM	59	850	50,150.00
	<u>Insitu concrete class 20 (20 mm aggregate): vibrated: reinforced</u>				
B	100mm Thick suspended worktop	SM	59	1,000	59,000.00
	<u>Reinforcement (All Provisional)</u>				
C	B.R.C. mesh ref.No. A142 with and including 150mm (min) end and side laps.	SM	59	500	29,500.00
	<u>Steel/ sawn softwood formwork: to</u>				
D	Soffits of worktop	SM	59	400	23,600.00
E	Edges of floor slab: over 75 but not exceeding 150 mm high	LM	84	100	8,400.00
	<u>Machine cut stone walling with a minimum of 7.0 N/mm² average compressive strength to B.S 5390; bedded and jointed in cement and sand (1:4) mortar ;reinforced with 25 x 3 mm hick hoop iron strips at alternate courses to: -</u>				
F	100 mm Walls	SM	64	1,400	89,600.00
	<u>Gauged cement, lime, sand plaster (1:2:9) steel trowelled smooth as described in</u>				
G	15mm thick plaster to wall finished smooth	SM	64	480	30,720.00
H	Ditto suspended soffits of worktop	SM	59	480	28,320.00
	<u>Painting</u>				
	<u>Prepare surface and apply an undercoat and two finishing coats of Silk Vinyl paint on:</u>				
J	Plastered wall surfaces	SM	64	450	28,800.00
K	Ditto suspended soffits of worktop	SM	59	450	26,550.00
	<u>Worktop and plinth finish</u>				
	<u>25 mm thick cement and sand (1:4) screed to;</u>				
L	Plinth	SM	59	480	28,320.00
M	Worktop	SM	59	480	28,320.00
	Carried to collection				431,280.00

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
	<u>18mm Thick Granite: on backings(m/s) with approved adhesive: to</u>				
A	Screeded worktop	SM	59	12,000	708,000.00
B	100mm high fascia	LM	84	1,200	100,800.00
	<u>20mm thick double sides melamine faced MDF with 0.4mm thick melamine iron-on edge trims on all exposed edges</u>				
C	Walls	SM	59	2,800	165,200.00
D	600 x 775mm high door	NO	84	2,500	210,000.00
E	25 x 50mm wide Wrot cypress bearers plugged to walls with counter sunk screws	LM	777	250	194,250.00
F	Pneumatic soft close Malpa hinges	NO	168	480	80,640.00
G	150mm Satin finish Stainless steel pull handle	NO	84	450	37,800.00
H	150mm Sliding Stainless door lock latch	NO	84	650	54,600.00
	<u>Concrete benches</u>				
J	Concrete bench with terrazzo finish overall size 1825 x 800 x 675	NO	5	24,500	122,500.00
	Carried to collection				1,673,790
	COLLECTION				
	From page '3/11				431,280
	From page (Above)				1,673,790
	Total Fittings and Fixtures Carried to Summary Page				2,105,070

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
	<u>ELEMENT NO. 7:</u>				
	<u>BUILDERS WORK IN CONNECTION WITH SPECIALISTS SERVICES:</u>				
	<u>(All provisional)</u>				
	<u>Builder's work in connection with Electrical Installation:</u>				
	<u>Cut away for, make good and attend in all trades on the sub-contractor installing the following points, including associated switch points in concealed electrical system, including cutting all chases and holes, notching and boxing timber etc. making good all finishes and leave clean to satisfaction of the Architect:</u>				
A	Lighting points	78	NO	200	15,600.00
B	Socket outlets	24	NO	200	4,800.00
C	Conduits/ducts	112	LM	200	22,400.00
	<u>Builder's work in connection with plumbing and drainage installation:</u>				
	<u>Cut away for, make good and attend in all trades on the subcontractor installing the following fittings, wastes under floor slabs, supply pipes fixed on walls including cutting holes, chases and making good finishes:</u>				
D	Wash hand basin	8	NO	350	2,800.00
E	Urinals	3	NO	350	1,050.00
F	Shower	6	NO	350	2,100.00
G	Low level W.C	6	NO	500	3,000.00
H	Small pipes chased in wall	18	LM	150	2,700.00
J	Cut or leave hole in 200 mm thick wall for small pipe	3	NO	100	300.00
K	Cut or leave hole in 150mm thick concrete slab for large pipe	5	NO	100	500.00
L	Ditto: small pipes	3	NO	100	300.00
	Total for BWIC with Services carried to Summary			Shs	55,550.00

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
	<u>GROUND FLOOR</u>				
	<u>SECTION 3</u>				
	1. Reinforced Concrete Superstructure		3/1		18,626,610.00
	2. Walling		3/2		4,143,910.00
	3. Windows		3/3		7,598,960.00
	4. Doors		3/6'		5,409,000.00
	5 Finishes		3/10'		15,474,020.00
	6. Fittings and Fixtures		3/12'		2,105,070.00
	7. BWIC with Services (Provisional)		3/13'		55,550.00
	<u>TOTAL CARRIED TO GRAND SUMMARY</u>			Kshs	53,413,120

Item	Description	Quantity	Unit	Rate	Amount (kshs)
	FIRST FLOOR				
	ELEMENT NO. 1				
	REINFORCED CONCRETE SUPERSTRUCTURE				
	<u>Vibrated reinforced insitu concrete 25/20;minimum cube crushing of 25N/mm².</u>				
A	Ring beams	98	CM	15,500	1,519,000.00
B	Columns	28	CM	15,500	434,000.00
C	150mm thick suspended slab	1,180	SM	2,325	2,743,500.00
D	Stairs	5	CM	2,325	11,625.00
E	175mm thick suspended Ramp	54	SM	2,710	146,340.00
F	175mm thick suspended landing	14	SM	2,710	37,940.00
	<u>Vibrated reinforced insitu concrete class 30 (C30/M30) ;minimum cube crushing of 30N/mm².</u>				
G	200mm thick concrete wall (elevator shaft)	36	SM	4,120	148,320.00
	<u>Reinforcement (All Provisional)</u>				
	<u>Supply, cut, bend and fix the following reinforcement bars including tying wire, stirrups and spacer blocks to B.S. 4461</u>				
H	Assorted bars	51,712	KG	200	10,342,400.00
	<u>Marine Ply sawn formwork to:</u>				
J	Sides and soffits: beams	971	SM	690	669,990.00
K	Vertical sides of columns	403	SM	690	278,070.00
L	Soffites of openings	38	SM	690	26,220.00
M	Soffites of suspended slab	1,180	SM	690	814,200.00
N	Vertical sides of elevator shaft	36	SM	690	24,840.00
P	Edges of suspended slab 150-225mm girth	277	LM	180	49,860.00
	Staircase and Ramp				
Q	Soffites of stairs	72	SM	690	49,680.00
R	Soffites of landing	14	SM	690	9,660.00
S	Risers and steps,75-150mm girth	92	LM	130	11,960.00
T	Soffites of ramp	54	SM	690	37,260.00
U	Edges of ramp's waist;150-225mm girth	49	LM	180	8,820.00
TOTAL REINFORCED CONCRETE CARRIED TO SUMMARY PAGE					17,363,685.00

Item	Description	Quantity	Unit	Rate	Amount (kshs)
	<u>ELEMENT NO. 2</u>				
	<u>WALLING</u>				
	<u>EXTERNAL WALLS</u>				
	<u>Natural hard machine cut stone walling well dressed with a minimum of 7.1 N/mm² average compressive strength to B.S 5390; bedded and jointed in cement and sand (1:3) mortar reinforced with 25 x 3 mm hick hoop iron strips at alternate courses to: -</u>				
A	200 mm Thick machine cut walls	652	SM	2,200	1,434,400.00
	<u>Vent Blocks.</u>				
B	200mm thick pre-cast concrete louver vent block bedded and jointed in cement and sand (1:4) mortar.	92	Sm	1,800	165,600.00
	<u>INTERNAL WALLS</u>				
	<u>Natural hard machine cut stone walling well dressed with a minimum of 7.1 N/mm² average compressive strength to B.S 5390; bedded and jointed in cement and sand (1:3) mortar reinforced with 25 x 3 mm hick hoop iron strips at alternate courses to: -</u>				
C	200 mm Thick machine cut walls	180	SM	2,200	396,000.00
D	150mm thick ditto	344	SM	1,800	619,200.00
E	100mm thick ditto	93	SM	1,500	139,500.00
	<u>Expansion Joint</u>				
F	Provide 25 mm thick styrofoam at every expansion joint which as shown in the structural drawings	59	SM	800	47,200.00
G	Provide and apply approved sealant on the expansion joints	98	LM	300	29,400.00
	TOTAL WALLING CARRIED TO COLLECTION				2,831,300.00

Item	Description	Quantity	Unit	Rate	Amount (kshs)
Aluminium & MDF wall partition					
A	Natural anodized aluminium partitions comprising 50x40x2mm thick Aluminium frame;50x40x2mm thick bottom and top members,with vertical members at maximum 1200mm centres and middle horizontal members to Architect's details where applicable;with and including 18mm thick medium density Fibre (MDF) board as infill with 900mm high 5mm thick one way glazing upper half.	424	Sm	7,500	3,180,000.00
B	100x6mm thick mahogany skirting with rounded top edges complete with three coats of premium grade stained polyurethane varnish	142	Lm	250	35,500.00
C	Ditto but to cornice ditto.	658	Lm	250	164,500.00
Total carried to collection					3,380,000.00
<u>COLLECTION</u>					
Total brought from page 4/2					2,831,300.00
Total brought from above					3,380,000.00
TOTAL WALLING CARRIED TO SUMMARY PAGE					6,211,300.00

Item	Description	Quantity	Unit	Rate	Amount (kshs)
	ELEMENT NO. 3				
	WINDOWS				
	<u>Precast concrete units class 20 (19 mm aggregates):</u>				
A	265 x 75 mm Thick weathered and throated window cill: fair faced on exposed surfaces: bedded jointed and pointed in cement and sand (1:4) mortar	152	LM	650	98,800.00
	STEEL WINDOWS				
	<u>Supply and fix the following purpose made mild steel casement windows with 2.5 mm thick "Z" section framing, for both openable and fixed panels and 20x6mm thick flat bars burglar proofing at 150mm centres to the inside behind (M/S) the 25 mm T - sections ;window panes size 500 x 150mm high generally including all coupling mullions etc.; and complete with bronze handles, peg stays and other ironmongery; factory primed with red oxide primer including cutting and pinning fixing lugs to concrete or masonry work jambs; bedding in cement and sand (1:3) mortar, pointing all round frames in mastic, easing, oiling and adjusting opening lights on completion to Architect's details</u>				
B	Window size 13300mm x 1200mm mm high (W17)	2	NO	103,740	207,480.00
C	Window size 1100mm x 8200mm mm high (W18)	7	NO	58,630	410,410.00
D	Window size 1100mm x 7800mm mm high (W14)	10	NO	55,770	557,700.00
E	Window size 4000mm x 1800mm mm high (W15)	7	NO	46,800	327,600.00
F	Window size 1800mm x 2100mm mm high (W16)	6	NO	24,570	147,420.00
G	Window size 4000mm x 900mm mm high (W19)	6	NO	23,400	140,400.00
H	Window size 3000mm x 1200mm mm high (W13)	2	NO	23,400	46,800.00
J	Window size 2000mm x 2100mm mm high (W2)	15	NO	27,300	409,500.00
K	Window size 1800mm x 1400mm mm high (W3)	2	NO	16,380	32,760.00
L	Window size 800mm x 1200mm mm high (W22)	1	NO	6,240	6,240.00
	<u>Finishes at reveals</u>				
M	15mm thick cement sand render (1:3) to surfaces 100-200mm girth	558	LM	100	55,800.00
	MILD STEEL, KS 02-18				
N	Burglar proofing grille to suit opening composed of 20mm diameter x 3mm thick steel tubes framing all round and middle rail, infilled with 15mm diameter solid vertical bars at 125mm centres, all joints welded including all necessary hanging to wall and priming with red oxide	336	SM	4,000	1,344,000.00
	Carried to collection				3,784,910.00

Item	Description	Quantity	Unit	Rate	Amount (kshs)
	<u>5mm Thick one way tinted sheet glass and glazing to metal with putty</u>				
A	In panes over 0.1 but not exceeding 0.5 square metres	305	SM	3,560	1,085,800.00
	<u>5mm Thick obscure sheet glass and glazing to metal with putty</u>				
B	In panes not exceeding 0.1 square metres;	31	SM	3,560	110,360.00
	<u>Painting and Decorating</u>				
	<u>Prepare, touch up primer and apply three coats gloss oil paint: on metal: to</u>				
C	General surfaces: windows (measured overall both sides)	672	SM	450	302,400.00
D	General surfaces: grilles (measured overall both sides)	672	SM	450	302,400.00
E	Prepare and apply three coats of first grade emulsion paint to rendered and plastered surfaces 100-200mm girth	558	LM	80	44,640.00
	<u>Curtain rail</u>				
F	"Silent Gliss" Standard I-section light duty brass single curtain track screwed to concrete/bock work with brass plated screws, one bracket runner per 75mm of rail, two end stops per length and complete accessories to approval	152	LM	1,500	228,000.00
G	Decorative basket ends to curtain rods	114	NO	250	28,500.00
	Carried to collection				2,102,100.00
	COLLECTION				
	From page 4/4				3,784,910.00
	From page 4/5(Above)				2,102,100.00
	TOTAL WINDOWS CARRIED TO SUMMARY PAGE				5,887,010.00

Item	Description	Quantity	Unit	Rate	Amount (kshs)
	ELEMENT NO. 4				
	DOORS				
	Flush Door				
	<u>45 mm (finished) Semi-solid core flush door to BS 459 faced on both sides with 5 mm thick mahogany veneer and 15 mm x 15 mm hardwood beadings pinned and glued to door on both faces to form grids to architect's details and approval: hard wood lipped on all edges to approval:</u>				
A	Door size 900 x 2100mm high	16	NO	8,250	132,000.00
B	Door size 1200 mm x 2100 mm high - Swing door	6	NO	12,000	72,000.00
	Panel Door				
	<u>50 mm (finished) mahogany panel door comprising moulded and rebated 150 x 50 mm top rail, 150 x 50 mm stiles, and 200 x 50 mm bottom rail: in filled with 45 mm thick moulded panels alternated with 15 mm diameter wrought iron, tongued and grooved into stiles and rails: all joints glued and clamped including necessary reinforcement, beads and fixed in position as described in:</u>				
C	Double door size 1500x2700mm high	6	NO	60,750	364,500.00
D	Single door size 900x2700mm high	12	NO	36,450	437,400.00
	<u>Mahogany Frames and linings : selected and kept clean</u>				
E	150 x 50 mm Frames: Three labours: plugged	151	LM	1,900	286,900.00
F	150 x 50mm transom with four labours	20	LM	1,900	38,000.00
G	Ditto mullion	4	LM	1,900	7,600.00
H	25 x 50 mm Architrave: screwed to frame and pelleted	151	LM	180	27,180.00
J	25 x 25 mm Quadrant beading: one labours: ditto	151	LM	150	22,650.00
	Aluminium Doors				
K	Supply and fix 900x2700 mm high double leaf Aluminium doors, with 900mm high 5mm one way thick glazing upper half and 18mm thick MDF padded and complete with all necessary iron mongery, Aluminium door frames, necessary beading and General purpose sealant (clear colour) to secure MDF in the aluminium frames to avoid vibrations.. detailed to Architect's schedule	38	NO	36,000	1,368,000.00
	Carried to collection				1,388,230.00

Item	Description	Quantity	Unit	Rate	Amount (kshs)
	<u>Iron mongery</u>				
	<u>Supply and fix the following ironmongery to timber complete with matching screws and keys as per 'UNION' manufacturers or other equal and approved.</u>				
A	100 mm high double washer brass butt hinges	60	PRS	490	29,400.00
B	5-Lever mortice lock and set of lever handle furniture	6	NO	9,500	57,000.00
C	3-Lever mortice lock and set of lever handle furniture	12	NO	5,260	63,120.00
D	DS-002-SNP SN Oval Satin nickel floor mounted door stop.	80	NO	1,500	120,000.00
E	Pressed steel indicator ref: 8094 bolt stop, Satin nickel finish	16	NO	2,700	43,200.00
F	Kick plate ref. KP- 800-200 AS	16	NO	5,500	88,000.00
G	Male or female pictogram ref. MS/SF - 150 - 75 SA	16	NO	2,500	40,000.00
H	Hat and Coat hook as 'Union 8704' with black rubber buffer	16	NO	850	13,600.00
J	Automatic heavy duty overhead door closer: 'LEB-241'	18	NO	9,500	171,000.00
K	Mortice bathroom lock as 'Union 2294' complete with brass handles	16	NO	2,500	40,000.00
L	Double action spring hinges	18	NO	1,450	26,100.00
	<u>Glazing</u>				
M	6mm Thick tinted sheet glass and glazing fanlight	27	SM	1,800	48,600.00
	<u>Painting and decorating</u>				
	<u>Thoroughly Prime backs of wood with one coat of approved primer before fixing: prepare and apply two coats of clear polyurethane varnish or other approved stain on:</u>				
N	Flush and panel doors: general surfaces	198	SM	450	89,100.00
P	Frames,mullion & transome : not exceeding 300 mm girth	175	LM	130	22,750.00
Q	Architraves: not exceeding 100 mm girth	151	LM	40	6,040.00
R	Quadrant beading : not exceeding 100 mm girth	151	LM	40	6,040.00
	Carried to collection				863,950.00
	COLLECTION				
	From page 4/6				1,388,230.00
	From page 4/7(Above)				863,950.00
	TOTAL DOORS CARRIED TO SUMMARY PAGE				2,252,180.00

Item	Description	Quantity	Unit	Rate	Amount (kshs)
	<u>ELEMENT NO. 5</u>				
	<u>FINISHES</u>				
	<u>FLOOR FINISHES</u>				
	<u>WET AREAS</u>				
	<u>Cement and sand (1:3) screeds, backings, beds etc</u>				
A	32 mm Thick to receive Ceramic tiles (measured separately)	65	SM	480	31,200.00
	<u>Approved matt ceramic tiles to B.S. 1281; local; non-slip floor tiles to regular or approved other pattern; bedding and jointing in cement sand (1:4) mortar, grouting with white cement</u>				
B	400 x 400 x 8mm thick floors	65	SM	2,200	143,000.00
C	20 mm x 100 mm high skirting squared at top and coved at junction with floor	48	LM	220	10,560.00
D	Labour in cutting and raking around corners	12	LM	250	3,000.00
	<u>Floor Screeding</u>				
	<u>Cement and sand (1:3) screeds, backings, beds etc</u>				
E	25 mm Thick to receive Terrazzo floor finish (measured separately)	1,265	SM	480	607,200.00
F	30x300mm wide paving to treads	96	LM	150	14,400.00
G	30x150mm high risers	15	LM	75	1,125.00
H	10x150mm high skirting	643	LM	50	32,150.00
J	Ditto to profile of treads and risers	15	LM	50	750.00
	<u>Terrazzo Floor finish</u>				
K	15mm thick monolithic floor finish from approved sources;Approved colour;cement and marble chippings (1;2);complete with and including plastic dividings strips set flush with paving;Washed and machine polished.	1,265	SM	2,600	3,289,000.00
L	30x300mm wide paving to treads	96	LM	450	43,200.00
M	30x150mm high risers	15	LM	200	3,000.00
N	10x150mm high skirting	643	LM	100	64,300.00
P	Ditto to profile of treads and risers	15	LM	100	1,500.00
Q	Surface of ramp	53	SM	2,600	137,800.00
R	Skirting of ramp	62	LM	200	12,400.00
S	Extra over treads for non-slip caborandum strip.	325	LM	100	32,500.00
	Carried to collection				4,427,085.00

Item	Description	Quantity	Unit	Rate	Amount (kshs)
	<u>EXTERNAL WALL FINISHES</u>				
	<u>15 mm Thick cement sand (1:3) render: wood floated: on concrete or block work: to</u>				
A	Beams, walls and column surfaces	652	SM	480	312,960.00
	<u>Prepare and apply one coat of exterior quality Ruff n Tuff paint by <i>Crown Paints</i> or other equal and approved on:</u>				
B	Rendered wall surfaces	652	SM	1,300	847,600.00
C	Supply and fix 4mm thick Alucobond panel wall cladding complete with aluminium sub-frame, brackets, fixings, sealants, trims, cutting, bending, and all accessories.	277	SM	9,500	2,631,500.00
	<u>INTERNAL WALL FINISHES</u>				
	<u>12 mm (minimum) two-coat plaster; 9 mm first coat of cement and sand (1:6), 3 mm second coat of cement and lime putty (1:10); steel trowelled smooth including skimming plastered surfaces to:</u>				
D	Beams, walls and column surfaces	1,886	SM	480	905,280.00
E	Soffites of suspended slab	1,265	SM	480	607,200.00
	<u>Prepare and apply three coats of first grade of silk acrylic vinyl paint or other equal and approved paint: on plastered surfaces: to</u>				
F	Plastered and rendered walls,beams and columns	1,886	SM	450	848,700.00
	<u>12 mm Cement and sand (1:4) backings:</u>				
G	Walls: finished to receive glazed tiles	332	SM	480	159,360.00
	<u>250x 400 x 6mm Thick ceramic wall tiles: on backings(m/s) with cement grout and point in matching cement grout: to</u>				
H	Walls	332	SM	1,780	590,960.00
J	Plastic beading for fair edges	128	LM	120	15,360.00
	<u>Lift Finish</u>				
	<u>12 mm Cement and sand (1:4) backings:</u>				
K	Walls: finished to receive glazed tiles	9	SM	480	4,320.00
	<u>12 mm thick coloured polished granite tiles: jointed and pointed with matching adhesive as described on:</u>				
L	Lift Walls	9	SM	12,000	108,000.00
	<u>Plaster; 15mm thick, 2 No. coat work, 12mm first coat of cement sand (1:3); 3mm second coat of cement and lime putty (1:9); steel trowelled to concrete or block work base generally to: -</u>				
M	Soffits of landing	14	SM	480	6,720.00
N	Ditto sloping Soffits of staircase and ramp	126	SM	480	60,480.00
P	Edges of landing and ramp	72	LM	100	7,200.00
	<u>Plaster; 15mm thick, 2 No. coat work, 12mm first coat of cement sand (1:3); 3mm second coat of cement and lime putty (1:9); steel trowelled to concrete or block work base generally to: -</u>				
Q	Soffits of landing	14	SM	480	6,720.00
R	Ditto sloping Soffits of staircase and ramp	126	SM	480	60,480.00
S	Edges of landing and ramp	49	LM	100	4,900.00
	Carried to collection				7,177,740.00

Item	Description	Quantity	Unit	Rate	Amount (kshs)
	<u>Prepare and apply three coats of silk acrylic vinyl paint by <i>Crown Paints</i> or other equal and approved, applied by roller on:</u>				
A	Soffits of landing	14	SM	480	6,720.00
B	Ditto sloping Soffits of staircase and ramp	126	SM	480	60,480.00
C	Edges of landing and ramp	49	SM	100	4,900.00
	<u>Ceiling</u>				
	<u>Acoustic suspended ceilings as Armstrong Tegular Dune or approved equivalent laid on "Donn T37" white epoxy coated exposed tee suspension system or approved equivalent including galvanised main tees, cross tees, hold-down clips, wedges, etc., all suspended with galvanised 19mm straps at not exceeding 1200mm centres strictly in accordance with the manufacturer's instructions as per architects details:</u>				
D	Horizontal suspended ceilings	694	SM	2,400	1,665,600.00
	<u>12mm thick gypsum board ceiling fixed to and including light weight aluminium furring channels plugged to sides and soffits of walls and slab, respectively : all works to be executed by an approved specialist</u>				
E	Horizontal suspended ceilings and bulkheads	486	SM	2,600	1,263,600.00
F	100 x 25mm moulded polysterene cornice	643	LM	210	135,030.00
	<u>Prepare and apply three coats of silk acrylic vinyl paint by <i>Crown Paints</i> or other equal and approved, applied by roller on:</u>				
G	Horizontal suspended ceilings	486	SM	480	233,280.00
H	Cornice	643	LM	100	64,300.00
	<u>Ramp and Staircase Balustrades</u>				
J	1000 mm long, 20mm diameter steel rods, fanged at one end built into concrete, other end welded and ground smooth	138	LM	1,500	207,000.00
	<u>Top and bottom rail</u>				
K	40 x 4mm thick steel flat welded and ground smooth to balustrades	227	LM	1,500	340,500.00
	<u>Intermediate rails</u>				
L	40 x 4mm thick steel flat welded and ground smooth to balustrades	227	LM	1,500	340,500.00
	<u>Wrot mahogany</u>				
M	100 x 50mm moulded handrail screwed to steel flat including countersinking and flush pelleting	114	LM	1,800	205,200.00
	Carried to collection				4,527,110.00

Item	Description	Quantity	Unit	Rate	Amount (kshs)
	<u>Painting and Decorations</u>				
	<u>To metal surfaces</u>				
	<u>One coat etching primer; one undercoat; two coats super gloss oil paint to "Crown Paints" or other equal and approved</u>				
A	Small pipes	454	LM	120	54,480.00
B	Frames; 100 to 200mm girth	138	LM	120	16,560.00
	<u>To wood surfaces</u>				
	<u>Knot, prime and stop, prepare and apply three coats of two pack polyurethane varnish on: -</u>				
C	Surfaces of handrail and skirting's over 100mm but not exceeding 200mm girth	114	LM	120	13,680.00
	Carried to collection				84,720.00
	COLLECTION				
	From page 4/8				4,427,085.00
	From page 4/9				7,177,740.00
	From page 4/10				4,527,110.00
	From page 4/11 above				84,720.00
	TOTAL FINISHES CARRIED TO SUMMARY PAGE				16,216,655.00

Item	Description	Quantity	Unit	Rate	Amount (kshs)
	<u>ELEMENT NO. 6</u>				
	<u>FITTINGS AND FIXTURES</u>				
	<u>In situ concrete class 15(19 mm aggregates): vibrated</u>				
A	50 mm Thick plinth	SM	11	850	9,350.00
	<u>In situ concrete class 20 (20 mm aggregate): vibrated: reinforced</u>				
B	100mm Thick suspended worktop	SM	11	1,000	11,000.00
	<u>Reinforcement (All Provisional)</u>				
C	B.R.C. mesh ref.No. A142 with and including 150mm (min) end and side laps.	SM	11	500	5,500.00
	<u>Steel/ sawn softwood formwork: to</u>				
D	Soffits of worktop	SM	11	400	4,400.00
E	Edges of floor slab: over 75 but not exceeding 150 mm high	LM	15	100	1,500.00
	<u>Machine cut stone walling with a minimum of 7.0 N/mm² average compressive strength to B.S 5390; bedded and jointed in cement and sand (1:4) mortar ;reinforced with 25 x 3 mm hick hoop iron strips at alternate courses to: -</u>				
F	100 mm Walls	SM	12	1,400	16,800.00
	<u>Gauged cement, lime, sand plaster (1:2:9) steel trowelled smooth as described in</u>				
G	15mm thick plaster to wall finished smooth	SM	12	480	5,760.00
H	Ditto suspended soffits of worktop	SM	11	480	5,280.00
	<u>Painting</u>				
	<u>Prepare surface and apply an undercoat and two finishing coats of Silk Vinyl paint on:</u>				
J	Plastered wall surfaces	SM	12	450	5,400.00
K	Ditto suspended soffits of worktop	SM	11	450	4,950.00
	<u>Worktop and plinth finish</u>				
	<u>25 mm thick cement and sand (1:4) screed to:</u>				
L	Plinth	SM	11	480	5,280.00
M	Worktop	SM	11	480	5,280.00
	Carried to collection				80,500.00

Item	Description	Quantity	Unit	Rate	Amount (kshs)
	<u>18mm Thick Granite: on backings(m/s) with approved adhesive: to</u>				
A	Screeded worktop	SM	11	12,000	132,000.00
B	100mm high fascia	LM	15	1,200	18,000.00
	<u>20mm thick double sides melamine faced MDF with 0.4mm thick melamine iron-on edge trims on all exposed edges</u>				
C	Walls	SM	11	2,800	30,800.00
D	600 x 775mm high door	NO	15	2,500	37,500.00
E	25 x 50mm wide Wrot cypress bearers plugged to walls with counter sunk screws	LM	139	250	34,750.00
F	Pneumatic soft close Malpa hinges	NO	30	480	14,400.00
G	150mm Satin finish Stainless steel pull handle	NO	15	450	6,750.00
H	150mm Sliding Stainless door lock latch	NO	15	650	9,750.00
	<u>Concrete benches</u>				
J	Concrete bench with terrazzo finish overall size 1825 x 800 x 675	NO	5	24,500	122,500.00
	Carried to collection				406,450
	COLLECTION				
	From page '4/12				80,500
	From page (Above)				406,450
	Total Fittings and Fixtures Carried to Summary Page				486,950

Item	Description	Quantity	Unit	Rate	Amount (kshs)
	ELEMENT NO. 7:				
	<u>BUILDERS WORK IN CONNECTION WITH SPECIALISTS SERVICES:</u>				
	<u>(All provisional)</u>				
	<u>Builder's work in connection with Electrical Installation:</u>				
	<u>Cut away for, make good and attend in all trades on the sub-contractor installing the following points, including associated switch points in concealed electrical system, including cutting all chases and holes, notching and boxing timber etc. making good all finishes and leave clean to satisfaction of the Architect:</u>				
A	Lighting points	78	NO	200	15,600.00
B	Socket outlets	24	NO	200	4,800.00
C	Conduits/ ducts	112	LM	200	22,400.00
	<u>Builder's work in connection with plumbing and drainage installation:</u>				
	<u>Cut away for, make good and attend in all trades on the subcontractor installing the following fittings, wastes under floor slabs, supply pipes fixed on walls including cutting holes, chases and making good finishes:</u>				
D	Wash hand basin	8	NO	350	2,800.00
E	Urinals	3	NO	350	1,050.00
F	Shower	6	NO	350	2,100.00
G	Low level W.C	6	NO	500	3,000.00
H	Small pipes chased in wall	18	LM	150	2,700.00
J	Cut or leave hole in 200 mm thick wall for small pipe	3	NO	100	300.00
K	Cut or leave hole in 150mm thick concrete slab for large pipe	5	NO	100	500.00
L	Ditto: small pipes	3	NO	100	300.00
	Total for BWIC with Services carried to Summary			Shs	55,550.00

Item	Description	Quantity	Unit	Rate	Amount (kshs)
	<u>FIRST FLOOR</u>				
	<u>SECTION 4</u>				
	1. Reinforced Concrete Superstructure		4/1		17,363,685.00
	2. Walling		4/3		6,211,300.00
	3. Windows		4/5		5,887,010.00
	4. Doors		4/7'		2,252,180.00
	5 Finishes		4/11'		16,216,655.00
	6. Fittings and Fixtures		4/13'		486,950.00
	7. BWIC with Services (Provisional)		4/14'		55,550.00
	<u>TOTAL CARRIED TO GRAND SUMMARY</u>			Kshs	48,473,330

Item	Description	Quantity	Unit	Rate	Amount(Kshs)
	SECOND FLOOR				
	ELEMENT NO. 1				
	REINFORCED CONCRETE SUPERSTRUCTURE				
	<u>Vibrated reinforced insitu concrete 25/20;minimum cube crushing of 25N/mm².</u>				
A	Ring beams	98	CM	15,500	1,519,000.00
B	Columns	28	CM	15,500	434,000.00
C	150mm thick suspended slab	1,180	SM	2,325	2,743,500.00
D	Stairs	5	CM	15,500	77,500.00
E	175mm thick suspended Ramp	54	SM	2,710	146,340.00
F	175mm thick suspended landing	14	SM	2,710	37,940.00
	<u>Vibrated reinforced insitu concrete class 30 (C30/M30) ;minimum cube crushing of 30N/mm².</u>				
G	200mm thick concrete wall (elevator shaft)	36	SM	4,120	148,320.00
	<u>Reinforcement (All Provisional)</u>				
	<u>Supply, cut, bend and fix the following reinforcement bars including tying wire, stirrups and spacer blocks to B.S. 4461</u>				
H	Assorted bars	51,712	KG	200	10,342,400.00
	<u>Marine Ply sawn formwork to:</u>				
J	Sides and soffits: beams	971	SM	690	669,990.00
K	Vertical sides of columns	403	SM	690	278,070.00
L	Soffites of openings	38	SM	690	26,220.00
M	Soffites of suspended slab	1,180	SM	690	814,200.00
N	Vertical sides of elevator shaft	36	SM	690	24,840.00
P	Edges of suspended slab 150-225mm girth	277	LM	180	49,860.00
	<u>Staircase and Ramp</u>				
Q	Soffites of stairs	72	SM	690	49,680.00
R	Soffites of landing	14	SM	690	9,660.00
S	Risers and steps,75-150mm girth	92	LM	130	11,960.00
T	Soffites of ramp	54	SM	690	37,260.00
U	Edges of ramp's waist;150-225mm girth	49	LM	180	8,820.00
	<u>Expansion Joint</u>				
V	Provide 25 mm thick styrofoam at every experntion joint which as shown in the structural drawings	59	SM	800	47,200.00
W	Provide and apply approved sealant on the expansion joints	98	LM	300	29,400.00
TOTAL REINFORCED CONCRETE CARRIED TO SUMMARY PAGE					17,429,560.00

Item	Description	Quantity	Unit	Rate	Amount(Kshs)
	ELEMENT NO. 2				
	WALLING				
	EXTERNAL WALLS				
	<u>Natural hard machine cut stone walling well dressed with a minimum of 7.1 N/mm² average compressive strength to B.S 5390; bedded and jointed in cement and sand (1:3) mortar ;reinforced with 25 x 3 mm hick hoop iron strips at alternate courses to: -</u>				
A	200 mm Thick machine cut walls	543	SM	2,200	1,194,600.00
	<u>Vent Blocks.</u>				
B	200mm thick pre-cast concrete louver vent block bedded and jointed in cement and sand (1:4) mortar.	127	Sm	1,800	228,600.00
	INTERNAL WALLS				
	<u>Natural hard machine cut stone walling well dressed with a minimum of 7.1 N/mm² average compressive strength to B.S 5390; bedded and jointed in cement and sand (1:3) mortar ;reinforced with 25 x 3 mm hick hoop iron strips at alternate courses to: -</u>				
C	200 mm Thick machine cut walls	101	SM	2,200	222,200.00
D	150mm thick ditto	652	SM	1,800	1,173,600.00
E	100mm thick ditto	93	SM	1,500	139,500.00
	<u>Curtain Wall</u>				
	<u>Supply, fabricate, deliver and fix aluminium curtain walling system ConWall™ CW60 or equal approved, comprising powder-coated aluminium mullions and transoms of adequate structural strength designed to resist all imposed loads including wind load and building height effects, with deflection limited to 1/175 of span. The system shall include concealed fixings, aluminium pressure plates and cover caps, EPDM gaskets, drainage and pressure equalisation provisions, and all necessary brackets, anchors, and accessories. Glazing to be 8mm thick laminated safety glass (or as specified), dry glazed to fixed panels, and structurally glazed operable vents with friction stay or approved equivalent opening mechanism. Include provision for thermal movement, fire stopping at floor levels, weather sealing, aluminium cills, and all associated ironmongery, sealants, and interface works with the structure. All works complete, tested, and installed in accordance with drawings, specifications, and manufacturer's recommendations.</u>				
G	Overall size 31050x5500mm mm high (W26)	1	NO	2,629,935	2,629,935.00
H	Overall size 2700x9100mm mm high (W23)	2	NO	378,378	756,756.00
	TOTAL WALLING CARRIED TO SUMMARY PAGE				6,345,191.00

Item	Description	Quantity	Unit	Rate	Amount(Kshs)
	ELEMENT NO. 3				
	WINDOWS				
	<u>Precast concrete units class 20 (19 mm aggregates):</u>				
A	265 x 75 mm Thick weathered and throated window cill: fair faced on exposed surfaces: bedded jointed and pointed in cement and sand (1:4) mortar	103	LM	650	66,950.00
	STEEL WINDOWS				
	<u>Supply and fix the following purpose made mild steel casement windows with 2.5 mm thick "Z" section framing, for both openable and fixed panels and 20x6mm thick flat bars burglar proofing at 150mm centres to the inside behind (M/S) the 25 mm T - sections ;window panes size 500 x 150mm high generally including all coupling mullions etc.; and complete with bronze handles, peg stays and other ironmongery; factory primed with red oxide primer including cutting and pinning fixing lugs to concrete or masonry work jambs; bedding in cement and sand (1:3) mortar, pointing all round frames in mastic, easing, oiling and adjusting opening lights on completion to Architect's details</u>				
B	Window size 5400mm x 1200mm mm high (W24)	1	NO	42,120	42,120.00
C	Window size 2000mm x 2100mm mm high (W2)	10	NO	27,300	273,000.00
D	Window size 1800mm x 2100mm mm high (W16)	15	NO	24,570	368,550.00
E	Window size 1600mm x 1200mm mm high (W25)	4	NO	12,480	49,920.00
F	Window size 800mm x 1200mm mm high (W22)	1	NO	6,240	6,240.00
	<u>Finishes at reveals</u>				
G	15mm thick cement sand render (1:3) to surfaces 100-200mm girth	136	LM	100	13,600.00
	<u>MILD STEEL, KS 02-18</u>				
H	Burglar proofing grille to suit opening composed of 20mm diameter x 3mm thick steel tubes framing all round and middle rail, infilled with 15mm diameter solid vertical bars at 125mm centres, all joints welded including all necessary hanging to wall and priming with red oxide	263	SM	4,000	1,052,000.00
	Carried to collection				1,872,380.00

Item	Description	Quantity	Unit	Rate	Amount(Kshs)
	<u>5mm Thick one way tinted sheet glass and glazing to metal with putty</u>				
A	In panes over 0.1 but not exceeding 0.5 square metres	232	SM	3,560	825,920.00
	<u>5mm Thick obscure sheet glass and glazing to metal with putty</u>				
B	In panes not exceeding 0.1 square metres;	31	SM	3,560	110,360.00
	<u>Painting and Decorating</u>				
	<u>Prepare, touch up primer and apply three coats gloss oil paint: on metal: to</u>				
C	General surfaces: windows (measured overall both sides)	526	SM	450	236,700.00
D	General surfaces: grilles (measured overall both sides)	526	SM	450	236,700.00
E	Prepare and apply three coats of first grade emulsion paint to rendered and plastered surfaces 100-200mm girth	136	LM	80	10,880.00
	<u>Curtain rail</u>				
F	"Silent Gliss" Standard I-section light duty brass single curtain track screwed to concrete/bock work with brass plated screws, one bracket runner per 75mm of rail, two end stops per length and complete accessories to approval	103	LM	1,500	154,500.00
G	Decorative basket ends to curtain rods	66	NO	250	16,500.00
	Carried to collection				1,591,560.00
	COLLECTION				
	From page 5/3				1,872,380.00
	From page 5/4(Above)				1,591,560.00
	TOTAL WINDOWS CARRIED TO SUMMARY PAGE				3,463,940.00

Item	Description	Quantity	Unit	Rate	Amount(Kshs)
	ELEMENT NO. 4				
	DOORS				
	Flush Door				
	<u>45 mm (finished) Semi-solid core flush door to BS 459 faced on both sides with 5 mm thick mahogany veneer and 15 mm x 15 mm hardwood beadings pinned and glued to door on both faces to form grids to architect's details and approval: hard wood lipped on all edges to approval:</u>				
A	Door size 900 x 2100mm high	17	NO	8,250	140,250.00
B	Door size 1200 mm x 2100 mm high - Swing door	6	NO	12,000	72,000.00
	Panel Door				
	<u>50 mm (finished) mahogany panel door comprising moulded and rebated 150 x 50 mm top rail, 150 x 50 mm stiles, and 200 x 50 mm bottom rail: in filled with 45 mm thick moulded panels alternated with 15 mm diameter wrought iron, tongued and grooved into stiles and rails: all joints glued and clamped including necessary reinforcement, beads and fixed in position as described in:</u>				
C	Double door size 1500x2700mm high	15	NO	60,750	911,250.00
D	Ditto but size 1200x2700mm high	2	NO	48,600	97,200.00
E	Single door size 900x2700mm high	26	NO	36,450	947,700.00
	<u>Mahogany Frames and linings : selected and kept clean</u>				
F	150 x 50 mm Frames: Three labours: plugged	313	LM	1,900	594,700.00
G	150 x 50mm transom with four labours	42	LM	1,900	79,800.00
H	Ditto mullion	11	LM	1,900	20,900.00
J	25 x 50 mm Architrave: screwed to frame and pelleted	313	LM	180	56,340.00
K	25 x 25 mm Quadrant beading: one labours: ditto	313	LM	150	46,950.00
	Carried to collection				2,967,090.00

Item	Description	Quantity	Unit	Rate	Amount(Kshs)
	<u>Iron mongery</u>				
	<u>Supply and fix the following ironmongery to timber complete with matching screws and keys as per 'UNION' manufacturers or other equal and approved.</u>				
A	100 mm high double washer brass butt hinges	116	PRS	490	56,840.00
B	5-Lever mortice lock and set of lever handle furniture	17	NO	9,500	161,500.00
C	3-Lever mortice lock and set of lever handle furniture	26	NO	5,260	136,760.00
D	DS-002-SNP SN Oval Satin nickel floor mounted door stop.	60	NO	1,500	90,000.00
E	Pressed steel indicator ref: 8094 bolt stop, Satin nickel finish	17	NO	2,700	45,900.00
F	Kick plate ref. KP- 800-200 AS	17	NO	5,500	93,500.00
G	Male or female pictogram ref. MS/SF - 150 - 75 SA	17	NO	2,500	42,500.00
H	Hat and Coat hook as 'Union 8704' with black rubber buffer	17	NO	850	14,450.00
J	Automatic heavy duty overhead door closer: 'LEB-241'	43	NO	9,500	408,500.00
K	Mortice bathroom lock as 'Union 2294' complete with brass handles	17	NO	2,500	42,500.00
L	Double action spring hinges	18	NO	1,450	26,100.00
	<u>Glazing</u>				
M	6mm Thick tinted sheet glass and glazing fanlight	30	SM	1,800	54,000.00
	<u>Painting and decorating</u>				
	<u>Thoroughly Prime backs of wood with one coat of approved primer before fixing: prepare and apply two coats of clear polyurethane varnish or other approved stain on:</u>				
N	Flush and panel doors: general surfaces	353	SM	450	158,850.00
P	Frame, Mullion & transome : not exceeding 300 mm girth	366	LM	130	47,580.00
Q	Architraves: not exceeding 100 mm girth	313	LM	40	12,520.00
R	Quadrant beading : not exceeding 100 mm girth	313	LM	40	12,520.00
	Carried to collection				1,404,020.00
	COLLECTION				
	From page 5/5				2,967,090.00
	From page 5/6(Above)				1,404,020.00
	TOTAL DOORS CARRIED TO SUMMARY PAGE				4,371,110.00

Item	Description	Quantity	Unit	Rate	Amount(Kshs)
	ELEMENT NO. 5				
	FINISHES				
	FLOOR FINISHES				
	WET AREAS				
	Cement and sand (1:3) screeds, backings, beds etc				
A	32 mm Thick to receive Ceramic tiles (measured separately)	112	SM	480	53,760.00
	<u>Approved matt ceramic tiles to B.S. 1281; local; non-slip floor tiles to regular or approved other pattern; bedding and jointing in cement sand (1:4) mortar, grouting with white cement</u>				
B	400 x 400 x 8mm thick floors	112	SM	2,200	246,400.00
C	20 mm x 100 mm high skirting squared at top and coved at junction with floor	88	LM	220	19,360.00
D	Labour in cutting and raking around corners	42	LM	250	10,500.00
	Floor Screeding				
	Cement and sand (1:3) screeds, backings, beds etc				
E	25 mm Thick to receive Terrazzo floor finish (measured separately)	906	SM	480	434,880.00
F	30x300mm wide paving to treads	96	LM	150	14,400.00
G	30x150mm high risers	15	LM	75	1,125.00
H	10x150mm high skirting	588	LM	50	29,400.00
J	Ditto to profile of treads and risers	15	LM	50	750.00
	Terrazzo Floor finish				
K	15mm thick monolithic floor finish from approved sources;Approved colour;cement and marble chippings (1;2);complete with and including plastic dividings strips set flush with paving;Washed and machine polished.	906	SM	2,600	2,355,600.00
L	30x300mm wide paving to treads	96	LM	450	43,200.00
M	30x150mm high risers	15	LM	200	3,000.00
N	10x150mm high skirting	588	LM	100	58,800.00
P	Ditto to profile of treads and risers	15	LM	100	1,500.00
Q	Surface of ramp	53	SM	2,600	137,800.00
R	Skirting of ramp	62	LM	200	12,400.00
S	Extra over treads for non-slip caborandum strip.	325	LM	100	32,500.00
	Carried to collection				3,455,375.00

Item	Description	Quantity	Unit	Rate	Amount(Kshs)
	<u>Epoxy Flooring</u>				
A	Prepare concrete floor surface and apply 5mm thick seamless hospital-grade self-levelling epoxy resin flooring system, chemical and stain resistant, including mechanical surface preparation, primer coat, body coat, top seal coat, curing, and all necessary accessories, complete in accordance with manufacturer's specifications.	162	SM	6,640	1,075,680.00
	<u>EXTERNAL WALL FINISHES</u>				
	<u>15 mm Thick cement sand (1:3) render: wood floated: on concrete or block work: to</u>				
B	Beams, walls and column surfaces	543	SM	480	260,640.00
	<u>Prepare and apply one coat of exterior quality Ruff n Tuff paint by Crown Paints or other equal and approved on:</u>				
C	Rendered wall surfaces	543	SM	1,300	705,900.00
	<u>INTERNAL WALL FINISHES</u>				
	<u>12 mm (minimum) two-coat plaster; 9 mm first coat of cement and sand (1:6), 3 mm second coat of cement and lime putty (1:10); steel trowelled smooth including skimming plastered surfaces to:</u>				
D	Beams, walls and column surfaces	2,235	SM	480	1,072,800.00
E	Soffites of suspended slab	906	SM	480	434,880.00
	<u>Prepare and apply three coats of first grade of silk acrylic vinyl paint or other equal and approved paint: on plastered surfaces: to</u>				
F	Plastered and rendered walls,beams and columns	2,235	SM	450	1,005,750.00
G	Soffites of suspended slab	906	SM	450	407,700.00
	<u>12 mm Cement and sand (1:4) backings:</u>				
H	Walls: finished to receive glazed tiles	332	SM	480	159,360.00
	<u>250x 400 x 6mm Thick ceramic wall tiles: on backings(m/s) with cement grout and point in matching cement grout: to</u>				
J	Walls	332	SM	1,780	590,960.00
K	Plastic beading for fair edges	128	LM	120	15,360.00
	<u>Lift Finish</u>				
	<u>12 mm Cement and sand (1:4) backings:</u>				
L	Walls: finished to receive glazed tiles	9	SM	480	4,320.00
	<u>12 mm thick coloured polished granite tiles: jointed and pointed with matching adhesive as described on:</u>				
M	Lift Walls	9	SM	12,000	108,000.00
	<u>Plaster; 15mm thick, 2 No. coat work, 12mm first coat of cement sand (1:3); 3mm second coat of cement and lime putty (1:9); steel trowelled to concrete or block work base generally to: -</u>				
N	Soffits of landing	14	SM	480	6,720.00
P	Ditto sloping Soffits of staircase and ramp	126	SM	480	60,480.00
Q	Edges of landing and ramp	49	LM	100	4,900.00
	Carried to collection				5,913,450.00

Item	Description	Quantity	Unit	Rate	Amount(Kshs)
	<u>Prepare and apply three coats of silk acrylic vinyl paint by <i>Crown Paints</i> or other equal and approved, applied by roller on:</u>				
A	Soffits of landing	14	SM	450	6,300.00
B	Ditto sloping Soffits of staircase and ramp	126	SM	450	56,700.00
C	Edges of landing and ramp	49	SM	100	4,900.00
	<u>Ceiling</u>				
	<u>Acoustic suspended ceilings as Armstrong Tegular Dune or approved equivalent laid on "Donn T37" white epoxy coated exposed tee suspension system or approved equivalent including galvanised main tees, cross tees, hold-down clips, wedges, etc., all suspended with galvanised 19mm straps at not exceeding 1200mm centres strictly in accordance with the manufacturer's instructions as per architects details:</u>				
D	Horizontal suspended ceilings	694	SM	2,400	1,665,600.00
	<u>12mm thick gypsum board ceiling fixed to and including light weight aluminium furring channels plugged to sides and soffits of walls and slab, respectively : all works to be executed by an approved specialist</u>				
E	Horizontal suspended ceilings and bulkheads	486	SM	2,600	1,263,600.00
F	100 x 25mm moulded polysterene cornice	588	LM	210	123,480.00
	<u>Ramp and Staircase Balustrades</u>				
D	1000 mm long, 20mm diameter steel rods, fanged at one end built into concrete, other end welded and ground smooth	138	LM	1,500	207,000.00
	<u>Top and bottom rail</u>				
G	40 x 4mm thick steel flat welded and ground smooth to balustrades	227	LM	1,500	340,500.00
	<u>Intermediate rails</u>				
H	40 x 4mm thick steel flat welded and ground smooth to balustrades	227	LM	1,500	340,500.00
	<u>Wrot mahogany</u>				
J	100 x 50mm moulded handrail screwed to steel flat including countersinking and flush pelleting	114	LM	1,800	205,200.00
	Carried to collection				4,213,780.00

Item	Description	Quantity	Unit	Rate	Amount(Kshs)
	<u>Painting and Decorations</u>				
	<u>To metal surfaces</u>				
	<u>One coat etching primer; one undercoat; two coats super gloss oil paint to "Crown Paints" or other equal and approved</u>				
A	Small pipes	454	LM	120	54,480.00
B	Frames; 100 to 200mm girth	138	LM	120	16,560.00
	<u>To wood surfaces</u>				
	<u>Knot, prime and stop, prepare and apply three coats of two pack polyurethane varnish on: -</u>				
C	Surfaces of handrail and skirting's over 100mm but not exceeding 200mm girth	114	LM	120	13,680.00
	Carried to collection				84,720.00
	COLLECTION				
	From page 5/7				3,455,375.00
	From page 5/8				5,913,450.00
	From page 5/9				4,213,780.00
	From page 5/10 above				84,720.00
	TOTAL FINISHES CARRIED TO SUMMARY PAGE				13,667,325.00

Item	Description	Quantity	Unit	Rate	Amount(Kshs)
	<u>ELEMENT NO. 6</u>				
	<u>FITTINGS AND FIXTURES</u>				
	<u>In situ concrete class 15(19 mm aggregates): vibrated</u>				
A	50 mm Thick plinth	SM	7	850	5,950.00
	<u>In situ concrete class 20 (20 mm aggregate): vibrated: reinforced</u>				
B	100mm Thick suspended worktop	SM	7	1,000	7,000.00
	<u>Reinforcement (All Provisional)</u>				
C	B.R.C. mesh ref.No. A142 with and including 150mm (min) end and side laps.	SM	7	500	3,500.00
	<u>Steel/ sawn softwood formwork: to</u>				
D	Soffits of worktop	SM	7	400	2,800.00
E	Edges of floor slab: over 75 but not exceeding 150 mm high	LM	10	100	1,000.00
	<u>Machine cut stone walling with a minimum of 7.0 N/mm² average compressive strength to B.S 5390; bedded and jointed in cement and sand (1:4) mortar ;reinforced with 25 x 3 mm hick hoop iron strips at alternate courses to: -</u>				
F	100 mm Walls	SM	9	1,400	12,600.00
	<u>Gauged cement, lime, sand plaster (1:2:9) steel trowelled smooth as described in</u>				
G	15mm thick plaster to wall finished smooth	SM	9	480	4,320.00
H	Ditto suspended soffits of worktop	SM	7	480	3,360.00
	<u>Painting</u>				
	<u>Prepare surface and apply an undercoat and two finishing coats of Silk Vinyl paint on:</u>				
J	Plastered wall surfaces	SM	9	450	4,050.00
K	Ditto suspended soffits of worktop	SM	7	450	3,150.00
	<u>Worktop and plinth finish</u>				
	<u>25 mm thick cement and sand (1:4) screed to:</u>				
L	Plinth	SM	7	480	3,360.00
M	Worktop	SM	7	480	3,360.00
	Carried to collection				54,450.00

Item	Description	Quantity	Unit	Rate	Amount(Kshs)
<u>18mm Thick Granite: on backings(m/s) with approved adhesive: to</u>					
A	Screeded worktop	SM	7	12,000	84,000.00
B	100mm high fascia	LM	10	1,200	12,000.00
<u>20mm thick double sides melamine faced MDF with 0.4mm thick melamine iron-on edge trims on all exposed edges</u>					
C	Walls	SM	7	2,800	19,600.00
D	600 x 775mm high door	NO	10	2,500	25,000.00
E	25 x 50mm wide Wrot cypress bearers plugged to walls with counter sunk screws	LM	93	250	23,250.00
F	Pneumatic soft close Malpa hinges	NO	20	480	9,600.00
G	150mm Satin finish Stainless steel pull handle	NO	10	450	4,500.00
H	150mm Sliding Stainless door lock latch	NO	10	650	6,500.00
<u>Concrete benches</u>					
J	Concrete bench with terrazzo finish overall size 1825 x 800 x 675	NO	5	24,500	122,500.00
Carried to collection					306,950
COLLECTION					
From page '4/11					54,450
From page (Above)					306,950
Total Fittings and Fixtures Carried to Summary Page					361,400

Item	Description	Quantity	Unit	Rate	Amount(Kshs)
	ELEMENT NO. 7:				
	<u>BUILDERS WORK IN CONNECTION WITH SPECIALISTS SERVICES:</u>				
	<u>(All provisional)</u>				
	<u>Builder's work in connection with Electrical Installation:</u>				
	<u>Cut away for, make good and attend in all trades on the sub-contractor installing the following points, including associated switch points in concealed electrical system, including cutting all chases and holes, notching and boxing timber etc. making good all finishes and leave clean to satisfaction of the Architect:</u>				
A	Lighting points	78	NO	200	15,600.00
B	Socket outlets	24	NO	200	4,800.00
C	Conduits/ducts	112	LM	200	22,400.00
	<u>Builder's work in connection with plumbing and drainage installation:</u>				
	<u>Cut away for, make good and attend in all trades on the subcontractor installing the following fittings, wastes under floor slabs, supply pipes fixed on walls including cutting holes, chases and making good finishes:</u>				
D	Wash hand basin	8	NO	350	2,800.00
E	Urinals	3	NO	350	1,050.00
F	Shower	6	NO	350	2,100.00
G	Low level W.C	6	NO	500	3,000.00
H	Small pipes chased in wall	18	LM	150	2,700.00
J	Cut or leave hole in 200 mm thick wall for small pipe	3	NO	100	300.00
K	Cut or leave hole in 150mm thick concrete slab for large pipe	5	NO	100	500.00
L	Ditto: small pipes	3	NO	100	300.00
	Total for BWIC with Services carried to Summary			Shs	55,550.00

Item	Description	Quantity	Unit	Rate	Amount(Kshs)
	<u>SECOND FLOOR</u>				
	<u>SECTION 5</u>				
	1. Reinforced Concrete Superstructure		5/1		17,429,560.00
	2. Walling		5/2		6,345,191.00
	3. Windows		5/4		3,463,940.00
	4. Doors		5/6'		4,371,110.00
	5 Finishes		5/10'		13,667,325.00
	6. Fittings and Fixtures		5/12'		361,400.00
	7. BWIC with Services (Provisional)		5/13'		55,550.00
	<u>TOTAL CARRIED TO GRAND SUMMARY</u>			Kshs	45,694,076.00

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
THIRD FLOOR					
ELEMENT NO. 1					
REINFORCED CONCRETE SUPERSTRUCTURE					
<u>Vibrated reinforced insitu concrete 25/20;minimum cube crushing of 25N/mm².</u>					
A	Ring beams	98	CM	15,500	1,519,000.00
B	Columns	28	CM	15,500	434,000.00
C	150mm thick suspended slab	1,288	SM	2,325	2,994,600.00
D	Stairs	5	CM	15,500	77,500.00
E	175mm thick suspended Ramp	54	SM	2,710	146,340.00
F	175mm thick suspended landing	14	SM	2,710	37,940.00
<u>Vibrated reinforced insitu concrete class 30 (C30/M30) ;minimum cube crushing of 30N/mm².</u>					
G	200mm thick concrete wall (elevator shaft)	36	SM	4,120	148,320.00
<u>Reinforcement (All Provisional)</u>					
<u>Supply, cut, bend and fix the following reinforcement bars including tying wire, stirrups and spacer blocks to B.S. 4461</u>					
H	Assorted bars	54,291	KG	200	10,858,200.00
<u>Marine Ply sawn formwork to;</u>					
J	Sides and soffits: beams	971	SM	690	669,990.00
K	Vertical sides of columns	403	SM	690	278,070.00
L	Soffites of openings	38	SM	690	26,220.00
M	Soffites of suspended slab	1,288	SM	690	888,720.00
N	Vertical sides of elevator shaft	36	SM	690	24,840.00
P	Edges of suspended slab 150-225mm girth	277	LM	180	49,860.00
<u>Staircase and Ramp</u>					
Q	Soffites of stairs	72	SM	690	49,680.00
R	Soffites of landing	14	SM	690	9,660.00
S	Risers and steps,75-150mm girth	92	LM	130	11,960.00
T	Soffites of ramp	54	SM	690	37,260.00
U	Edges of ramp's waist;150-225mm girth	49	LM	180	8,820.00
TOTAL REINFORCED CONCRETE CARRIED TO SUMMARY PAGE					18,270,980.00

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
	<u>ELEMENT NO. 2</u>				
	<u>WALLING</u>				
	<u>EXTERNAL WALLS</u>				
	<u>Natural hard machine cut stone walling well dressed with a minimum of 7.1 N/mm² average compressive strength to B.S 5390; bedded and jointed in cement and sand (1:3) mortar ;reinforced with 25 x 3 mm hick hoop iron strips at alternate courses to: -</u>				
A	200 mm Thick machine cut walls	633	SM	2,200	1,392,600.00
	<u>Vent Blocks.</u>				
B	200mm thick pre-cast concrete louver vent block bedded and jointed in cement and sand (1:4) mortar.	92	Sm	1,800	165,600.00
	<u>INTERNAL WALLS</u>				
	<u>Natural hard machine cut stone walling well dressed with a minimum of 7.1 N/mm² average compressive strength to B.S 5390; bedded and jointed in cement and sand (1:3) mortar ;reinforced with 25 x 3 mm hick hoop iron strips at alternate courses to: -</u>				
C	200 mm Thick machine cut walls	596	SM	2,200	1,311,200.00
D	150mm thick ditto	267	SM	1,800	480,600.00
E	100mm thick ditto	123	SM	1,500	184,500.00
F	Provide 25 mm thick styrofoam at every expansion joint which as shown in the structural drawings	59	SM	800	47,200.00
G	Provide and apply approved sealant on the expansion joints	98	LM	300	29,400.00
	TOTAL WALLING CARRIED TO SUMMARY PAGE				3,611,100.00

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
	ELEMENT NO. 3				
	WINDOWS				
	<u>Precast concrete units class 20 (19 mm aggregates):</u>				
A	265 x 75 mm Thick weathered and throated window cill: fair faced on exposed surfaces: bedded jointed and pointed in cement and sand (1:4) mortar	61	LM	650	39,650.00
	STEEL WINDOWS				
	<u>Supply and fix the following purpose made mild steel casement windows with 2.5 mm thick "Z" section framing, for both openable and fixed panels and 20x6mm thick flat bars burglar proofing at 150mm centres to the inside behind (M/S) the 25 mm T-sections ;window panes size 500 x 150mm high generally including all coupling mullions etc.; and complete with bronze handles, peg stays and other ironmongery; factory primed with red oxide primer including cutting and pinning fixing lugs to concrete or masonry work jambs; bedding in cement and sand (1:3) mortar, pointing all round frames in mastic, easing, oiling and adjusting opening lights on completion to Architect's details</u>				
B	Window size 7200x1200mm mm high (W29)	1	NO	56,160	56,160.00
C	Window size 3000x2100mm mm high (W28)	5	NO	40,950	204,750.00
D	Window size 1800mm x 2100mm mm high (W16)	16	NO	24,570	393,120.00
E	Window size 3000mm x 1200mm mm high (W13)	1	NO	23,400	23,400.00
	<u>Finishes at reveals</u>				
F	15mm thick cement sand render (1:3) to surfaces 100-200mm girth	160	LM	100	16,000.00
	MILD STEEL, KS 02-18				
G	Burglar proofing grille to suit opening composed of 20mm diameter x 3mm thick steel tubes framing all round and middle rail, infilled with 15mm diameter solid vertical bars at 125mm centres, all joints welded including all necessary hanging to wall and priming with red oxide	119	SM	4,000	476,000.00
	Carried to collection				733,080.00

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
A	<u>5mm Thick one way tinted sheet glass and glazing to metal with putty</u> In panes over 0.1 but not exceeding 0.5 square metres	104	SM	3,560	370,240.00
B	<u>5mm Thick obscure sheet glass and glazing to metal with putty</u> In panes not exceeding 0.1 square metres;	15	SM	3,560	53,400.00
	<u>Painting and Decorating</u>				
	<u>Prepare, touch up primer and apply three coats gloss oil paint: on metal: to</u>				
C	General surfaces: windows (measured overall both sides)	238	SM	450	107,100.00
D	General surfaces: grilles (measured overall both sides)	238	SM	450	107,100.00
E	Prepare and apply three coats of first grade emulsion paint to rendered and plastered surfaces 100-200mm girth	160	LM	80	12,800.00
	<u>Curtain rail</u>				
F	"Silent Gliss" Standard I-section light duty brass single curtain track screwed to concrete/bock work with brass plated screws, one bracket runner per 75mm of rail, two end stops per length and complete accessories to approval	61	LM	1,500	91,500.00
G	Decorative basket ends to curtain rods	46	NO	250	11,500.00
	Carried to collection				753,640.00
	COLLECTION				
	From page 6/3				733,080.00
	From page 6/4(Above)				753,640.00
	TOTAL WINDOWS CARRIED TO SUMMARY PAGE				1,486,720.00

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
	<u>ELEMENT NO. 4</u>				
	<u>DOORS</u>				
	<u>Flush Door</u>				
	<u>45 mm (finished) Semi-solid core flush door to BS 459 faced on both sides with 5 mm thick mahogany veneer and 15 mm x 15 mm hardwood beadings pinned and glued to door on both faces to form grids to architect's details and approval: hard wood lipped on all edges to approval:</u>				
A	Door size 900 x 2100mm high (D6)	8	NO	8,250	66,000.00
B	Door size 1200 mm x 2100 mm high - Swing door (D11)	4	NO	12,000	48,000.00
	<u>Panel Door</u>				
	<u>50 mm (finished) mahogany panel door comprising moulded and rebated 150 x 50 mm top rail, 150 x 50 mm stiles, and 200 x 50 mm bottom rail: in filled with 45 mm thick moulded panels alternated with 15 mm diameter wrought iron, tongued and grooved into stiles and rails: all joints glued and clamped including necessary reinforcement, beads and fixed in position as described in:</u>				
A	Double door size 1500x2700mm high (D10)	7	NO	60,750	425,250.00
B	Single door size 900x2700mm high (D8&D9)	53	NO	36,450	1,931,850.00
	<u>Mahogany Frames and linings : selected and kept clean</u>				
C	150 x 50 mm Frames: Three labours: plugged	421	LM	1,900	799,900.00
D	150 x 50mm transom with four labours	59	LM	1,900	112,100.00
E	Ditto mullion	4	LM	1,900	7,600.00
F	25 x 50 mm Architrave: screwed to frame and pelleted	421	LM	180	75,780.00
G	25 x 25 mm Quadrant beading: one labours: ditto	421	LM	150	63,150.00
	Carried to collection				3,529,630.00

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
	<u>Iron mongery</u>				
	<u>Supply and fix the following ironmongery to timber complete with matching screws and keys as per 'UNION' manufacturers or other equal and approved.</u>				
A	100 mm high double washer brass butt hinges	113	PRS	490	55,370.00
B	5-Lever mortice lock and set of lever handle furniture	7	NO	9,500	66,500.00
C	3-Lever mortice lock and set of lever handle furniture	53	NO	5,260	278,780.00
D	DS-002-SNP SN Oval Satin nickel floor mounted door stop.	79	NO	1,500	118,500.00
E	Pressed steel indicator ref: 8094 bolt stop, Satin nickel finish	33	NO	2,700	89,100.00
F	Kick plate ref. KP- 800-200 AS	33	NO	5,500	181,500.00
G	Male or female pictogram ref. MS/SF - 150 - 75 SA	33	NO	2,500	82,500.00
H	Hat and Coat hook as 'Union 8704' with black rubber buffer	33	NO	850	28,050.00
J	Automatic heavy duty overhead door closer: 'LEB-241'	60	NO	9,500	570,000.00
K	Mortice bathroom lock as 'Union 2294' complete with brass handles	33	NO	2,500	82,500.00
L	Double action spring hinges	12	NO	1,450	17,400.00
	<u>Glazing</u>				
M	6mm Thick tinted sheet glass and glazing fanlight	30	SM	1,800	54,000.00
	<u>Painting and decorating</u>				
	<u>Thoroughly Prime backs of wood with one coat of approved primer before fixing: prepare and apply two coats of clear polyurethane varnish or other approved stain on:</u>				
N	Flush and panel doors: general surfaces	365	SM	450	164,250.00
P	Frame, Mullion & transome : not exceeding 300 mm girth	484	LM	130	62,920.00
Q	Architraves: not exceeding 100 mm girth	421	LM	40	16,840.00
R	Quadrant beading : not exceeding 100 mm girth	421	LM	40	16,840.00
	Carried to collection				1,885,050.00
	COLLECTION				
	From page 6/5				3,529,630.00
	From page 6/6(Above)				1,885,050.00
	TOTAL DOORS CARRIED TO SUMMARY PAGE				5,414,680.00

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
	ELEMENT NO. 5				
	FINISHES				
	FLOOR FINISHES				
	WET AREAS				
	<u>Cement and sand (1:3) screeds, backings, beds etc</u>				
A	32 mm Thick to receive Ceramic tiles (measured separately)	302	SM	480	144,960.00
	<u>Approved matt ceramic tiles to B.S. 1281; local; non-slip floor tiles to regular or approved other pattern; bedding and jointing in cement sand (1:4) mortar, grouting with white cement</u>				
B	400 x 400 x 8mm thick floors	302	SM	2,200	664,400.00
C	20 mm x 100 mm high skirting squared at top and coved at junction with floor	166	LM	220	36,520.00
D	Labour in cutting and raking around corners	36	LM	250	9,000.00
	Floor Screeding				
	<u>Cement and sand (1:3) screeds, backings, beds etc</u>				
E	25 mm Thick to receive Terrazzo floor finish (measured separately)	815	SM	480	391,200.00
F	30x300mm wide paving to treads	96	LM	150	14,400.00
G	30x150mm high risers	15	LM	75	1,125.00
H	10x150mm high skirting	588	LM	50	29,400.00
J	Ditto to profile of treads and risers	15	LM	50	750.00
	Terrazzo Floor finish				
K	15mm thick monolithic floor finish from approved sources; Approved colour; cement and marble chippings (1:2); complete with and including plastic dividing strips set flush with paving; Washed and machine polished.	815	SM	2,600	2,119,000.00
L	30x300mm wide paving to treads	96	LM	450	43,200.00
M	30x150mm high risers	15	LM	200	3,000.00
N	10x150mm high skirting	588	LM	100	58,800.00
P	Ditto to profile of treads and risers	15	LM	100	1,500.00
Q	Surface of ramp	53	SM	2,600	137,800.00
R	Skirting of ramp	62	LM	200	12,400.00
S	Extra over treads for non-slip caborandum strip.	325	LM	100	32,500.00
	Carried to collection				3,699,955.00

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
	<u>Epoxy Flooring</u>				
A	Prepare concrete floor surface and apply 5mm thick seamless hospital-grade self-levelling epoxy resin flooring system, chemical and stain resistant, including mechanical surface preparation, primer coat, body coat, top seal coat, curing, and all necessary accessories, complete in accordance with manufacturer's specifications.	63	SM	6,640	418,320.00
	<u>EXTERNAL WALL FINISHES</u>				
	<u>15 mm Thick cement sand (1:3) render: wood floated: on concrete or block work: to</u>				
B	Beams, walls and column surfaces	633	SM	480	303,840.00
	<u>Prepare and apply one coat of exterior quality Ruff n Tuff paint by Crown Paints or other equal and approved on:</u>				
C	Rendered wall surfaces <u>INTERNAL WALL FINISHES</u>	633	SM	1,300	822,900.00
	<u>12 mm (minimum) two-coat plaster; 9 mm first coat of cement and sand (1:6), 3 mm second coat of cement and lime putty (1:10); steel trowelled smooth including skimming plastered surfaces to:</u>				
D	Beams, walls and column surfaces	2,605	SM	480	1,250,400.00
E	Soffites of suspended slab	1,279	SM	480	613,920.00
	<u>Prepare and apply three coats of first grade of silk acrylic vinyl paint or other equal and approved paint: on plastered surfaces: to</u>				
F	Plastered and rendered walls, beams and columns	2,605	SM	450	1,172,250.00
G	Soffites of suspended slab	1,279	SM	450	575,550.00
	<u>12 mm Cement and sand (1:4) backings:</u>				
H	Walls: finished to receive glazed tiles	332	SM	480	159,360.00
	<u>250x 400 x 6mm Thick ceramic wall tiles: on backings(m/s) with cement grout and point in matching cement grout: to</u>				
J	Walls	332	SM	1,780	590,960.00
K	Plastic beading for fair edges	158	LM	120	18,960.00
	<u>Lift Finish</u>				
	<u>12 mm Cement and sand (1:4) backings:</u>				
L	Walls: finished to receive glazed tiles	9	SM	480	4,320.00
	<u>12 mm thick coloured polished granite tiles: jointed and pointed with matching adhesive as described on:</u>				
M	Lift Walls	9	SM	12,000	108,000.00
	<u>Plaster; 15mm thick, 2 No. coat work, 12mm first coat of cement sand (1:3); 3mm second coat of cement and lime putty (1:9); steel trowelled to concrete or block work base generally to: -</u>				
M	Soffits of landing	14	SM	480	6,720.00
N	Ditto sloping Soffits of staircase and ramp	126	SM	480	60,480.00
P	Edges of landing and ramp	49	LM	100	4,900.00
	Carried to collection				6,110,880.00

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
	<u>Prepare and apply three coats of silk acrylic vinyl paint by <i>Crown Paints</i> or other equal and approved, applied by roller on:</u>				
A	Soffits of landing	14	SM	450	6,300.00
B	Ditto sloping Soffits of staircase and ramp	126	SM	450	56,700.00
C	Edges of landing and ramp	49	SM	100	4,900.00
	<u>Ceiling</u>				
	<u>Acoustic suspended ceilings as Armstrong Tegular Dune or approved equivalent laid on "Donn T37 " white epoxy coated exposed tee suspension system or approved equivalent including galvanised main tees, cross tees, hold-down clips, wedges, etc., all suspended with galvanised 19mm straps at not exceeding 1200mm centres strictly in accordance with the manufacturer's instructions as per architects details:</u>				
D	Horizontal suspended ceilings	802	SM	2,400	1,924,800.00
	<u>12mm thick gypsum board ceiling fixed to and including light weight aluminium furring channels plugged to sides and soffits of walls and slab , respectively : all works to be executed by an approved specialist</u>				
E	Horizontal suspended ceilings and bulkheads	486	SM	2,600	1,263,600.00
F	100 x 25mm moulded polysterene cornice	588	LM	210	123,480.00
	<u>Ramp and Staircase Balustrades</u>				
G	1000 mm long, 20mm diameter steel rods, fanged at one end built into concrete, other end welded and ground smooth	61	LM	1,500	91,500.00
	<u>Top and bottom rail</u>				
H	40 x 4mm thick steel flat welded and ground smooth to balustrades	99	LM	1,500	148,500.00
	<u>Intermediate rails</u>				
J	40 x 4mm thick steel flat welded and ground smooth to balustrades	99	LM	1,500	148,500.00
	<u>Wrot mahogany</u>				
K	100 x 50mm moulded handrail screwed to steel flat including countersinking and flush pelleting	50	LM	1,800	90,000.00
	Carried to collection				3,858,280.00

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
	<u>Painting and Decorations</u>				
	<u>To metal surfaces</u>				
	<u>One coat etching primer; one undercoat; two coats super gloss oil paint to "Crown Paints" or other equal and approved</u>				
A	Small pipes	198	LM	120	23,760.00
B	Frames; 100 to 200mm girth	61	LM	120	7,320.00
	<u>To wood surfaces</u>				
	<u>Knot, prime and stop, prepare and apply three coats of two pack polyurethane varnish on: -</u>				
C	Surfaces of handrail and skirting's over 100mm but not exceeding 200mm girth	50	LM	120	6,000.00
	Carried to collection				37,080.00
	COLLECTION				
	From page 6/7				3,699,955.00
	From page 6/8				6,110,880.00
	From page 6/9				3,858,280.00
	From page 6/10				37,080.00
	TOTAL FINISHES CARRIED TO SUMMARY PAGE				13,706,195.00

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
	<u>ELEMENT NO. 6</u>				
	<u>FITTINGS AND FIXTURES</u>				
	<u>In situ concrete class 15(19 mm aggregates): vibrated</u>				
A	50 mm Thick plinth	SM	21	850	17,850.00
	<u>In situ concrete class 20 (20 mm aggregate): vibrated: reinforced</u>				
B	100mm Thick suspended worktop	SM	21	1,000	21,000.00
	<u>Reinforcement (All Provisional)</u>				
C	B.R.C. mesh ref.No. A142 with and including 150mm (min) end and side laps.	SM	21	500	10,500.00
	<u>Steel/ sawn softwood formwork: to</u>				
D	Soffits of worktop	SM	21	400	8,400.00
E	Edges of floor slab: over 75 but not exceeding 150 mm high	LM	29	100	2,900.00
	<u>Machine cut stone walling with a minimum of 7.0 N/mm² average compressive strength to B.S 5390; bedded and jointed in cement and sand (1:4) mortar ;reinforced with 25 x 3 mm hick hoop iron strips at alternate courses to: -</u>				
F	100 mm Walls	SM	23	1,400	32,200.00
	<u>Gauged cement, lime, sand plaster (1:2:9) steel trowelled smooth as described in</u>				
G	15mm thick plaster to wall finished smooth	SM	23	480	11,040.00
H	Ditto suspended soffits of worktop	SM	21	480	10,080.00
	<u>Painting</u>				
	<u>Prepare surface and apply an undercoat and two finishing coats of Silk Vinyl paint on:</u>				
J	Plastered wall surfaces	SM	23	450	10,350.00
K	Ditto suspended soffits of worktop	SM	21	450	9,450.00
	<u>Worktop and plinth finish</u>				
	<u>25 mm thick cement and sand (1:4) screed to:</u>				
L	Plinth	SM	21	480	10,080.00
M	Worktop	SM	21	480	10,080.00
	Carried to collection				153,930.00

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
	<u>18mm Thick Granite: on backings(m/s) with approved adhesive: to</u>				
A	Screeded worktop	SM	21	12,000	252,000.00
B	100mm high fascia	LM	29	1,200	34,800.00
	<u>20mm thick double sides melamine faced MDF with 0.4mm thick melamine iron-on edge trims on all exposed edges</u>				
C	Walls	SM	21	2,800	58,800.00
D	600 x 775mm high door	NO	29	2,500	72,500.00
E	25 x 50mm wide Wrot cypress bearers plugged to walls with counter sunk screws	LM	269	250	67,250.00
F	Pneumatic soft close Malpa hinges	NO	58	480	27,840.00
G	150mm Satin finish Stainless steel pull handle	NO	29	450	13,050.00
H	150mm Sliding Stainless door lock latch	NO	29	650	18,850.00
	<u>Concrete benches</u>				
J	Concrete bench with terrazzo finish overall size 1825 x 800 x 675	NO	5	24,500	122,500.00
	Carried to collection				667,590.00
	COLLECTION				
	From page '4/11				153,930.00
	From page (Above)				667,590.00
	Total Fittings and Fixtures Carried to Summary Page				821,520.00

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
	ELEMENT NO. 7:				
	<u>BUILDERS WORK IN CONNECTION WITH SPECIALISTS SERVICES:</u>				
	<u>(All provisional)</u>				
	<u>Builder's work in connection with Electrical Installation:</u>				
	<u>Cut away for, make good and attend in all trades on the sub-contractor installing the following points, including associated switch points in concealed electrical system, including cutting all chases and holes, notching and boxing timber etc. making good all finishes and leave clean to satisfaction of the Architect:</u>				
A	Lighting points	78	NO	200	15,600.00
B	Socket outlets	24	NO	200	4,800.00
C	Conduits/ ducts	112	LM	200	22,400.00
	<u>Builder's work in connection with plumbing and drainage installation:</u>				
	<u>Cut away for, make good and attend in all trades on the subcontractor installing the following fittings, wastes under floor slabs, supply pipes fixed on walls including cutting holes, chases and making good finishes:</u>				
D	Wash hand basin	8	NO	350	2,800.00
E	Urinals	3	NO	350	1,050.00
F	Shower	6	NO	350	2,100.00
G	Low level W.C	6	NO	500	3,000.00
H	Small pipes chased in wall	18	LM	150	2,700.00
J	Cut or leave hole in 200 mm thick wall for small pipe	3	NO	100	300.00
K	Cut or leave hole in 150mm thick concrete slab for large pipe	5	NO	100	500.00
L	Ditto: small pipes	3	NO	100	300.00
	Total for BWIC with Services carried to Summary			Shs	55,550.00

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
<u>THIRD FLOOR</u>					
<u>SECTION 6</u>					
	1. Reinforced Concrete Superstructure		6/1		18,270,980.00
	2. Walling		6/2		3,611,100.00
	3. Windows		6/4		1,486,720.00
	4. Doors		6/6'		5,414,680.00
	5 Finishes		6/10'		13,706,195.00
	6. Fittings and Fixtures		6/12'		821,520.00
	7. BWIC with Services (Provisional)		6/13'		55,550.00
	<u>TOTAL CARRIED TO GRAND SUMMARY</u>			Kshs	43,366,745.00

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
	ROOF				
	ELEMENT NO. 1				
	REINFORCED CONCRETE SUPERSTRUCTURE				
	<u>Vibrated reinforced insitu concrete 25/20;minimum cube crushing of 25N/mm².</u>				
A	Ring beams	2	CM	15,500	31,000.00
B	Columns	6	CM	15,500	93,000.00
C	Gutter	81	Cm	15,500	1,255,500.00
D	150mm thick suspended slab	110	SM	2,325	255,750.00
	<u>Vibrated reinforced insitu concrete class 30 (C30/M30) ;minimum cube crushing of 30N/mm².</u>				
E	200mm thick concrete wall (elevator shaft)	36	SM	4,120	148,320.00
	<u>Reinforcement (All Provisional)</u>				
	<u>Supply, cut, bend and fix the following reinforcement bars including tying wire, stirrups and spacer blocks to B.S. 4461</u>				
F	Assorted bars	16,905	KG	200	3,381,000.00
	<u>Marine Ply sawn formwork to;</u>				
G	Sides and soffits: beams	25	SM	690	17,250.00
H	Vertical sides of columns	9	SM	690	6,210.00
J	Gutter slab	218	Sm	690	150,420.00
K	Ditto sides of wall	308	Sm	690	212,520.00
L	Soffites of openings	3	SM	690	2,070.00
M	Soffites of suspended slab	110	SM	690	75,900.00
N	Vertical sides of elevator shaft	36	SM	690	24,840.00
P	Edges of suspended slab 150-225mm girth	42	LM	180	7,560.00
TOTAL REINFORCED CONCRETE CARRIED TO SUMMARY PAGE					5,661,340.00

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
	<u>ELEMENT NO. 2</u>				
	<u>WALLING</u>				
	<u>EXTERNAL WALLS</u>				
	<u>Natural hard machine cut stone walling well dressed with a minimum of 7.1 N/mm² average compressive strength to B.S 5390; bedded and jointed in cement and sand (1:3) mortar ;reinforced with 25 x 3 mm hick hoop iron strips at alternate courses to: -</u>				
A	200 mm Thick machine cut walls <u>Precast concrete units : class 20/20 : reinforced as necessary for handling : fair face finished on all exposed faces</u>	384	SM	2,200	844,800.00
B	300 x 75mm Coping : twice weathered and throated ; bedded in cement mortar (1:4) <u>Concrete benches</u>	256	LM	650	166,400.00
J	Concrete bench with terrazzo finish overall size 1825 x 800 x 675	NO	10	24,500	245,000.00
	TOTAL WALLING CARRIED TO SUMMARY PAGE				1,256,200.00

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
	<u>ELEMENT NO. 3</u>				
	<u>WINDOWS</u>				
	<u>Precast concrete units class 20 (19 mm aggregates):</u>				
A	265 x 75 mm Thick weathered and throated window cill: fair faced on exposed surfaces: bedded jointed and pointed in cement and sand (1:4) mortar	26	LM	650	16,900.00
	<u>STEEL WINDOWS</u>				
	<u>Supply and fix the following purpose made mild steel casement windows with 2.5 mm thick "Z" section framing, for both openable and fixed panels and 20x6mm thick flat bars burglar proofing at 150mm centres to the inside behind (M/S) the 25 mm T - sections ;window panes size 500 x 150mm high generally including all coupling mullions etc.; and complete with bronze handles, peg stays and other ironmongery; factory primed with red oxide primer including cutting and pining fixing lugs to concrete or masonry work jambs; bedding in cement and sand (1:3) mortar, pointing all round frames in mastic, easing, oiling and adjusting opening lights on completion to Architect's details</u>				
B	Window size 4000x900mm mm high (W19)	6	NO	24,480	146,880.00
	<u>Finishes at reveals</u>				
C	15mm thick cement sand render (1:3) to surfaces 100-200mm girth	10	LM	100	1,000.00
	<u>5mm Thick one way tinted sheet glass and glazing to metal with putty</u>				
D	In panes over 0.1 but not exceeding 0.5 square metres	22	SM	3,560	78,320.00
	<u>Painting and Decorating</u>				
	<u>Prepare, touch up primer and apply three coats gloss oil paint: on metal: to</u>				
C	General surfaces: windows and grilles (measured overall both sides)	44	SM	450	19,800.00
D	Prepare and apply three coats of first grade emulsion paint to rendered and plastered surfaces 100-200mm girth	10	LM	80	800.00
	<u>Curtain rail</u>				
E	"Silent Gliss" Standard I-section light duty brass single curtain track screwed to concrete/bock work with brass plated screws, one bracket runner per 75mm of rail, two end stops per length and complete accessories to approval	26	LM	1,500	39,000.00
F	Decorative basket ends to curtain rods	12	NO	250	3,000.00
	TOTAL WINDOWS CARRIED TO SUMMARY PAGE				305,700.00

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
	ELEMENT NO. 4				
	DOORS				
	Panel Door				
	<u>50 mm (finished) mahogany panel door comprising moulded and rebated 150 x 50 mm top rail, 150 x 50 mm stiles, and 200 x 50 mm bottom rail: in filled with 45 mm thick moulded panels alternated with 15 mm diameter wrought iron, tongued and grooved into stiles and rails: all joints glued and clamped including necessary reinforcement, beads and fixed in position as described in:</u>				
A	Double door size 1200x2700mm high <u>Mahogany Frames and linings : selected and kept clean</u>	1	NO	48,600	48,600.00
B	150 x 50 mm Frames: Three labours: plugged	7	LM	1,900	13,300.00
C	150 x 50mm transom with four labours	2	LM	1,900	3,800.00
D	Ditto mullion	1	LM	1,900	1,900.00
E	25 x 50 mm Architrave: screwed to frame and pelleted	7	LM	180	1,260.00
F	25 x 25 mm Quadrant beading: one labours: ditto	7	LM	150	1,050.00
	Sliding Mild steel Door				
	Purpose made mild steel double leaf door ; consisting of 525 x 2000mm high 2 No. openable leaves; 1050mm wide x 350mm high - 1.5mm thick fixed steel louvers blades bent and welded in fanlight; each leaf shall have 525 x 725mm high x 4mm thick one way glass mounted on 20 x 20 x 3mm thick zed Tee mentions; 300mm high x 1.5mm thick plate both sides on 50 x 50 x 3mm top and bottom bearers; bottom section 1000mm high shall have 1.5mm thick plate bent to shape and welded on 50 x 30 x 1.2mm thick RHS welded together at 50mm centres to form a panel; including hinges, hasp, staple and fixing door to wall with lugs detailed to Architect's schedule				
G	Steel door; overall size 1800 x 2700 mm high;	1	NO	63,180	63,180.00
	Carried to collection				133,090.00

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
	<u>Iron mongery</u>				
	<u>Supply and fix the following ironmongery to timber complete with matching screws and keys as per 'UNION' manufacturers or other equal and approved.</u>				
A	100 mm high double washer brass butt hinges	3	PRS	490	1,470.00
B	5-Lever mortice lock and set of lever handle furniture	1	NO	9,500	9,500.00
	<u>Glazing</u>				
C	6mm Thick tinted sheet glass and glazing fanlight	3	SM	1,800	5,400.00
	<u>Painting and decorating</u>				
	before fixing: prepare and apply two coats of clear polyurethane varnish or other approved stain on:				
D	Panel doors: general surfaces	11	SM	450	4,950.00
E	Frame, Mullion & transome : not exceeding 300 mm girth	10	LM	130	1,300.00
F	Architraves: not exceeding 100 mm girth	7	LM	40	280.00
G	Quadrant beading : not exceeding 100 mm girth	7	LM	40	280.00
	<u>Painting and decorating</u>				
H	Prepare and apply two coats of gloss oil paint to surfaces of steel door	10	SM	450	4,500.00
	Carried to collection				27,680.00
	COLLECTION				
	From page 7/3				133,090.00
	From page 7/4(Above)				27,680.00
	TOTAL DOORS CARRIED TO SUMMARY PAGE				160,770.00

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
	<u>ELEMENT NO. 5</u>				
	<u>FINISHES</u>				
	<u>FLOOR FINISHES</u>				
	<u>Floor Screeding</u>				
	<u>Cement and sand (1:3) screeds, backings, beds etc</u>				
A	25 mm Thick to receive Terrazzo floor finish (measured separately)	110	SM	480	52,800.00
	<u>Terrazzo Floor finish</u>				
B	20mm thick monolithic floor finish from approved sources; Approved colour; cement and marble chippings (1;2); complete with and including plastic dividing strips set flush with paving; Washed and machine polished.	110	SM	2,600	286,000.00
C	10x150mm high skirting	112	LM	260	29,120.00
	<u>Roof Slab Finish</u>				
	<u>Roofing screeds cement, sand and pumice (1:3:1) finished with 10 mm layer of cement and sand (1:4) topping: laid on concrete slab and finished to receive APP bituminous membrane (m.s) as described:</u>				
A	50 mm thick screed laid in bed to falls	1440	SM	480	691,200.00
B	Ditto: to parapet wall 300mm high	308	SM	480	147,840.00
C	60 mm x 60 mm (extreme) triangular fillet	512	LM	480	245,760.00
C	60 mm x 60 mm (extreme) triangular fillet				
C	Prepare surface by cleaning, removing debris, and wire brushing the RC slab.	110	SM	50	5,500.00
D	Apply approved bituminous primer coat, rate not exceeding 0.3Kg/m ²	110	SM	150	16,500.00
E	Apply 4mm thick APP modified bituminous waterproofing membrane, torch-applied, with 100mm overlaps.	110	SM	2,500	275,000.00
F	Turn up waterproofing membrane at parapet walls (min. 300mm) and tuck into grooves.	220	SM	150	33,000.00
G	Dressing and sealing around 100 mm diameter rainwater outlets points	10	NO	500	5,000.00
H	Supply and fix 50 mm Diameter, 400 mm long UPV pipe for weep holes cut through 200mm thick masonry walls	20	NO	450	9,000.00
J	Allow for 25mm thick concrete surround mix 1:3:6 to the pipe	20	NO	500	10,000.00
	Carried to collection				1,806,720.00

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
A	Provide and install uPVC water outlets/drain traps, including connection to pipes.	20	NO	550	11,000.00
B	100 mm diameter UPVC 'Fulbora' outlet as 'Key Terrain' including joint to downpipe (m.s) and casing into concrete slab	20	NO	3,800	76,000.00
C	100 mm x 75 mm x 24 gauge preprinted galvanized metal box down pipe including fixing to wall with and including brackets	340	LM	1,500	510,000.00
D	Extra-over pipe for swan neck	20	NO	450	9,000.00
E	Ditto: bend	20	NO	450	9,000.00
F	Ditto for shoe	20	NO	450	9,000.00
G	Supply and lay 1250 x250mmx 12mm thick square Grey concrete interlocking paver blocks.	1,440	SM	2,480	3,571,200.00
	<u>EXTERNAL WALL FINISHES</u>				
	<u>15 mm Thick cement sand (1:3) render: wood floated: on concrete or block work: to</u>				
H	Beams, walls and column surfaces	384	SM	480	184,320.00
	<u>Prepare and apply one coat of exterior quality Ruff n Tuff paint by Crown Paints or other equal and approved on:</u>				
C	Rendered wall surfaces	384	SM	1,300	499,200.00
	<u>INTERNAL WALL FINISHES</u>				
	<u>INTERNAL LIME PLASTER, FIRST COAT of cement, lime and sand (1:2:9), second coat of cement, lime putty and sand (1:1:6), steel trowelled as described</u>				
J	Beams, walls and column surfaces	384	SM	480	184,320.00
K	Soffites of suspended slab	110	SM	480	52,800.00
	<u>Prepare and apply three coats of first grade vinyl matt emulsion paint or other equal and approved paint: on plastered surfaces: to</u>				
L	Plastered and rendered walls,beams and columns	768	SM	450	345,600.00
M	Soffites of suspended slab	110	SM	450	49,500.00
	Carried to collection				5,510,940.00

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
	<u>12 mm Cement and sand (1:4) backings:</u>				
A	Walls: finished to receive glazed tiles	332	SM	480	159,360.00
	<u>300 x 200 x 6mm Thick ceramic wall tiles: on backings(m/s) with cement grout and point in matching cement grout: to</u>				
B	Walls	332	SM	1,500	498,000.00
C	Plastic beading for fair edges	158	LM	120	18,960.00
	Carried to collection				676,320.00
	<u>COLLECTION</u>				
	From page 7/5				1,806,720.00
	From page 7/6				5,510,940.00
	From page 7/7				676,320.00
	TOTAL FINISHES CARRIED TO SUMMARY PAGE				7,993,980.00

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
	<u>ELEMENT NO. 6:</u>				
	<u>BUILDERS WORK IN CONNECTION WITH SPECIALISTS SERVICES:</u>				
	<u>(All provisional)</u>				
	<u>Builder's work in connection with Electrical Installation:</u>				
	<u>Cut away for, make good and attend in all trades on the sub-contractor installing the following points, including associated switch points in concealed electrical system, including cutting all chases and holes, notching and boxing timber etc. making good all finishes and leave clean to satisfaction of the Architect:</u>				
A	Lighting points	78	NO	200	15,600.00
B	Socket outlets	24	NO	200	4,800.00
C	Conduits/ducts	112	LM	200	22,400.00
	<u>Builder's work in connection with plumbing and drainage installation:</u>				
	<u>Cut away for, make good and attend in all trades on the subcontractor installing the following fittings, wastes under floor slabs, supply pipes fixed on walls including cutting holes, chases and making good finishes:</u>				
D	Wash hand basin	1	NO	350	350.00
E	Urinals	1	NO	350	350.00
F	Shower	1	NO	350	350.00
G	Low level W.C	1	NO	500	500.00
H	Small pipes chased in wall	2	LM	150	300.00
J	Cut or leave hole in 200 mm thick wall for small pipe	1	NO	100	100.00
K	Cut or leave hole in 150mm thick concrete slab for large pipe	3	NO	100	300.00
L	Ditto: small pipes	2	NO	100	200.00
	Total for BWIC with Services carried to Summary			Shs	45,250.00

Item	Description	Quantity	Unit	Rate	Amount (Kshs)
	<u>ROOF PLAN</u>				
	<u>SECTION 7</u>				
	1. Reinforced Concrete Superstructure		7/1		5,661,340.00
	2. Walling		7/2		1,256,200.00
	3. Windows		7/3'		305,700.00
	4. Doors		7/5'		160,770.00
	5 Finishes		7/8'		7,993,980.00
	6. BWIC with Services (Provisional)		7/9'		45,250.00
	<u>TOTAL CARRIED TO GRAND SUMMARY</u>			Kshs	15,423,240.00

Item	Description	Qty	Unit	Rate	Amount (Kshs)
<u>PROPOSED CONSTRUCTION PERIMETER WALL</u>					
<u>Substructure</u>					
A	Clear the site off grass, shrubs and all small trees not exceeding 300mm girth including grubbing up roots, burn or cart way arising.	626	Sm	50	31,300.00
B	Cutting down of trees of overall girth of 300-600mm(including necessary approvals.	3	No	1,500	4,500
C	Uprooting of existing stumps of overall girth of 600-900mm	3	No	3,500	10,500
D	Excavate in normal soil for strip foundation trench starting from existing ground level but not exceeding 1.5m deep.	261	cm	400	104,400.00
E	Ditto for column pits.	417	cm	400	166,800.00
F	Extra over excavation in hard rock class 1.	193	cm	1,500	289,500.00
G	Return infill and ram selected excavated materials around foundations.	441	cm	350	154,350.00
H	Load and spread onsite surplus excavated materials to make up levels within site points.	238	cm	300	71,400.00
<u>CONCRETE WORKS</u>					
<u>Plain concrete (1:4:8) in:-</u>					
J	50mm thick blinding under strip foundation.	174	sm	500	87,000.00
K	Ditto under column bases.	278	sm	500	139,000.00
<u>Vibrated reinforced concrete (1:2:4) 20/20mm aggregate in:-</u>					
L	Strip foundation.	35	cm	12,000	420,000.00
M	Column bases.	84	cm	12,000	1,008,000.00
N	Columns under ground.	20	cm	12,000	240,000.00
P	Ditto above ground.	42	cm	12,000	504,000.00
Q	Provide 12mm thick Styrofoam at every expansion joint which is at every 30m distance c/c	24	sm	2,000	48,000.00
TOTAL CARRIED TO COLLECTION					3,278,750.00

Item	Description	Qty	Unit	Rate	Amount (Kshs)
	<u>Reinforcements</u>				
	<u>High tensile ribbed bars to B.S.4461 including descaling, cutting to size, bending, binding wire and spacer blocks.</u>				
A	8mm Diameter bars.	2492	Kg	200	498,400.00
B	10mm Ditto.	3828	Kg	200	765,600.00
C	12mm Ditto.	3168	Kg	200	633,600.00
	<u>Sawn formwork to:-</u>				
D	Sides of strip foundation.	116	sm	400	46,400.00
E	Ditto column bases	278	sm	400	111,200.00
F	Ditto columns	857	sm	400	342,800.00
	<u>WALLING</u>				
H	200mm Thick hand-dressed natural stone walling in c/s (1:4) mortar reinforced with hoop iron at every second alternate course underground.	604	sm	1,200	724,800.00
J	Ditto above ground level (Machine cut stones).	557	sm	2,200	1,225,400.00
K	200mm wide B.S. 743 Type A bitumen hessian base 150mm lap (no allowance made for laps), horizontal, 1 No. layer bedded in cement sand (1:3) mortar.	464	Lm	150	69,600.00
	<u>Plinth</u>				
L	15mm Thick cement and sand (1:4) render to plinth finished with a wood float on one side.	521	sm	480	250,080.00
M	Prepare and apply three coats of black bituminous paint to rendered plinth walls on both two sides.	521	sm	450	234,450.00
TOTAL CARRIED TO COLLECTION					4,902,330.00

Item	Description	Qty	Unit	Rate	Amount (Kshs)
	<u>Column Copings</u>				
A	450x450x75mm thick min precast concrete coping to top of columns.	193	No	500	96,500.00
	<u>FINISHES</u>				
B	15mm thick cement and sand (1:3) render to walls one way and both ways on columns.	766	sm	480	367,680.00
C	Ditto to exposed surfaces of columns.	139	sm	480	66,720.00
D	75mm Thick (mean), 280mm wide pre-cast concrete (1:2:4) coping twice weathered and throated.	464	Lm	420	194,880.00
E	Extra over fair faced and recessed horizontal keying to walls externally.	557	sm	380	211,660.00
	<u>Painting and Decorations</u>				
F	Prepare and apply one undercoat and two finishing coat of emulsion paint as crown or other equivalent quality approved brand to walls internally	766	sm	450	344,700.00
G	Ditto to exposed surfaces of columns.	139	SM	450	62,550.00
H	Apply water repellent clear wall vanish to walls externally	557	sm	450	250,650.00
	<u>GRILLS</u>				
J	Supply and fix burglar proof grill overall size 2800x600mm high comprising of 40x25mm RHS at 500mm centers both horizontally, 25mm CHS at 300mm centres both ways vertically and moulded vertical spikes at top with and including fixing and accessories.	418	sm	4,000	1,672,000.00
	<u>Painting and Decorations</u>				
K	Prepare and apply one undercoat and two finishing coat of gloss oil of gloss oil paint on grill surface measured overall externally and internally.	836	sm	450	376,200.00
	Carried to Collection				3,643,540.00
	<u>COLLECTION</u>				
1	Brought forward from page 8/1.....				3,278,750.00
2	Brought forward from page 8/2.....				4,902,330.00
3	Brought forward from page 8/3.....				3,643,540.00
TOTAL CARRIED TO GRAND SUMMARY					11,824,620.00

Item	Description	Qty	Unit	Rate	Amount (Kshs)
<u>PROPOSED CONSTRUCTION OF CABRO ROADS, PARKING PATHWAYS AND STORM WATER DRAINAGE</u>					
<u>Site Clearance:</u>					
A	Clear the site of all bushes, shrubs, small trees grab up root and remove from site	1200	SM	50	60,000.00
<u>Earthworks:</u>					
B	Excavate for roads and parking not exceeding 1.5m deep starting from ground level (Average excavation depth - 600mm to formation level)	720	CM	400	288,000.00
C	Extra over excavation for excavating in Rock class 1-III	72	CM	1,500	108,000.00
D	Allow for keeping all excavations free from water as before described including spring and running water	1	ITEM	25,000	25,000.00
E	Allow for planking and strutting to sides of excavations as before described	1	ITEM	25,000	25,000.00
F	Load and cart away surplus excavated material and deposit minimum 2km away from the site as directed by local authority by-laws	720	CM	500	360,000.00
<u>Construction:</u>					
G	Allow a provisional sum for adjusting the Moisture Content of the 300mm below formation by either mixing in water or drying out the material such that the Moisture Content during compaction is between 75-100% OMC .	1	SUM	50,000	50,000.00
H	Allow for trimming and compacting 300mm below formation level in two 150mm layers to correct levels and cross falls. Compaction to 100% MDD as described	1200	SM	50	60,000.00
L	Provide non selective post emergence broad spectrum persistent herbicide as 'Round up' or equal and approved; and, apply on the surface of formation as per the manufacturer's specifications.	1200	SM	200	240,000.00
<u>Filling</u>					
J	Provide and spread 300 mm thick imported approved hardcore well compacted and laid to falls and chambers to receive murrum (m.s.). Compaction to 100% B.S Compaction rolled to the satisfaction of the Engineer/Project Manager	540	CM	1,700	918,000.00
K	Provide and spread 300 mm thick murrum base well compacted in 150 mm thick layers to make up levels to receive gravel (m.s.). Compacted to 98% B.S Compaction	360	CM	1,200	432,000.00
M	Provide lay and compact 50 mm thick sand or quarry dust bedding to receive paving blocks	1200	SM	190	228,000.00
Carried to Forward to next page				Shs	2,794,000.00

C/1

Item	Description	Qty	Unit	Rate	Amount (Kshs)
	<i>Brought forward from previous page</i>			Shs	2,794,000.00
	<u>Concrete Paving Blocks: approved supplier laid in approved pattern to manufacturer's instructions as described in:</u>				
A	Provide, lay and compact 60mm thick Heavy duty Pre-cast Concrete paving blocks (Minimum Strength 45-50 N/mm ²) laid on prepared bed with fine quarry sand material	870	SM	2,200	1,914,000.00
B	Ditto but 50mm thick coloured light duty paving blocks with a minimum strength of 25N/mm (sq.) on the walkways.	330	SM	1,600	528,000.00
	<u>Foundations to kerbs and channels:</u>				
	<u>Concrete (1:3:6) class Q as described in:</u>				
C	250 mm wide x 180 mm high foundation to kerbs and channels (m.s.) with 125 mm wide x 200 mm high haunching to kerb splayed all along the top edge and including necessary earthworks as described and laying to circles where required	720	LM	300	216,000.00
D	250 mm wide x 150 mm high foundation to kerbs (m.s.) with 125 mm wide x 100 mm high haunching to kerbs splayed all along the top edge and including necessary earth-works and formwork as described and laying to circles where required	720	LM	300	216,000.00
E	Supply and lay 600x 330 x 190 mm diameter IBD including concrete bed and surround. (Rate to include excavation, backfilling, tamping & compacting bottoms/sides of excavations, making good disturbed surroundings, disposal of surplus soil)	180	LM	1,680	302,400.00
F	Provide, lay and joint 600x225x75mm side slabs two courses (including excavation / backfilling to form suitable slopes, shoring and jointing in cement mortar, disposal of surplus soil and making good surrounding disturbed surfaces)	720	LM	620	446,400.00
	<u>Culverts and Head walls</u>				
G	Excavate trench in normal soil for and 600mm \varnothing precast concrete pipe and cart away surplus material as directed by the Engineer. Excavation measured from ground level to a depth n.e 1.5m.	84	CM	400	33,600.00
H	Extra over excavation for excavating in Rock class 1	9	CM	1,500	13,500.00
J	Provide, mix and place 50mm thick concrete grade C10 (Mix Ratio 1:4:8) as blinding for culvert pipe. Cement to BS 12, 14mm aggregate to BS 882.	5	CM	9,300	46,500.00
K	Provide, mix and place concrete grade C20 (Mix Ratio 1:2:4) to construct 150mm thick bed for culvert pipe. Cement to BS 12, 20mm aggregate to BS 882.	13	CM	12,000	156,000.00
L	Provide and fix Fabric Mesh Reinforcement Type A to B.S 1483 B.R.C Mesh No.65 to B.S 1483	147	SM	450	66,150.00
	<i>Carried to Forward to next page</i>			Shs	6,732,550.00

Item	Description	Qty	Unit	Rate	Amount (Kshs)
	<i>Brought forward from previous page</i>			Shs	6,732,550.00
A	Provide all materials, mix and place 250mm thick Concrete grade C20/20 (Mix Ratio 1:2:4) as Headwall and Wing walls as per Drawing . Cement to BS 12, 20mm aggregate to BS 882.	31	CM	12,000	372,000.00
	<u>Formwork</u>				
	<u>Provide, erect and afterwards dismantle and remove all the formwork as specified by the Engineer</u>				
C	Formwork Class F2 Finish	140	SM	450	63,000.00
D	Provide, lay and joint 600mm dia. precast concrete pipes on concrete bedding to correct fall. as directed	70	Lm	5,660	396,200.00
	<u>Concrete Kerbs:</u>				
E	Supply and fix Precast concrete (1:2:4) class 20/12mm kerbs size 125 mm wide x 250mm high splayed on edge and laid to required falls and levels on concrete foundations (m.s.) including all necessary earth works and formwork as described and laying to circles where required	720	LM	650	468,000.00
F	Ditto: Curved to any radius	144	LM	840	120,960.00
	<u>Concrete Channel Blocks:</u>				
G	Supply and fix Pre-cast concrete (1:2:4) - Class 20/15 mm in road channel blocks size 125 mm wide x 100 mm high laid to required falls on concrete foundation (measured separately) including jointing and pointing in cement and sand (1:3) mortar	720	LM	500	360,000.00
H	Ditto: Curved to any radius	144	LM	750	108,000.00
	<u>Pre-cast Concrete Cover Slab</u>				
J	1000 x 600 wide x 150 mm thick precast reinforced concrete (class 20/20) cover slabs bedded and jointed in cement and sand (1:4) mortar as per the design and Engineer's direction	42	LM	4,200	176,400.00
	<u>Road Marking</u>				
K	Prepare road surfaces, spray with approved tack coat and paint yellow road marking lines: 100 mm wide as directed by the Engineer.	556	LM	450	250,200.00
L	Ditto: white and black on road kerbs	720	LM	450	324,000.00
M	Ditto: white and black on road Channels	720	LM	450	324,000.00
	Total Amount for Parking Area Works Carried to Section Summary				9,695,310.00

Item	Description	Qty	Unit	Rate	Amount (Kshs)
<u>PROPOSED GATE, SENTRY</u>					
<u>Site clearance</u>					
A	Clear the site off grass, shrubs and all small trees not exceeding 300mm girth including grubbing up roots, burn or cart way arising.	1140	Sm	50	57,000.00
B	Cutting down of trees of overall girth of 300-900mm and grubbing up the roots	3	No	1,500	4,500.00
C	Ditto overall girth of 300-1500mm	10	No	4,000	40,000.00
D	Ditto overall girth of 300-1800mm	4	NO	5,000	20,000.00
E	Ditto overall girth of 300-2700mm	5	NO	6,000	30,000.00
<u>Gate</u>					
<u>Substructure</u>					
F	Excavate in soft soils for column pits.	14	CM	430	6,020.00
G	Return fill and ram in excavated material around foundations.	5	C.M.	350	1,750.00
H	Load and cart away extra excavated material.	10	C.M.	570	5,700.00
<u>CONCRETE WORKS</u>					
<u>Plain concrete (1:4:8) in:-</u>					
J	50mm thick blinding under column bases.	13	SM	500	6,500.00
<u>Vibrated reinforced concrete (1:2:4) 20/20mm aggregate in:-</u>					
K	Column bases.	4	CM	12,000	48,000.00
L	Columns .	5	CM	12,000	60,000.00
M	150mm thick Suspended canopy slab	10	SM	1,800	18,000.00
<u>Bars, high yield steel, cold worked to B.S 4461</u>					
<u>including bends, hooks, tying wire and distance blocks</u>					
N	D/8 bars.	33	KG	200	6,600.00
P	D/12 Ditto.	426	KG	200	85,200.00
Q	Sawn formwork to the sides of columns.	12	SM	400	4,800.00
R	Ditto soofits of slab	10	SM	400	4,000.00
T	Ditto Sides of slab	19	LM	100	1,900.00
TOTAL CARRIED TO COLLECTION					394,070.00

HG/1

Item	Description	Qty	Unit	Rate	Amount (Kshs)
A	Supply and fix purpose made double steel gate overall size 6000x2700mm high in two equal openable parts comprising of 30x30x30mm thick SHS at 200mm centers both ways and moulded vertical spikes at top with and including fixing,hanging,opening and closing accessories.	1	NO	150,000	150,000.00
B	Ditto 1500 x 2200mm high pedestrian gate.	2	NO	30,000	60,000.00
<u>Painting and Decorations</u>					
C	Prepare and apply one undercoat and two finishing coat of gloss oil of gloss oil paint on gates measured overall externally and internally.	46	SM	450	20,700.00
<u>Cement sand (1:4) render.</u>					
D	To column surfaces.	13	SM	480	6,240.00
E	Ditto slab	20	SM	480	9,600.00
F	Ditto Sides of slab	19	LM	100	1,900.00
<u>Prepare and apply three coats of first quality plastic emulsion paint to:-</u>					
G	Column surfaces.	13	SM	450	5,850.00
H	Ditto slab	20	SM	450	9,000.00
J	Ditto Sides of slab	19	LM	100	1,900.00
Carried to collection					265,190.00
<u>COLLECTION</u>					
From page.....HG/1					394,070.00
From page above.....					265,190.00
TOTAL FOR GATE CARRIED TO GRAND SUMMARY					659,260.00

HG/2

Item	Description	Qty	Unit	Rate	Amount (Kshs)
SENTRY					
ELEMENT NO. 1 - SUBSTRUCTURES					
(ALL PROVISIONAL)					
<u>Site clearance</u>					
A	Clearing site vegetation , grubbing up roots and filling up voids left with selected excavated materials.	8	S.M	80	640.00
Excavations and Earthworks					
B	Excavate oversite average 150 mm deep to remove vegetable top soil and cart away.	8	S.M.	100	800.00
C	Excavate to reduce levels 300mm deep	3	C.M.	400	1,200.00
D	Excavate for foundation trenches not exceeding 1.50 m deep starting from reduced level.	8	C.M.	400	3,200.00
E	Extra over in rock excavation Class I	1	C.M.	2,000	2,000.00
F	Return fill and ram in excavated material around foundations.	4	C.M.	300	1,200.00
G	Load and cart away extra excavated material.	8	C.M.	500	4,000.00
Imported fill material					
H	50 mm thick quarry dust blinding.	4	S.M.	150	600.00
J	300mm thick Hardcore filling laid in 150 mm thick layers, each layer well compacted : handpacked.	4	C.M.	450	1,800.00
K	Insecticide anti termite treatment on blinded surfaces and bottom of excavations with Termidor 25E.c equal and approves	6	S.M.	200	1,200.00
L	500 Gauge polythene sheeting in DPM laid with 300 mm end and edge laps.	6	S.M.	250	1,500.00
M	Allow for keeping the whole of the excavation free from all water by pumping or other such means as may be necessary		ITEM	5,000	5,000.00
N	Allow for maintaining and upholding sides of excavations and keeping excavations clear of all fallen material, rubbish, etc		ITEM	5,000	5,000.00
	Carried to collection				28,140.00

Item	Description	Qty	Unit	Rate	Amount (Kshs)
	Concrete works				
	Insitu concrete : mix 1:4:8 : 40 mm aggregate				
A	50 mm thick blinding.	6	S.M	450	2,700.00
	Insitu concrete : class 25/20 : vibrated : reinforced				
B	Strip foundations.	2	C.M.	12,000	24,000.00
C	100 mm thick floor bed	6	S.M	1,500	9,000.00
	High yield steel reinforcement bars to B.S. 4461				
D	8mm diameter bars.	12	K.G.	200	2,400.00
E	10mm diameter bars	18	KG	200	3,600.00
	Steel fabric mesh reinforcement to B.S. 4483				
F	BRC Ref A142 reinforcement and laying with 300 mm end and edge laps	6	S.M.	500	3,000.00
	Sawn formwork as described to:-				
G	Vertical sides of strip footing.	4	S.M.	400	1,600.00
H	Edges of floor bed 75 - 150 mm wide.	10	L.M.	150	1,500.00
	Approved quality local stone blocks walling : medium chisel dressed in regular courses : in cement and sand (1:3) mortar				
J	200 mm thick foundation walling.	15	S.M.	1,200	18,000.00
	Carried to collection				65,800.00

Item	Description	Qty	Unit	Rate	Amount (Kshs)
	FINISHES TO PLINTHS				
	Damp proof courses : bituminous felt : bedded in cement and sand mortar (1:4) : 300 mm laps.				
A	Horizontal : 300 mm wide	9	L.M.	150	1,350.00
	Cement and sand (1:4) render as described:-				
B	12 mm thick render to concrete surfaces.	4	S.M.	480	1,920.00
	Prepare and apply one undercoat and two finishing coats of bituminous paint or other equal an approved water resistant paint; on rendered plinths (m.s.)				
C	Rendered surfaces externally.	4	S.M.	450	1,800.00
	Collection below				5,070.00
	<u>COLLECTION</u>				
	From Page 1				28,140.00
	From Page 2				65,800.00
	From Above				5,070.00
	<u>ELEMENT NO. 1 - SUBSTRUCTURES</u>				
	Carried to Summary of Elements				99,010.00

Item	Description	Qty	Unit	Rate	Amount (Kshs)
	ELEMENT NO. 2 - REINFORCED CONCRETE FRAME				
	Note:- This element comprises of beam and upper floor				
	Reinforced concrete grade 25(20) as described in:-				
A	Beams.	1	C.M.	12,000	12,000.00
B	100 mm thick suspended slab.	7	S.M	1,500	10,500.00
	High yield steel reinforcement bars to B.S 446 (Provisional)				
C	8 mm diameter bars.	26	K.G.	200	5,200.00
D	10 mm ditto.	24	K.G.	200	4,800.00
E	12 mm ditto.	62	K.G.	200	12,400.00
H	16 mm ditto.	109	K.G.	200	21,800.00
	Sawn formwork as described to:-				
I	Sides and soffites of beam	8	S.M.	400	3,200.00
J	Soffites of suspended slab	7	S.M.	400	2,800.00
K	Edges of suspended slab 75 - 150 mm wide.	10	L.M.	150	1,500.00
	ELEMENT NO. 2 - R.CONCRETE WORKS				
	Carried to Summary of Elements				74,200.00

Item	Description	Qty	Unit	Rate	Amount (Kshs)
	<u>ELEMENT NO. 3 - WALLS</u>				
	<u>Medium dressed natural stone walling in cement and sand (1:3) mortar and reinforced with 25 mm wide hoop iron in every alternate course</u>				
A	200 mm walling	20	S.M.	2,200	44,000.00
B	250×250×20mm Wall Vents	3	Prs	180	540.00
C	275 x 50 mm precast concrete coping on masonry walling	9	L.M.	500	4,500.00
	Wall Finishes				
	Internal Wall Finishes				
	Internal lime plaster as described				
D	12 mm thick plaster to walls, finished smooth with steel trowel.	18	S.M.	480	8,640.00
	Painting and decoration				
E	Prepare and apply one undercoat and two finishing coats Vinyl emulsion paint to plastered wall.	18	S.M.	450	8,100.00
	External Wall Finishes				
F	Extra over stone walling for fairface with horizontal struck joints in fine chisel dressing Keying and pointing	26	SM	480	12,480.00
	<u>ELEMENT NO. 3 - WALLS</u>				
	Carried to Summary of Elements				78,260.00

Item	Description	Qty	Unit	Rate	Amount (Kshs)
	ELEMENT NO. 4 - WINDOWS AND DOORS				
	WINDOWS				
	Supply and fix the following composite purpose made Steel casement windows; in 2mm thick standard "Z" sections; in various combinations of fixed and openable casements; permanent ventilators; finished with one coat red oxide primer; complete with opening accessories; including cutting and fixing lugs and pointing all round in cement mortar; Burglar proofing in 25 x 4mm flat bars spaced complete at 150mm centres both ways and to Architects approval. The Burglar-proofing in 25 x 4mm flat bars spaced complete at 150mm centres both ways and to Architects approval. The sizes given are for guidance only and the exact sizes should be ascertained on site. sizes given are for guidance only and the exact sizes should be ascertained on site.				
A	1000 x 1000 mm Galvanized mild steel windows with one top hung, 25 x 4mm burglar proofing bars.	1	NO	10,000	10,000.00
B	400 x 400mm ditto	1	NO	3,500	3,500.00
D	Wrot cedar as described:-150 x 20 mm window board . Precast concrete units : class 25/12 mm : vibrated : reinforced	2	L.M.	500	1,000.00
E	275 x 50 mm thick Sill weathered and throated finished in white stone dust and bedded in cement and sand (1:3) mortar Curtain rods to detail	2	L.M.	400	800.00
G	25 mm diameter black furniture curtain rod with and including black ornamental brackets fastened to wall	4	L.M.	1,200	4,800.00
H	Extra over ditto for twisted ornamental ends	4	NO.	350	1,400.00
	Carried to collection				21,500.00

Item	Description	Qty	Unit	Rate	Amount (Kshs)
	GLAZING				
A	5 mm thick sheet glass and glazing with linseed putty or equal and approved 4 mm thick translucent glass in panes 0.10-0.50m2	2	SM,	1,500	3,000.00
	PAINTING AND DECORATION				
B	Prepare and apply one undercoat and two finishing coats gloss oil paint to:- Glazed metal windows internally.	2	SM	450	900.00
C	Ditto externally.	2	SM	450	900.00
D	Anti-burglar grilles externally and internally	4	SM	450	1,800.00
	DOOR				
E	900 x 2100 mm high standard section purpose made single leafed glazed steel metal door; complete with 100 x 50 x 3 mm as frame and intermediate members, including 75x12mm flats @150c/c as infill members; 16 gauge sheet metal primed painted with 3 coats of enamel paint; 4 mm thick (0.1-0.5m2) one way sheet glass section; permanent vent with mosquito gauge and a sheet metal hood; burglar proof on glazed sections; 25 mm diameter machine cut door steel bushes (metal hinges); 3-Lever Steel Lock; all iron mongery primed with red oxide all to Architects details and approval .	1	NO	25,000	25,000.00
	GLAZING				
F	6 mm clear sheet glass : fixed with putty to steel frames In panes over 0.1 but not exceeding 0.5 square metres	1	S.M.	1,500	1,500.00
F	Curtain rods to detail 25 mm diameter black furniture curtain rod with and including black ornamental brackets fastened to wall	3	L.M	1,200	3,600.00
G	Extra over ditto for twisted ornamental ends	2	N.O	350	700.00
F	38 mm diameter rubber door stopper, plugged.	1	NO	200	200.00
	Carried to collection				37,600.00
	COLLECTION				
	From page 6				21,500.00
	From page 7				37,600.00
	<u>ELEMENT NO. 4 - DOOR and Windows</u> Carried to Summary of Elements				59,100.00

Item	Description	Qty	Unit	Rate	Amount (Kshs)
	ELEMENT NO. 5- FINISHES				
	FLOOR FINISHES				
	Internal Floor Finishes				
	Cement and sand (1:3) as described				
A	30 mm thick screed to receive ceramic tiles	4	S.M.	480	1,920.00
B	40 mm thick screed with waterproofing admixture	6	SM	600	3,600.00
C	Approved matt ceramic tiles to B.S. 1281; local; non-slip floor tiles to regular or approved other pattern; bedding and jointing in cement sand (1:4) mortar, grouting with white cement	4	SM	2200	8,800.00
D	20 x 100 mm high skirting.	8	L.M.	200	1,600.00
E	12 x 150 mm high backing	8	L.M	150	1,200.00
	CEILING FINISHES				
	External Finishes				
	Cement and sand (1:3) as described				
F	12 mm thick render to ceilings	4	S.M.	480	1,920.00
	Prepare and apply one undercoat and two finishing coats plastic emulsion paint to:-				
G	Rendered ceilings.	4	S.M.	450	1,800.00
	<u>RAIN WATER DISPOSAL</u>				
	<u>Down pipe</u>				
H	75 mm Diameter 'GOLDEN BROWN' UPVC rain water down pipe fixed to wall with brackets	3	LM	550	1,650.00
J	Extra over ditto for swan neck outlet bend	1	No.	300	300.00
K	Ditto shoe	1	No.	300	300.00
L	100mm Rain-flo 90° flat Grate Fullbore outlet	1	No	3,200	3,200.00
	<u>ELEMENT NO. 5 - FINISHES</u>				
	Carried to Summary of Elements				26,290.00

Item	Description	Qty	Unit	Rate	Amount (Kshs)
	<u>Landscaping</u>				
	<u>Excavations</u>				
A	Excavate existing grassed areas to remove vegetable soil average 100mm deep and dispose as directed by the Engineer.	500	SM	100	50,000.00
B	Excavate to formation level, n.e 0.5 m commencing from reduced levels, average 150 mm deep to allow for water seepage and retention remove all hardened ground, weeds and any deleterious materials; including raking and fine levelling of the ground.	250	CM	300	75,000.00
C	Excavate in rock class II, irrespective of depth	13	CM	1,000	13,000.00
D	Spread and compact in layers not exceeding 200mm thick selected excavated material upto the formation level	100	CM	300	30,000.00
E	Load and cart away surplus excavated material out of site.	150	CM	350	52,500.00
F	Provide, mix, spread and roll red soil as grass growing medium to the correct levels and cross fall in 200mm thick layer to the satisfaction of the engineer	100	CM	750	75,000.00
G	Supply of weed free, farm yard (goat) manure; and mix thoroughly with red soil on site (ratio 1:5) over all areas to be landscaped; manure depth =20mm.	2	CM	4,000	8,000.00
H	Provide and plant Stenotaphrum secundatum drought resistance or equal of quality approved by the Engineer.	500	SM	300	150,000.00
J	Maintain by mowing the grass cover to a height of 40mm when it achieves a height of 80mm. regularly watering and weeding until the grass cover is well established	500	SM	20	10,000.00
K	Provide and apply tripple super phosphate (TSP) fertilizer at the rate of 100kg TPS/100m2 at planting.	500	SM	20	10,000.00
L	Provide and apply evenly, calcium ammonium nitrate(CAN) fertilizer at the rate of 20kg CAN/100m2 of 10kg TSP/100m2 when the grass cover is established and attains a height of 30mm.	500	SM	20	10,000.00
	<u>Edging shrub Planting</u>				
M	Excavate 600 x 450mm deep trench part return and part cart away: remove weeds, stones, and prepare to receive seedlings	232	LM	150	34,800.00
N	Supply and plant one line of Duranta erecta seedlings at 150mm c/c: water and nature until established	232	LM	760	176,320.00
P	Water, Manure and nature, seedlings until established	232	LM	20	4,640.00
	Carried to Forward				699,260.00

BT/1

Item	Description	Qty	Unit	Rate	Amount (Kshs)
	brought forward				699,260.00
	<u>Hedge Planting</u>				
A	Excavate 600 x 450mm deep trench part return and part cart away: remove weeds, stones, and prepare to receive seedlings	145	LM	150	21,750.00
B	Supply and plant one line of Dovyalis caffra seedlings at 150mm c/c: water and nature until established	145	LM	1080	156,600.00
C	Water, Manure and nature, seedlings until established	145	LM	20	2,900.00
	<u>Installation of Trees & Specimen Trees:</u>				
	<u>Pits excavation and Planting of Trees & Specimen Trees (40 No.)</u>				
D	Excavate circular pits, average 900mm diameter, commencing at existing ground level but not exceeding 1 metres depth average 900mm deep and spread arisings evenly around. including Backfill excavated planting pits with Approved imported Red soil mixed with farmyard manure at the ratio 4:1, 1050mm deep.	66	No	680.00	44,880.00
	<u>Planting of Trees</u>				
	<u>Supply, plant, weed, water and tend well under-mentioned Assorted species of trees For 6 Months;</u>				
E	Cassia spectabilis	5	NO	1,200.00	6,000.00
F	Jacaranda mimosifolia	3	NO	1,200.00	3,600.00
G	Washingtonia robusta	16	NO	1,200.00	19,200.00
H	Mangifera indica	2	NO	1,200.00	2,400.00
J	Java plum	1	NO	1,200.00	1,200.00
K	Vitex doniana	1	NO	1,200.00	1,200.00
L	Lemon bottle brush	3	NO	1,200.00	3,600.00
M	Flowering Dogwood	5	NO	1,200.00	6,000.00
N	Yellow wood	14	NO	1,200.00	16,800.00
P	Ficus benamina	16	NO	1,200.00	19,200.00
	Total Amount for Land scaping Works Carried to Section Summary				1,004,590.00

BT/2

Item	Description	Qty	Unit	Rate	Amount (Kshs)
	<u>CIVIL WORKS SUMMARY</u>				
1	Cabro paving and Drainage		C/3		9,695,310.00
2	Gate		HG/2		659,260.00
3	Sentry		S/1		336,860.00
3	Landscaping		BT/2		1,004,590.00
	<u>TOTAL CARRIED TO GRAND SUMMARY</u>			Kshs	11,696,020.00
CW/1					

ELECTRICAL WORK

**PROPOSED ELECTRICAL INSTALLATION OF BUSIA COUNTY REFFERAL HOSPITAL
ANNEX**

GROUND FLOOR

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	SUPPLY, DELIVER, INSTALL, TEST AND COMMISSION THE FOLLOWING WORKS:				
A	Lighting points comprising wiring in 3x1.5mm ² Single Core PVC insulated copper cables drawn in concealed 20mm diameter HG PVC conduits complete with all necessary accessories but excluding switches for:-				
	(a) One Way Switching.	106	NO	3250	344500
	(b) Two Way Switching.	56	NO	3650	204400
B	Ring mains socket outlets comprising wiring in 3x2.5mm sq. single core PVC insulated copper cables drawn in concealed 25 mm diameter Heavy Gauge PVC conduits complete with all the necessary accessories.	83	NO	3650	302950
C	13A switched white moulded case socket outlet plates as MK, Clipsal, BG, Crabtree or an approved equivalent.	83	NO	850	70550
D	10A moulded ivory switch plates as MK, BG, Crabtree or approved equivalent as follows:				
	(a) 1 gang 1 way	36	NO	500	18000
	(b) 1 gang 2 way	9	NO	600	5400
	(c) 2 gang 2 way	3	NO	650	1950
	(d) 3 gang 1 way	1	NO	700	700
	(e) Intermediate Switch	4		1850	7400
E	Hand Drier's Power Point, wired in 3x 2.5sq mm PVC SC copper cables drawn in concealed 25mm Dia. HG PVC conduits complete with all accessories but excluding the D.P switch.	4	NO	4500	18000
F	13A double pole control switch plates with neon light as MK, BG, Crabtree or approved equivalent	4	NO	1000	4000
G	Air Conditioner's Power Point, comprising wiring drawn in 3x2.5mm² PVC-SC-CU cables in concealed 25mm Diameter HG PVC conduits complete with all accessories but excluding the D.P switch .	3	NO	4500	13500
H	13A double pole control switch plates with neon light as MK, BG, Crabtree or approved equivalent	3	NO	1000	3000
	TOTAL CARRIED TO COLLECTION				994350

GROUND FLOOR CONTINUED					
ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	LIGHTING FITTINGS				
	(g) Self-contained double sided EXIT sign with 8W fluorescent lamp for non-maintained emergency lighting for 3 hour duration as Sapphire or	5	NO	9500	47500
	36wx1200 mm fluorescent fitting c/w all accessories as thorn or of equivalent quality	125	NO	2350	293750
	(c) 18W, 200mm diameter, recess mounted, LED circular ceiling light, IP44 with daylight white output and Long lamp life above 50,000 hours as Philips, LEDVANCE or approved equivalent	5	NO	1250	6250
B	36W x Rectangular bulkhead as thorn or equally approved Energy saver lamps as Philips or equivalent.	18	NO	1250	22500
C	6 Ways TPN, flush mounted Distribution Board complete with 100A integral isolator as <i>Schneider Electric Acti 9 or an approved equivalent complete with all accessories but</i> excluding MCBs.	2	NO	28500	57000
	MCBs for item above				
	(i) 10A SP	16	NO	750	12000
	(ii) 20A SP	7	NO	750	5250
	(iii) 32A SP	5	NO	750	3750
	(iv) SP Spareway	2	NO	150	300
D	(v) TP Spareway	2	NO	250	500
E	Carry out concise permanent traffolyte labelling for all the sub-circuits in item above.	1	Item	2500	2500
F	4x16mm ² + 1x10mm ² single core PVC insulated copper cables in 50mmØ concealed HG PVC conduits complete with appropriate cable glands and any other necessary accessory	72	LM	3250	234000
K	25mm ² 4Core PVC/SWA/PVC Copper cables running on cable tray complete with appropriate cable glands and any other necessary accessory (to supply from power house).	85	LM	4750	403750
L	IP65 rated, standard cable loop-in box made of powder coated steel sheets of at least 14SWG complete with 50A, Three Phase Cut-out as Henleys or approved equivalent.	1	No.	6500	6500
TOTAL CARRIED TO COLLECTION					1048050

GROUND FLOOR CONTINUED

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
A	TELEVISION POINTS				
	a) TV outlet point wired in 75 Ohms Screened Coaxial TV cables drawn in concealed 20mm diameter HG/PVC conduits and linked to the outside through the roof space (to the amplifier) via telephone draw in boxes.	3	NO	1200	3600
	b) Moulded ivory TV outlet plate as MK, Clipsal, Crabtree or approved equivalent.	3	NO	1550	4650
	c) Supply and Install draw box 300mmx250mmx150mm made in 16SWG steel sheets finished in cream powder coating to Engineer's approval.	1	NO	4000	4000
B	DATA&TELEPHONE POINTS				
	Data/Telephone outlet point done in 25mm dia. HG PVC conduits concealed in building fabric/ trunking complete with all necessary accessories.	38	NO	1550	58900
C	CCTV SYSTEM POINTS				
	CCTV System Points done in 25mm dia. HG PVC conduits concealed in building fabric/trunking complete with all necessary accessories (N/B: conduit length for each point running from the communication room is approximately 20m).	7		1850	12950
	FIRE DETECTION AND ALARM SYSTEM				
	Supply, deliver, install and commission a complete Fire Detection and Alarm system, addressable type and in accordance with BS 5839 :2000, P2 and L2				
A	Outlet for Fire Alarm Panel's concealed 25mm HG PVC conduit, wiring in 3 x 2.5mm ² SC-PVC-CU fire rated cables and all accessories, including 5A fused unswitched connection unit with neon light.	1	No.	3750	3750
B	Outlet for fire alarm manual call point/smoke/heat detector comprising box, concealed 20mm HG PVC conduit, wiring in 3 x 1.5mm ² fire rated cables and all accessories.	9	No.	18000	162000
C	Addressable Manual Fire break glass call point unit as MENVIER or approved equivalent complete with a packet of 5 spare glasses, a packet of 5 spare test keys, a spare back box and a hinged cover to be installed recessed in building fabric.	7	No.	5800	40600
D	Addressable Electronic Fire Alarm Sounder complete with Red Flashing Beacon Light as Menvier or approved equivalent.	2	No.	8500	17000
E	Addressable Photometric Smoke Detector as Menvier or equal and approved.	46	No.	2500	115000
F	Addressable Rate of Heat Rise Detector as Menvier MENVIER or equal and approved.	1	No.	5800	5800
G	4 - Loop zone addressable fire alarm control panel complete with 2X12AH autonomous time emergency batteries as Menvier DF60001 or equal and approved.	1	No.	45000	45000
	TOTAL CARRIED TO COLLECTION				473250

**PROPOSED ELECTRICAL INSTALLATION OF BUSIA COUNTY REFFERAL HOSPITAL
ANNEX**

FIRFT FLOOR

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>SUPPLY, DELIVER, INSTALL, TEST AND COMMISSION THE FOLLOWING WORKS:</u>				
A	Lighting points comprising wiring in 3x1.5mm ² Single Core PVC insulated copper cables drawn in concealed 20mm diameter HG PVC conduits complete with all necessary accessories but excluding switches for:-				
	(a) One Way Switching.	111	NO	3250	360750
	(b) Two Way Switching.	28	NO	3650	102200
B	Ring mains socket outlets comprising wiring in 3x2.5mm sq. single core PVC insulated copper cables drawn in concealed 25 mm diameter Heavy Gauge PVC conduits complete with all the necessary accessories.	113	NO	3650	412450
C	13A switched white moulded case socket outlet plates as MK, Clipsal, BG, Crabtree or an approved equivalent.	113	NO	850	96050
D	10A moulded ivory switch plates as MK, BG, Crabtree or approved equivalent as follows:				
	(a) 1 gang 1 way	46	NO	500	23000
	(b) 1 gang 2 way	8	NO	600	4800
	(c) 2 gang 2 way	8	NO	650	
	(d) 3 gang 1 way	1	NO	700	700
	(e) Intermediate Switch	4		1850	7400
E	Hand Drier's Power Point, wired in 3x 2.5sq mm PVC SC copper cables drawn in concealed 25mm Dia. HG PVC conduits complete with all accessories but excluding the D.P switch.	6	NO	4500	27000
F	13A double pole control switch plates with neon light as MK, BG, Crabtree or approved equivalent	6	NO	1000	6000
G	Air Conditioner's Power Point, comprising wiring drawn in 3x2.5mm² PVC-SC-CU cables in concealed 25mm Diameter HG PVC conduits complete with all accessories but excluding the D.P switch .	6	NO	4500	27000
H	13A double pole control switch plates with neon light as MK, BG, Crabtree or approved equivalent	6	NO	1000	6000
	TOTAL CARRIED TO COLLECTION				1073350

FIRST FLOOR CONTINUED

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
C	LIGHTING FITTINGS				
	(g) Self-contained double sided EXIT sign with 8W fluorescent lamp for non- maintained emergency lighting for 3 hour duration as Sapphire or approved equivalent.	5	NO	9500	47500
	36wx1200 mm fluorescent fitting c/w all accessories as thorn or of equivalent quality	123	NO	2350	289050
	(c) 18W, 200mm diameter, recess mounted, LED circular ceiling light, IP44 with daylight white output and Long lamp life above 50,000 hours as Philips, LEDVANCE or approved equivalent	16	NO	1250	20000
	6 Ways TPN, flush mounted Distribution Board complete with 100A integral isolator as <i>Schneider Electric Acti 9 or an approved equivalent complete with all accessories but</i> excluding MCBs.	2	NO	28500	57000
	MCBs for item above				
	(i) 10A SP	13	NO	750	9750
	(ii) 20A SP	9	NO	750	
D	(iii) 32A SP	6	NO	750	4500
	(iv) SP Spareway	2	NO	150	300
	(v) TP Spareway	2	NO	250	500
E	Carry out concise permanent traffolyte labelling for all the sub-circuits in item above.	1	Item	2500	2500
F	4x10mm ² + 1x10mm ² single core PVC insulated copper cables in 50mmØ concealed HG PVC conduits complete with appropriate cable glands and any other necessary accessory	72	LM	2450	176400
K	16mm ² 4Core PVC/SWA/PVC Copper cables running on cable tray complete with appropriate cable glands and any other necessary accessory	25	LM	3450	86250
L	IP65 rated, standard cable loop-in box made of powder coated steel sheets of at least 14SWG complete with 50A, Three Phase Cut-out as Henleys or approved equivalent.	1	No.	6500	6500
TOTAL CARRIED TO COLLECTION					700250

FIRST FLOOR CONTINUED

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
A	TELEVISION POINTS				
	a) TV outlet point wired in 75 Ohms Screened Coaxial TV cables drawn in concealed 20mm diameter HG/PVC conduits and linked to the outside through the roof space (to the amplifier) via telephone draw in boxes.	9	NO	1200	10800
	b) Moulded ivory TV outlet plate as MK, Clipsal, Crabtree or approved equivalent.	9	NO	1550	13950
	c) Supply and Install draw box 300mmx250mmx150mm made in 16SWG steel sheets finished in cream powder coating to Engineer's approval.	1	NO	4000	4000
B	DATA&TELEPHONE POINTS				
	Data/Telephone outlet point done in 25mm dia. HG PVC conduits concealed in building fabric/ trunking complete with all necessary accessories.	38	NO	1550	58900
C	CCTV SYSTEM POINTS				
	CCTV System Points done in 25mm dia. HG PVC conduits concealed in building fabric/trunking complete with all necessary accessories (N/B: conduit length for each point running from the communication room is approximately 20m).	6		1850	11100
	FIRE DETECTION AND ALARM SYSTEM				
	Supply, deliver, install and commission a complete Fire Detection and Alarm system, addressable type and in accordance with BS 5839 :2000, P2 and L2				
A	Outlet for Fire Alarm Panel's concealed 25mm HG PVC conduit, wiring in 3 x 2.5mm ² SC-PVC-CU fire rated cables and all accessories, including 5A fused unswitched connection unit with neon light.	1	No.	3750	3750
B	Outlet for fire alarm manual call point/smoke/heat detector comprising box, concealed 20mm HG PVC conduit, wiring in 3 x 1.5mm ² fire rated cables and all accessories.	9	No.	18000	162000
C	Addressable Manual Fire break glass call point unit as MENVIER or approved equivalent complete with a packet of 5 spare glasses, a packet of 5 spare test keys, a spare back box and a hinged cover to be installed recessed in building fabric.	7	No.	5800	40600
D	Addressable Electronic Fire Alarm Sounder complete with Red Flashing Beacon Light as Menvier or approved equivalent.	2	No.	8500	17000
E	Addressable Photometric Smoke Detector as Menvier or equal and approved.	42	No.	2500	105000
F	Addressable Rate of Heat Rise Detector as Menvier MENVIER or equal and approved.	1	No.	5800	5800
G	4 - Loop zone addressable fire alarm control panel complete with 2X12AH autonomous time emergency batteries as Menvier DF60001 or equal and approved.	1	No.	45000	45000
TOTAL CARRIED TO COLLECTION					477900

PROPOSED ELECTRICAL INSTALLATION OF BUSIA COUNTY REFFERAL HOSPITAL ANNEX

SECOND FLOOR

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	SUPPLY, DELIVER, INSTALL, TEST AND COMMISSION THE FOLLOWING WORKS:				
A	Lighting points comprising wiring in 3x1.5mm ² Single Core PVC insulated copper cables drawn in concealed 20mm diameter HG PVC conduits complete with all necessary accessories but excluding switches for:-				
	(a) One Way Switching.	101	NO	3250	328250
	(b) Two Way Switching.	37	NO	3650	135050
B	Ring mains socket outlets comprising wiring in 3x2.5mm sq. single core PVC insulated copper cables drawn in concealed 25 mm diameter Heavy Gauge PVC conduits complete with all the necessary accessories.	72	NO	3650	262800
C	13A switched white moulded case socket outlet plates as MK, Clipsal, BG, Crabtree or an approved equivalent.	72	NO	850	61200
D	10A moulded ivory switch plates as MK, BG, Crabtree or approved equivalent as follows:				
	(a) 1 gang 1 way	27	NO	500	13500
	(b) 1 gang 2 way	16	NO	600	9600
	(c) 2 gang 2 way	8	NO	650	
	(d) 3 gang 1 way	1	NO	700	700
	(e) Intermediate Switch	5	NO	1850	9250
E	Hand Drier's Power Point, wired in 3x 2.5sq mm PVC SC copper cables drawn in concealed 25mm Dia. HG PVC conduits complete with all accessories but excluding the D.P switch.	9	NO	4500	40500
F	13A double pole control switch plates with neon light as MK, BG, Crabtree or approved equivalent	9	NO	1000	9000
G	Air Conditioner's Power Point, comprising wiring drawn in 3x2.5mm² PVC-SC-CU cables in concealed 25mm Diameter HG PVC conduits complete with all accessories but excluding the D.P switch .	10	NO	4500	45000
H	13A double pole control switch plates with neon light as MK, BG, Crabtree or approved equivalent	10	NO	1000	10000
	TOTAL CARRIED TO COLLECTION				924850

SECOND FLOOR CONTINUED

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Cooker (1-Φ) Power Point, comprising of 3x6mm² PVC SC Copper cables drawn in concealed 25mm dia. HG PVC conduits complete with all accessories.	2	No.	7500	15000
	45A DP Cooker Control Unit with 13A integral Socket Outlet and Pilot Lamp marked 'As Per Application' for item above as MK, MEM or approved equivalent.	2	No.	3250	6500
	Cooker Connection Unit for flush mounting and wired from Cooker Control Unit.	2	No.	1000	2000
	LIGHTING FITTINGS				
	(g) Self-contained double sided EXIT sign with 8W fluorescent lamp for non- maintained emergency lighting for 3 hour duration as Sapphire or approved equivalent.	5	NO	9500	47500
	36wx1200 mm fluorescent fitting c/w all accessories as thorn or of equivalent quality	52	NO	2350	122200
	(c) 18W, 200mm diameter, recess mounted, LED circular ceiling light, IP44 with daylight white output and Long lamp life above 50,000 hours as Philips, LEDVANCE or approved equivalent	20	NO	1250	25000
C	6 Ways TPN, flush mounted Distribution Board complete with 100A integral isolator as <i>Schneider Electric Acti 9 or an approved equivalent complete with all accessories but</i> excluding MCBs.	2	NO	28500	57000
	MCBs for item above				
	(i) 10A SP	14	NO	750	10500
	(ii) 20A SP	8	NO	750	
	(iii) 32A SP	8	NO	750	6000
	(iv) SP Spareway	3	NO	150	450
	(v) TP Spareway	1	NO	250	250
E	Carry out concise permanent traffolyte labelling for all the sub-circuits in item above.	1	Item	2500	2500
F	4x10mm ² + 1x10mm ² single core PVC insulated copper cables in 50mmØ concealed HG PVC conduits complete with appropriate cable glands and any other necessary accessory	72	LM	2450	176400
K	16mm ² 4Core PVC/SWA/PVC Copper cables running on cable tray complete with appropriate cable glands and any other necessary accessory	25	LM	3450	86250
L	IP65 rated, standard cable loop-in box made of powder coated steel sheets of at least 14SWG complete with 50A, Three Phase Cut-out as Henleys or approved equivalent.	1	No.	6500	6500
	TOTAL CARRIED TO COLLECTION				
					540550

SECOND FLOOR CONTINUED

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
A	TELEVISION POINTS				
	a) TV outlet point wired in 75 Ohms Screened Coaxial TV cables drawn in concealed 20mm diameter HG/PVC conduits and linked to the outside through the roof space (to the amplifier) via telephone draw in boxes.	6	NO	1200	7200
	b) Moulded ivory TV outlet plate as MK, Clipsal, Crabtree or approved equivalent.	6	NO	1550	9300
	c) Supply and Install draw box 300mmx250mmx150mm made in 16SWG steel sheets finished in cream powder coating to Engineer's approval.	1	NO	4000	4000
B	DATA&TELEPHONE POINTS				
	Data/Telephone outlet point done in 25mm dia. HG PVC conduits concealed in building fabric/ trunking complete with all necessary accessories.	6	NO	1550	9300
C	CCTV SYSTEM POINTS				
	CCTV System Points done in 25mm dia. HG PVC conduits concealed in building fabric/trunking complete with all necessary accessories (N/B: conduit length for each point running from the communication room is approximately 20m).	6		1850	11100
	FIRE DETECTION AND ALARM SYSTEM				
	Supply, deliver, install and commission a complete Fire Detection and Alarm system, addressable type and in accordance with BS 5839 :2000, P2 and L2				
A	Outlet for Fire Alarm Panel's concealed 25mm HG PVC conduit, wiring in 3 x 2.5mm ² SC-PVC-CU fire rated cables and all accessories, including 5A fused unswitched connection unit with neon light.	1	No.	3750	3750
B	Outlet for fire alarm manual call point/smoke/heat detector comprising box, concealed 20mm HG PVC conduit, wiring in 3 x 1.5mm ² fire rated cables and all accessories.	9	No.	18000	162000
C	Addressable Manual Fire break glass call point unit as MENVIER or approved equivalent complete with a packet of 5 spare glasses, a packet of 5 spare test keys, a spare back box and a hinged cover to be installed recessed in building fabric.	7	No.	5800	40600
D	Addressable Electronic Fire Alarm Sounder complete with Red Flashing Beacon Light as Menvier or approved equivalent.	2	No.	8500	17000
E	Addressable Photometric Smoke Detector as Menvier or equal and approved.	25	No.	2500	62500
F	Addressable Rate of Heat Rise Detector as Menvier MENVIER or equal and approved.	1	No.	5800	5800
G	4 - Loop zone addressable fire alarm control panel complete with 2X12AH autonomous time emergency batteries as Menvier DF60001 or equal and approved.	1	No.	45000	45000
TOTAL CARRIED TO COLLECTION					377550

**PROPOSED ELECTRICAL INSTALLATION OF BUSIA COUNTY REFERRAL HOSPITAL
ANNEX**

SECOND FLOOR

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	SUPPLY, DELIVER, INSTALL, TEST AND COMMISSION THE FOLLOWING WORKS:				
A	Lighting points comprising wiring in 3x1.5mm ² Single Core PVC insulated copper cables drawn in concealed 20mm diameter HG PVC conduits complete with all necessary accessories but excluding switches for:-				
	(a) One Way Switching.	84	NO	3250	273000
	(b) Two Way Switching.	34	NO	3650	124100
B	Ring mains socket outlets comprising wiring in 3x2.5mm sq. single core PVC insulated copper cables drawn in concealed 25 mm diameter Heavy Gauge PVC conduits complete with all the necessary accessories.	79	NO	3650	288350
C	13A switched white moulded case socket outlet plates as MK, Clipsal, BG, Crabtree or an approved equivalent.	79	NO	850	67150
D	10A moulded ivory switch plates as MK, BG, Crabtree or approved equivalent as follows:				
	(a) 1 gang 1 way	52	NO	500	26000
	(b) 1 gang 2 way	20	NO	600	12000
	(c) 2 gang 2 way	2	NO	650	
	(d) 3 gang 1 way	1	NO	700	700
	(e) Intermediate Switch	2	NO	1850	3700
E	Hand Drier's Power Point, wired in 3x 2.5sq mm PVC SC copper cables drawn in concealed 25mm Dia. HG PVC conduits complete with all accessories but excluding the D.P switch.	4	NO	4500	18000
F	13A double pole control switch plates with neon light as MK, BG, Crabtree or approved equivalent	4	NO	1000	4000
G	Air Conditioner's Power Point, comprising wiring drawn in 3x2.5mm² PVC-SC-CU cables in concealed 25mm Diameter HG PVC conduits complete with all accessories but excluding the D.P switch .	5	NO	4500	22500
H	13A double pole control switch plates with neon light as MK, BG, Crabtree or approved equivalent	5	NO	1000	5000
	TOTAL CARRIED TO COLLECTION				844500

FIRST FLOOR CONTINUED

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
C	LIGHTING FITTINGS				
	(g) Self-contained double sided EXIT sign with 8W fluorescent lamp for non- maintained emergency lighting for 3 hour duration as Sapphire or approved equivalent.	5	NO	9500	47500
	36wx1200 mm fluorescent fitting c/w all accessories as thorn or of equivalent quality	97	NO	2350	227950
	(c) 18W, 200mm diameter, recess mounted, LED circular ceiling light, IP44 with daylight white output and Long lamp life above 50,000 hours as Philips, LEDVANCE or approved equivalent	27	NO	1250	33750
	4 Ways TPN, flush mounted Distribution Board complete with 100A integral isolator as <i>Schneider Electric Acti 9 or an approved equivalent complete with all accessories but</i> excluding MCBs.	2	NO	28500	57000
	MCBs for item above				
	(i) 10A SP	12	NO	750	9000
	(ii) 20A SP	8	NO	750	
	(iii) SP Spareway	2	NO	150	300
	(iv) TP Spareway	2	NO	250	500
E	Carry out concise permanent traffolyte labelling for all the sub-circuits in item above.	1	Item	2500	2500
F	4x10mm ² + 1x10mm ² single core PVC insulated copper cables in 50mmØ concealed HG PVC conduits complete with appropriate cable glands and any other necessary accessory	72	LM	2450	176400
K	16mm ² 4Core PVC/SWA/PVC Copper cables running on cable tray complete with appropriate cable glands and any other necessary accessory	25	LM	3450	86250
L	IP65 rated, standard cable loop-in box made of powder coated steel sheets of at least 16SWG complete with 50A, Three Phase Cut-out as Henleys or approved equivalent.	1	No.	6500	6500
TOTAL CARRIED TO COLLECTION					647650
<i>ELECT/11</i>					

	SECOND FLOOR CONTINUED				
ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
A	TELEVISION POINTS				
	a) TV outlet point wired in 75 Ohms Screened Coaxial TV cables drawn in concealed 20mm diameter HG/PVC conduits and linked to the outside through the roof space via telephone draw in boxes.	7	NO	1200	8400
	b) Moulded ivory TV outlet plate as MK, Clipsal, Crabtree or approved equivalent.	7	NO	1550	10850
	c) Supply and Install draw box 300mmx250mmx150mm made in 16SWG steel sheets finished in cream powder coating to Engineer's approval.	1	NO	4000	4000
B	DATA&TELEPHONE POINTS				
	Data/Telephone outlet point done in 25mm dia. HG PVC conduits concealed in building fabric/ trunking complete with all necessary accessories.	32	NO	1550	49600
C	CCTV SYSTEM POINTS				
	CCTV System Points done in 25mm dia. HG PVC conduits concealed in building fabric/trunking complete with all necessary accessories (N/B: conduit length for each point running from the communication room is approximately 20m).	6		1850	11100
	FIRE DETECTION AND ALARM SYSTEM				
	Supply, deliver, install and commission a complete Fire Detection and Alarm system, addressable type and in accordance with BS 5839 :2000, P2 and L2				
A	Outlet for Fire Alarm Panel's concealed 25mm HG PVC conduit, wiring in 3 x 2.5mm ² SC-PVC-CU fire rated cables and all accessories, including 5A fused unswitched connection unit with neon light.	1	No.	3750	3750
B	Outlet for fire alarm manual call point/smoke/heat detector comprising box, concealed 20mm HG PVC conduit, wiring in 3 x 1.5mm ² fire rated cables and all accessories.	9	No.	18000	162000
C	Addressable Manual Fire break glass call point unit as MENVIER or approved equivalent complete with a packet of 5 spare glasses, a packet of 5 spare test keys, a spare back box and a hinged cover to be installed recessed in building fabric.	7	No.	5800	40600
D	Addressable Electronic Fire Alarm Sounder complete with Red Flashing Beacon Light as Menvier or approved equivalent.	2	No.	8500	17000
E	Addressable Photometric Smoke Detector as Menvier or equal and approved.	32	No.	2500	80000
F	Addressable Rate of Heat Rise Detector as Menvier MENVIER or equal and approved.	1	No.	5800	5800
G	4 - Loop zone addressable fire alarm control panel complete with 2X12AH autonomous time emergency batteries as Menvier DF60001 or equal and approved.	1	No.	45000	45000
TOTAL CARRIED TO COLLECTION					438100

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Supply, install, test & commission the lightning protection system comprising the following:				
	AIR TERMINATION				
A	Supply and lay along the ridge cap 25mm X 3mm thick bare pure copper tape as Furse P. No. TC030 or approved equivalent.	130	Lm.	3250	422500
B	State Holdfast to fix the above tape at 1000mm intervals at the roof ridge for air termination system complete with tape jointing clamps and all the necessary accessories all as Furse Cat. No. HF015 or approved equivalent.	130	No.	250	32500
C	Air Termination Spike (lightning arrestors) comprising 2000mm by 15mm diameter copper rod as Furse P.No. RA240 complete with; Copper Multiple Point as Furse P. No. RA 600 and Copper Ridge Saddle as Furse P. No. SD115 or approved equivalent.	12	No.	4500	54000
	DOWNWARD CONDUCTOR				
D	Downward Conductor comprising 25mm X 3mm thick bare pure copper tape as Furse P. No. TC030 or approved equivalent.	72	Lm.	3250	234000
E	Copper Square Tape Clamp for making crossing tape joints as Furse CT 105 - FU or approved equivalent.	15	No.	250	3750
F	DC Tape Clips for Fixing the Down Conductors to the wall as Furse CT 105-FU or approved equivalent.	72	No.	450	32400
G	Copper Oblong Test/Junction Clamp complete with phosphor bronze nuts, washers and screws mounted 1800mm above finished ground level as Furse P. No. CN 105 or approved equivalent.	6	No.	1250	7500
H	32 mm diameter galvanised steel conduit recessed in wall between test clamp and ground and through the ring beam for sleeving at roof level for securing the down conductors.	18	Lm.	2500	45000
J	Copper Saddles fixed at 1000mm intervals at the surface on wall for the down conductor system complete with all the necessary accessories all as FURSE or approved equivalent.	72	No.	1550	111600
	EARTHING				
K	Earth Inspection Concrete Chamber 300mm x 300mm x 300mm with an air tight inspection cover to approval.	6	No.	4500	27000
L	Earthing with 16mm nominal diameter by 1500mm long threaded copper bond earth rods, complete with driving head and clamp.	6	No.	3500	21000
M	Driving Stud for the Item above as Furse ST 300 or approved equivalent.	6	No.	4500	27000
N	Earth Electrode Rod-to-Downward Conductor Copper Tape Clamps as Furse CR 105 or approved equivalent.	6	No.	5000	30000
	TOTAL CARRIED TO COLLECTION				269100

<u>DESCRIPTION</u>				AMOUNT
<u>ELECTRICAL COLLECTION</u>				
Subcontract Preliminaries				1035000
Total Carried from Page Elec/01.....				994350
Total Carried from Page Elec/02.....				1048050
Total Carried from Page Elec/03.....				473250
Total Carried from Page Elec/04.....				1073350
Total Carried from Page Elec/05.....				700250
Total Carried from Page Elec/06.....				477900
Total Carried from Page Elec/07.....				924850
Total Carried from Page Elec/08.....				540550
Total Carried from Page Elec/09.....				377550
Total Carried from Page Elec/10.....				844500
Total Carried from Page Elec/11.....				647650
Total Carried from Page Elec/12.....				438100
Total Carried from Page Elec/13.....				1568350
Total Carried from Page Elec/14.....				269100
Total Carried from Page Elec/15.....				1500000
Total Carried from Page Elec/16.....				77750
Total Carried from Page Elec/17.....				2080000
Total Carried from Page Elec/18.....				1035000
<i>TOTAL CARRIED TO GRAND SUMMARY</i>				<u>16105550</u>

TOTAL COST OF ELECTRICAL COST

MECHANICAL WORK

COUNTY GOVERNMENT OF BUSIA – DIRECTORATE OF PUBLIC WORKS
PROPOSED CONSTRUCTION OF BCRH ANNEX SPECIALIZED HOSPITAL, BUSIA, KENYA
MECHANICAL WORKS: BILLS OF QUANTITIES (ALL RATES INCLUSIVE OF ALL TAXES)

DESIGN DATA	
Project Location:	Busia Town, Busia County, Kenya (Lat 0°28'N, Long 34°06'E)
Altitude:	1,146 m above sea level
Outdoor Design Temp (DB/WB):	34°C / 26°C (wet season); 33°C / 24°C (dry season)
Mean Annual Rainfall:	1,400 mm/year (KNMD data)
Relative Humidity:	70–90% (wet season); 50–65% (dry season)
Hospital Category:	County Referral Hospital Annex – Specialized
Total Floors:	4 (Ground + First + Second + Third)
Total Beds:	76 (including 7 HDU/ICU beds)
Building Footprint:	48.7 m × 49.5 m (Ground Floor)
Floor-to-Floor Height:	3.6 m (as per architectural drawings Section A-A)
Design Standards:	CIBSE Guides, BS EN, Kenya NBC 2024, HTM 02-01:2022, NFPA, ISO
Rates Inclusive Of:	All taxes, VAT, duties and levies as applicable in Kenya

MAIN SUMMARY OF BILLS			
Bill No.	Description	Sheet Ref	Amount (KShs)
PRELIM	Preliminaries & Contractual Requirements	MW/P	466,000
BILL 1	Water Reticulation, Storage & Treatment	MW/1	5,858,100
BILL 2	Internal Plumbing – Cold & Hot Water	MW/2	1,893,530
BILL 3	Sanitary Appliances & Accessories	MW/3	9,558,400
BILL 4	Internal Drainage	MW/4	1,238,140
BILL 5	External Drainage & Sewerage	MW/5	4,358,950
BILL 6	Medical Gas Pipework & Terminal Units	MW/6	24,620,000
BILL 7	Medical Gas Plants & Equipment	MW/7	29,425,000
BILL 8	Fire Protection & Hose Reels	MW/8	3,022,400
BILL 9	Solar Hot Water System	MW/9	2,079,400
BILL 10	Rainwater Harvesting System (80,000 L)	MW/10	1,595,900
BILL 11	Air Conditioning & Mechanical Ventilation	MW/11	14,200,200
BILL 12	Hospital Bed Lift (Elevator)	MW/12	10,537,500
BILL 13	PC Sums & Provisional Sums	MW/13	485,000
GRAND TOTAL (INCLUSIVE OF ALL TAXES)			109,338,520

MECHANICAL WORKS – PAGE INDEX & CROSS-REFERENCE

Page Ref	Description	Sheet Name	Amount (KShs)
MW/P	Preliminaries & Contractual Requirements	PRELIMINARIES	466,000
MW/1	Water Reticulation, Storage & Treatment	BILL 1 - WATER SUPPLY	5,858,100
MW/2	Internal Plumbing – Cold & Hot Water	BILL 2 - INTERNAL PLUMBING	1,893,530
MW/3	Sanitary Appliances & Accessories	BILL 3 - SANITARY APPLIANCES	9,558,400
MW/4	Internal Drainage	BILL 4 - INTERNAL DRAINAGE	1,238,140
MW/5	External Drainage & Sewerage	BILL 5 - EXTERNAL DRAINAGE	4,358,950
MW/6	Medical Gas Pipework & Terminal	BILL 6 - MEDICAL GAS PIPING	24,620,000
MW/7	Medical Gas Plants & Equipment	BILL 7 - MEDICAL GAS PLANTS	29,425,000
MW/8	Fire Protection & Hose Reels	BILL 8 - FIRE PROTECTION	3,022,400
MW/9	Solar Hot Water System	BILL 9 - SOLAR HOT WATER	2,079,400
MW/10	Rainwater Harvesting System	BILL 10 - RAINWATER HARVESTI	1,595,900
MW/11	Air Conditioning & Mechanical	BILL 11 - AC & VENTILATION	14,200,200
MW/12	Hospital Bed Lift (Elevator)	BILL 12 - HOSPITAL LIFT	10,537,500
MW/13	PC Sums & Provisional Sums	BILL 13 - PC SUMS	485,000
TOTAL CARRIED TO GRAND TOTAL (Inclusive of All Taxes)			109,338,520

COUNTY GOVERNMENT OF BUSIA – DIRECTORATE OF PUBLIC WORKS**PROPOSED CONSTRUCTION OF BCRH ANNEX SPECIALIZED HOSPITAL, BUSIA, KENYA****PRELIMINARIES & CONTRACTUAL REQUIREMENTS**

Item	Description	Unit	Qty	Rate (KShs)	Amount (KShs)
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NOTE: All prices inclusive of all applicable taxes. Items A–H cover contractual requirements for the full Mechanical Works contract.

Section P: Preliminaries & Contractual Requirements

A	Preparation, printing and distribution of working drawings – 6 complete sets in A1 colour, plus A3 reduced sets (2 No.) and PDF copy on USB drive.	Sum	1	55,000	55,000
B	Preparation and distribution of As-Installed (Record) Drawings on completion: 4 No. full-size blue print sets + 2 No. AutoCAD DWG files on USB drives (min. 1 TB each). All services shown on separate layers per discipline.	Sum	1	65,000	65,000
C	Submission of Operation & Maintenance Manuals in A4 hardback binders (4 copies) including test certificates, commissioning records, warranties, spare parts schedules and equipment data sheets for all installed systems.	Sum	1	42,000	42,000
D	Statutory approvals: Busia County building inspections, NEMA approval fees (mechanical component), Water Services Board notification and compliance.	Sum	1	55,000	55,000
E	Health, Safety & Environmental Plan (HSEP): preparation, PPE provision for all operatives, safety signage, dedicated safety officer 2 days/week.	Sum	1	42,000	42,000
F	Defects Liability Period maintenance (12 months from Practical Completion): 4 scheduled site visits per main system per year including adjustment, lubrication and minor corrections.	Sum	1	95,000	95,000
G	Supply, deliver and install 1 No. multifunction office laser printers (A4 colour, network, duplex, scan, copy, min. 35 ppm) for County Mechanical Engineer's use at project commencement. Brand equivalent: HP LaserJet Pro MFP M479 or Canon MF842Cdw.	No.	1	95,000	95,000
H	Supply 2 No. portable external hard drives (min. 1 TB USB 3.0, shock-proof casing) for project data storage delivered at project commencement.	No.	2	8,500	17,000
Sub-Total – Preliminaries					466,000

TOTAL PRELIMINARIES – CARRIED TO SUMMARY**466,000**

COUNTY GOVERNMENT OF BUSIA – DIRECTORATE OF PUBLIC WORKS

PROPOSED CONSTRUCTION OF BCRH ANNEX SPECIALIZED HOSPITAL, BUSIA, KENYA

BILL 1 – WATER RETICULATION, STORAGE & TREATMENT

Item	Description	Unit	Qty	Rate (KShs)	Amount (KShs)
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NOTE: All external HDPE PE100 PN16 to BS EN 12201-2. Ground storage: pressed steel sectional tanks to BS

1.1 External Water Reticulation & Metering

A	Excavate trench 600 mm deep × 350 mm wide for water supply pipe in soft ground, shore where necessary, backfill with approved granular material in 150 mm compacted layers, compact to 95% MDD, and dispose surplus spoil off site. Estimated 150 m run.	LM	150	950	142,500
B	Supply and lay HDPE PE100 PN16 pipe 63 mm OD (50 mm NB) in prepared trench, complete with 150 mm sand bedding, granular haunching, electrofusion couplings, HDPE fittings, tracing wire and yellow warning tape 300 mm above pipe. To BS EN 12201-2.	LM	150	3,200	480,000
C	Extra over 63 mm HDPE PE100 PN16 pipe: electrofusion coupling (joints at 6 m intervals).	No.	25	1,400	35,000
D	Extra over 63 mm HDPE PE100 PN16 pipe: 90° elbow electrofusion.	No.	8	2,200	17,600
E	Extra over 63 mm HDPE PE100 PN16 pipe: equal tee electrofusion.	No.	4	2,800	11,200
F	63 mm HDPE PN16 full-bore ball valve (brass body, lever operated) complete with valve box (precast concrete) and concrete surround. BS 5351.	No.	3	22,000	66,000
G	63 mm in-line water meter (Woltmann multi-jet Class C, EN ISO 4064, pulse output for BMS), complete with isolating valves, non-return valve, bypass valve and assembly, strainer, meter box and concrete surround. Calibrated and sealed.	No.	1	95,000	95,000
H	63 mm pressure reducing valve (PRV) set at 4 bar, SS internals, with upstream/downstream pressure gauges, isolation valves and bypass valve. BS 6282.	No.	1	55,000	55,000
I	63 mm non-return valve (swing check, PN16, flanged ends) at building entry point.	No.	1	15,000	15,000
J	Reinstate surface finish after trench backfilling: gravel path 650 mm wide, tarmac patching where crossing existing roads.	LM	150	750	112,500
K	Connection to County Water main: tie-in saddle (ductile iron, epoxy coated), corporation stop, HDPE compression fitting, concrete thrust block and all fittings.	No.	1	55,000	55,000
L	Hydraulic pressure test of external supply pipework at 1.5× working pressure (6 bar) for 1 hour minimum, witnessed by Engineer. Issue test certificate.	Sum	1	12,000	12,000
Sub-Total – 1.1 External Water Reticulation & Metering					1,096,800

1.2 Water Storage – Ground Level Tanks (2 × 50,000 L Pressed Steel)					
A	Excavation, preparation and concrete base slab (300 mm thick, C30/37 reinforced concrete) for low-level storage tanks, including formwork, reinforcement and curing. Allow for 2 No. tanks.	m ²	30	9,500	285,000
B	Supply and install pressed steel sectional water storage tank, galvanised, 50,000 litre capacity (max per unit), comprising bolted steel panels (3 mm min. thickness), internal food-grade epoxy lining (NSF/ANSI 61 certified), access manhole 600×600 mm with lockable hinged cover, 100 mm HDPE overflow pipe with vermin-proof screen, 75 mm HDPE drain pipe with valve, 63 mm HDPE inlet with SS float valve (BS 1212), 63 mm HDPE outlet with isolation valve, 100 mm vent pipe with insect-proof gauze, internal access ladder (GI rungs). All joints sealed with food-grade sealant. To BS 1564.	No.	2	685,000	1,370,000
C	Extra over tanks: 63 mm HDPE PN16 interconnecting header pipe, isolation valves and cross-connections for parallel operation of both tanks.	Set	1	35,000	35,000
D	Tank overflow alarm (float switch, wired to BMS/indicator panel) per tank.	No.	2	8,500	17,000
E	Filling, disinfection, flushing and water quality testing of storage tanks at commissioning (BS CP301 Clause 409). Issue certificates.	Sum	1	18,000	18,000
F	Hydraulic test of tanks and associated pipework, witnessed by Engineer. Issue test certificate.	Sum	1	12,000	12,000
Sub-Total – 1.2 Water Storage – Ground Level Tanks (2 × 50,000 L Pressed Steel)					1,737,000

1.3 Water Storage – Rooftop HDPE Tanks (4 × 500 L)

A	Supply and install rooftop cold water storage tank: polyethylene (HDPE) rotomoulded, UV-stabilised with min. 2% carbon black, food-grade (KS 3000), 10,000 litre capacity, with lockable lid, inlet/outlet/overflow/drain connections, mosquito-proof vent. As Kentank 5000 L or approved equal. 4 No. tanks connected in parallel = 40,000 L total rooftop storage.	No.	4	120,000	480,000
B	Extra over rooftop tanks: SS304 inlet float valve 25 mm (BS 1212 Part 3) with debris guard, per tank.	No.	4	6,500	26,000
C	Extra over rooftop tanks: 25 mm PP-R PN16 outlet isolation ball valve (full bore, chrome brass), per tank.	No.	4	3,200	12,800
D	Extra over rooftop tanks: 40 mm HDPE PN16 interconnecting overflow header pipe connecting all 4 tanks to storm water downpipe.	LM	12	2,200	26,400
E	Extra over rooftop tanks: 25 mm PP-R PN16 parallel collection manifold from all 4 tanks to single riser.	LM	8	2,200	17,600
F	Rooftop tank support frame (galvanised steel RSJ/angle iron, designed for full tank weight + 25% impact factor), including holding-down bolts, anti-vibration pads and waterproofing of roof penetrations.	Set	1	95,000	95,000
G	Filling and disinfection of rooftop tanks at commissioning. Water quality test. Issue certificate.	Sum	1	9,500	9,500
Sub-Total – 1.3 Water Storage – Rooftop HDPE Tanks (4 × 500 L)					667,300

1.4 Water Treatment Plant

A	Supply and install multi-media pressure filter (FRP vessel 800 mm dia., gravel/sand/anthracite bed, backwash system, pressure gauges, automated backwash timer valve). Flow rate 10 m ³ /h.	No.	1	285,000	285,000
B	Supply and install activated carbon filter (FRP vessel 800 mm dia., granular activated carbon bed), complete with backwash system, pressure gauges and all interconnecting pipework and valves. Flow rate 10 m ³ /h.	No.	1	355,000	355,000
C	Supply and install duplex alternating water softener (2×600 mm dia. FRP vessels, cation resin bed, brine tank 200 L, microprocessor regeneration controller, all pipework). Flow rate 10 m ³ /h.	No.	1	325,000	325,000
D	Supply and install UV steriliser (SS316L chamber, 30 W UV lamp, 10 m ³ /h), complete with UV intensity monitor and alarm, isolating valves. NSF 55 Class A certified.	No.	1	110,000	110,000
E	Supply and install chemical dosing system: sodium hypochlorite dosing pump (0–8 L/h peristaltic), 200 L HDPE dosing tank with level sensor, in-line static mixer, residual chlorine analyser (4–20 mA output to BMS).	Set	1	210,000	210,000
F	Supply and install electromagnetic inline flow meter (50 mm bore, SS316L electrodes, HART protocol, 4–20 mA output) on treatment plant outlet.	No.	1	75,000	75,000
G	Water treatment plant pipework (HDPE PN16/PP-R PN16, 40–63 mm): header, manifold, all interconnections, sample ports and drain valves. Estimated 20 LM piping.	Sum	1	55,000	55,000
H	Treatment plant skid frame (mild steel hot-dip galvanised, 50 mm drip tray and drain connection) and weatherproof housing (GI sheet enclosure with ventilation louvres and door).	Sum	1	95,000	95,000
I	Commissioning, performance testing, water quality analysis (pH, turbidity, TDS, residual chlorine, coliform count) and training on plant operation (5 days). Submit certificates.	Sum	1	45,000	45,000
Sub-Total – 1.4 Water Treatment Plant					1,555,000

1.5 Booster Pump Set & Control Panel

A	Supply and install booster pump set: 2 No. close-coupled centrifugal pumps (duty/assist/standby), each 2.2 kW, Q=8 m ³ /h at H=45 m, SS304 impeller and shaft, mechanical seal, flanged connections, on common SS304 base frame with anti-vibration mounts and EPDM flexible connectors. WRAS approved. Performance curve to be submitted.	Set	1	450,000	450,000
B	Supply and install pump control panel (IP55, SS304 enclosure): MCCB main isolator, DOL starters with overload relays for each pump, auto/manual/off selector switches, duty rotation timer (24-hr), pressure transducer (4–20 mA), low-level cut-out relay inputs, run/fail/auto LED indicators, BMS relay outputs (volt-free contacts).	No.	1	215,000	215,000
C	Supply and install pressure vessel (expansion/surge tank) 80 litre capacity, pre-charged with nitrogen to 2.5 bar, SS304 diaphragm, on pump discharge manifold with isolation valve.	No.	2	35,000	70,000
D	Supply and install pump header manifold (65 mm GI Class C pipe): pressure gauges upstream and downstream, pressure switch (adjustable 2–8 bar), non-return valves per pump outlet, gate valves and 50 mm drain valve.	Set	1	45,000	45,000
E	Commissioning of pump set: flow measurement, pressure testing, duty-standby changeover test, alarm test, BMS interface test. Issue commissioning certificate.	Sum	1	22,000	22,000
Sub-Total – 1.5 Booster Pump Set & Control Panel					802,000

1 – WATER RETICULATION, STORAGE & TREATMENT – CARRIED TO SUMMARY	5,858,100
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COUNTY GOVERNMENT OF BUSIA – DIRECTORATE OF PUBLIC WORKS					
PROPOSED CONSTRUCTION OF BCRH ANNEX SPECIALIZED HOSPITAL, BUSIA, KENYA					
CONTRACT No: BUSIA/DOH/BCRH/2025-2026					
BILL 2 – INTERNAL PLUMBING – COLD & HOT WATER					
Item	Description	Unit	Qty	Rate (KShs)	Amount (KShs)
2.1 Ground Floor – Cold & Hot Water Pipework & Valves					
A	20 mm PP-R PN16 cold water distribution pipe (DIN 8077/8078, heat-fusion jointed), complete with pipe supports at 1.2 m cts, colour-coded green labels at 3 m intervals, end caps during installation. Ground floor.	LM	185	150	27,750
B	25 mm PP-R PN16 cold water distribution pipe as above. Ground floor.	LM	85	200	17,000
C	32 mm PP-R PN16 cold water branch/riser pipe as above. Ground floor.	LM	42	300	12,600
D	40 mm PP-R PN16 cold water main riser/branch pipe as above. Ground floor.	LM	32	450	14,400
E	50 mm PP-R PN16 cold water main riser pipe as above. Ground floor.	LM	22	600	13,200
F	20 mm PP-R PN16 hot water distribution pipe insulated with 25 mm Armaflex Class 1 closed-cell elastomeric foam, colour-coded red band. Ground floor.	LM	125	150	18,750
G	25 mm PP-R PN16 hot water distribution pipe, insulated as above. Ground floor.	LM	62	200	12,400
H	32 mm PP-R PN16 hot water branch/riser, insulated as above. Ground floor.	LM	28	300	8,400
I	40 mm PP-R PN16 hot water riser, insulated as above. Ground floor.	LM	18	450	8,100
J	Extra over any PP-R pipe: heat-fusion equal tee (any size). Ground floor.	No.	55	60	3,300
K	Extra over any PP-R pipe: heat-fusion reducing tee (any size combination). Ground floor.	No.	35	50	1,750
L	Extra over any PP-R pipe: heat-fusion 90° elbow. Ground floor.	No.	85	45	3,825
M	Extra over any PP-R pipe: heat-fusion 45° elbow. Ground floor.	No.	35	45	1,575
N	Extra over any PP-R pipe: heat-fusion coupling/union. Ground floor.	No.	45	50	2,250
O	20 mm full-bore ball valve (chrome-plated brass, PN16, lever handle, lockable) at branch isolation. Ground floor.	No.	14	3,800	53,200
P	25 mm full-bore ball valve as above. Ground floor.	No.	8	4,800	38,400
Q	32 mm gate valve (non-rising stem, PN16, screwed) at branch isolation. Ground floor.	No.	5	7,200	36,000
R	Pressure reducing valve (PRV) 20 mm, set 3 bar, with gauge and isolation valve. At WC/ward groups. Ground floor.	No.	2	12,500	25,000
S	Thermostatic mixing valve (TMV) 20 mm, WRAS approved, set 43°C, lockable, with strainer, at patient wash basin/shower connections. Ground floor.	No.	4	8,500	34,000
T	Non-return valve 20 mm (swing check, PN16, screwed) at hot water return connections. Ground floor.	No.	6	3,800	22,800
U	Float valve 25 mm (BS 1212 Part 3, equilibrium type, WRAS) for cisterns. Ground floor.	No.	4	4,500	18,000
V	Hydraulic pressure test of ground floor pipework at 1.5× working pressure for 60 min, witnessed by Engineer. Certificate issued.	Sum	1	12,000	12,000
W	Flushing and disinfection of ground floor cold water pipework (chlorine solution 50 ppm, 1-hour contact), final flush and water sample test. Certificate.	Sum	1	9,500	9,500
Sub-Total – 2.1 Ground Floor – Cold & Hot Water Pipework & Valves					394,200

2.2 First Floor – Cold & Hot Water Pipework & Valves					
A	20 mm PP-R PN16 cold water distribution pipe, complete. First floor.	LM	175	150	26,250
B	25 mm PP-R PN16 cold water distribution pipe. First floor.	LM	78	200	15,600
C	32 mm PP-R PN16 cold water branch/riser. First floor.	LM	38	300	11,400
D	40 mm PP-R PN16 cold water riser. First floor.	LM	28	450	12,600
E	20 mm PP-R PN16 hot water distribution pipe, insulated. First floor.	LM	115	150	17,250
F	25 mm PP-R PN16 hot water pipe, insulated. First floor.	LM	55	200	11,000
G	32 mm PP-R PN16 hot water branch/riser, insulated. First floor.	LM	25	300	7,500
H	Extra over any PP-R pipe: heat-fusion equal tee. First floor.	No.	50	60	3,000
I	Extra over any PP-R pipe: heat-fusion 90° elbow. First floor.	No.	80	50	4,000
J	Extra over any PP-R pipe: reducing tee. First floor.	No.	30	50	1,500
K	20 mm full-bore ball valve at branch isolation. First floor.	No.	12	3,800	45,600
L	25 mm full-bore ball valve. First floor.	No.	7	4,800	33,600
M	PRV 20 mm set 3 bar at ward/WC groups. First floor.	No.	2	12,500	25,000
N	TMV 20 mm set 43°C at patient basins/showers. First floor.	No.	6	8,500	51,000
O	NRV 20 mm at hot water return. First floor.	No.	5	3,800	19,000
P	Hydraulic pressure test of first floor pipework, witnessed. Certificate.	Sum	1	12,000	12,000
Q	Flushing and disinfection of first floor cold water pipework. Certificate.	Sum	1	9,500	9,500
Sub-Total – 2.2 First Floor – Cold & Hot Water Pipework & Valves					305,800

2.3 Second Floor – Cold & Hot Water Pipework & Valves

A	20 mm PP-R PN16 cold water distribution pipe, complete. Second floor.	LM	175	150	26,250
B	25 mm PP-R PN16 cold water distribution pipe. Second floor.	LM	75	200	15,000
C	32 mm PP-R PN16 cold water branch/riser. Second floor.	LM	38	300	11,400
D	20 mm PP-R PN16 hot water pipe, insulated. Second floor.	LM	115	150	17,250
E	25 mm PP-R PN16 hot water pipe, insulated. Second floor.	LM	52	200	10,400
F	Extra over any PP-R pipe: heat-fusion equal tee. Second floor.	No.	48	60	2,880
G	Extra over any PP-R pipe: 90° elbow. Second floor.	No.	75	50	3,750
H	20 mm full-bore ball valve at branch isolation. Second floor.	No.	12	3,800	45,600
I	PRV 20 mm at ward/WC groups. Second floor.	No.	2	12,500	25,000
J	TMV 20 mm set 43°C at patient basins/showers. Second floor.	No.	5	8,500	42,500
K	NRV 20 mm at hot water return. Second floor.	No.	5	3,800	19,000
L	Hydraulic pressure test and disinfection of second floor pipework. Certificate.	Sum	1	20,000	20,000
Sub-Total – 2.3 Second Floor – Cold & Hot Water Pipework & Valves					239,030

2.4 Third Floor – Cold & Hot Water Pipework & Valves

A	20 mm PP-R PN16 cold water distribution pipe, complete. Third floor.	LM	172	150	25,800
B	25 mm PP-R PN16 cold water distribution pipe. Third floor.	LM	72	200	14,400
C	32 mm PP-R PN16 cold water branch/riser. Third floor.	LM	35	300	10,500
D	20 mm PP-R PN16 hot water pipe, insulated. Third floor.	LM	112	150	16,800
E	25 mm PP-R PN16 hot water pipe, insulated. Third floor.	LM	50	200	10,000
F	Extra over any PP-R pipe: heat-fusion equal tee. Third floor.	No.	45	60	2,700
G	Extra over any PP-R pipe: 90° elbow. Third floor.	No.	72	50	3,600
H	20 mm full-bore ball valve at branch isolation. Third floor.	No.	12	3,800	45,600
I	PRV 20 mm at ward/WC groups. Third floor.	No.	3	12,500	37,500
J	TMV 20 mm set 43°C at patient basins/showers. Third floor.	No.	6	8,500	51,000
K	NRV 20 mm at hot water return. Third floor.	No.	5	3,800	19,000
L	Hydraulic pressure test and disinfection of third floor pipework. Certificate.	Sum	1	20,000	20,000
Sub-Total – 2.4 Third Floor – Cold & Hot Water Pipework & Valves					256,900

2.5 Vertical Risers, Headers, Miscellaneous & Commissioning					
A	50 mm PP-R PN16 cold water main rising pipe from pump room to roof tanks, insulated (50 mm Armaflex Class 1 with GI sheet cladding), including clips, sleeves and fittings. 4 floors plus basement.	LM	58	2,500	145,000
B	50 mm PP-R PN16 hot water main riser from solar plant to all floors, fully insulated (50 mm Armaflex). Complete.	LM	52	1,500	78,000
C	32 mm PP-R PN16 hot water circulation return pipe (HWCR) – insulated, all floors.	LM	52	1,800	93,600
D	Pipe sleeves (PVC, 1 dia. larger) at all wall and slab penetrations, with 50 mm mineral wool fire-stop packing and intumescent fire collar (100 mm) to BS 476 at fire compartment walls.	No.	95	1,800	171,000
E	Pipe identification labels (colour-coded, Brady or Seton type) at 3 m intervals on all pipes, at all branches and valves. Overall allowance.	Sum	1	38,000	38,000
F	Pipe supports: unistrut channel runs, proprietary pipe clips, threaded rod hangers, wall brackets and all fixings. Overall allowance.	Sum	1	115,000	115,000
G	Commissioning of hot water system: circulation balancing, temperature checks at all outlets (60°C flow, 55°C return), TMV calibration records.	Sum	1	35,000	35,000
H	Final pressure test and commissioning certificate for all plumbing systems (cold and hot), witnessed by Engineer.	Sum	1	22,000	22,000
Sub-Total – 2.5 Vertical Risers, Headers, Miscellaneous & Commissioning					697,600

TOTAL BILL 2 – INTERNAL PLUMBING – COLD & HOT WATER – CARRIED TO	1,893,530
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COUNTY GOVERNMENT OF BUSIA – DIRECTORATE OF PUBLIC WORKS

PROPOSED CONSTRUCTION OF BCRH ANNEX SPECIALIZED HOSPITAL, BUSIA, KENYA

BILL 3 – SANITARY APPLIANCES & ACCESSORIES

Item	Description	Unit	Qty	Rate (KShs)	Amount (KShs)
NOTE: All sanitary ware vitreous china to BS 5503/5504, white. All WCs: Sloan Royal dual-flush flush valve (6/4 L) used throughout facility. PWD fittings to BS 8300 and Kenya PWD Act 2003. Hospital-grade antimicrobial finish in clinical areas. Rates inclusive of all taxes.					
3.1 Ground Floor Sanitary Appliances					
A	Wall-hung wash hand basin (WHB) 550×430 mm, vitreous china (BS 5503), concealed fixings; chrome-plated lever-action mixer tap (elbow-operated in clinical areas), pop-up waste 32 mm, polypropylene P-trap 32 mm, flexible SS connections 300 mm, quarter-turn isolation valves. As Duravit D-Code or equal. Hospital antimicrobial finish in clinical areas.	No.	26	22,000	572,000
B	Wall-hung WC pan, vitreous china, horizontal outlet with 100 mm PP connector; fitted with Sloan Royal dual-flush flush valve (6/4 L, chrome body, control stop, anti-siphon, vacuum breaker, ADA compliant); white heavy-duty soft-close hinged seat with SS hinges. Including pan fixing bolts and wall bracket.	No.	8	28,500	228,000
C	Shower unit 800×800 mm: acrylic tray with chrome waste 50 mm, thermostatic shower valve (TMV3, 43°C anti-scald), adjustable chrome shower rail 600–1,200 mm, chrome shower head (200 mm dia. fixed) with flexible hose, chrome curtain rail, white shower curtain.	No.	2	48,500	97,000
D	PWD Accessible WC set : wall-hung WC with Sloan flush valve; wall-mounted wash basin 550×430 mm with lever mixer tap; SS304 folding grab rail 900 mm; SS304 straight grab rail 600 mm. All to BS 8300 and Kenya PWD Act 2003.	Set	2	115,000	230,000
E	Stainless steel lab sink (single bowl 450×350×200 mm deep, SS316L), deck-mounted pillar taps (hot + cold, lever-action), 40 mm basket strainer waste and 40 mm chrome bottle trap.	No.	2	26,500	53,000
F	Stainless steel soap dispenser 500 ml capacity, surface-mounted, hospital grade anti-drip nozzle. One per basin and shower.	No.	28	4,800	134,400
G	Stainless steel toilet roll holder, surface-mounted, single-roll, anti-vandal screw. One per WC.	No.	8	2,200	17,600
H	Mirror, polished-edge plate glass 600×450 mm, wall-fixed with chrome dome-head screws and backing pad.	No.	14	4,200	58,800
J	Sluice/utility sink, inset stainless steel SS316, 600×500×300 mm deep, pillar taps, bucket grating, 75 mm anti-siphon waste.	No.	1	80,000	80,000
Sub-Total – 3.1 Ground Floor Sanitary Appliances					1,470,800

3.2 First Floor Sanitary Appliances

A	Wall-hung WHB 550×430 mm, vitreous china, as described. First floor (outpatient, theatre suite, consultation, offices).	No.	28	22,000	616,000
B	Wall-hung WC pan with Sloan Royal flush valve as described.	No.	10	28,500	285,000
C	Shower unit 800×800 mm with TMV3 as described. First floor (post-op recovery, scrub areas).	No.	4	48,500	194,000
D	PWD Accessible WC set as described – 1 No. per gender = 2 sets.	Set	2	115,000	230,000
E	Scrub-up sink (clinical scrub, 600×400 mm, SS316L), two-basin, knee-operated mixer taps with elbow action, anti-splash aerator, 50 mm NRV waste, thermostatic water at 38°C. Theatre suite.	No.	2	85,000	170,000
F	Stainless steel lab/pharmacy sink as described.	No.	2	26,500	53,000
G	Soap dispenser SS 500 ml as described.	No.	32	4,800	153,600
H	Toilet roll holder SS as described.	No.	14	2,200	30,800
J	Mirror 600×450 mm.	No.	14	4,200	58,800
K	Sluice sink SS316 as described.	No.	1	80,000	80,000
L	Bedpan washer/disinfector (mains-connected, electric, EN ISO 15883-3, 76°C thermal disinfection), wall-mounted with drip tray and drain. First floor sluice.	No.	1	185,000	185,000
Sub-Total – 3.2 First Floor Sanitary Appliances					2,056,200

3.3 Second Floor Sanitary Appliances

A	Wall-hung WHB as described. (obs/gynae, general wards, offices).	No.	25	22,000	550,000
B	Wall-hung WC with Sloan Royal flush valve as described.	No.	14	28,500	399,000
C	Shower unit 800×800 mm with TMV3 as described. Second floor ward bathrooms.	No.	6	48,500	291,000
D	PWD Accessible WC set as described – 2 sets.	Set	2	115,000	230,000
E	Soap dispensers SS 500 ml as described.	No.	34	4,800	163,200
F	Toilet roll holders SS as described.	No.	14	2,200	30,800
H	Mirrors 600×450 mm.	No.	16	4,200	67,200
J	Sluice sink SS316 as described.	No.	2	80,000	160,000
K	Bedpan washer/disinfector as described.	No.	1	185,000	185,000
Sub-Total – 3.3 Second Floor Sanitary Appliances					2,076,200

3.4 Third Floor Sanitary Appliances

A	Wall-hung WHB as described. (ward/HDU/ICU/burns/cardiac, elbow-lever taps in all clinical areas).	No.	36	22,000	792,000
B	Wall-hung WC with Sloan Royal flush valve as described.	No.	24	28,500	684,000
C	Shower units 800×800 mm with TMV3 as described.	No.	20	48,500	970,000
D	PWD Accessible WC set as described – 2 sets.	Set	2	115,000	230,000
E	Clinical wash basin with elbow-lever mixer tap for HDU/ICU	No.	4	28,500	114,000
F	Burns unit: clinical shower/hydrotherapy bath (adjustable height, SS, with shower head, flexible hose, anti-bacterial drain). Per 2 beds.	No.	2	215,000	430,000
G	Stainless steel floor drain 75 mm with SS grating and anti-bacterial trap (HDU/ICU areas).	No.	6	9,500	57,000
H	Soap dispensers SS 500 ml.	No.	40	4,800	192,000
I	Toilet roll holders SS.	No.	26	2,200	57,200
K	Mirrors 600×450 mm.	No.	20	4,200	84,000
M	Sluice sink SS316 as described.	No.	2	80,000	160,000
N	Bedpan washer/disinfector as described.	No.	1	185,000	185,000
Sub-Total – 3.4 Third Floor Sanitary Appliances					3,955,200

TOTAL BILL 3 – SANITARY APPLIANCES & ACCESSORIES – CARRIED TO**9,558,400**

COUNTY GOVERNMENT OF BUSIA – DIRECTORATE OF PUBLIC WORKS

PROPOSED CONSTRUCTION OF BCRH ANNEX SPECIALIZED HOSPITAL, BUSIA, KENYA

BILL 4 – INTERNAL DRAINAGE

Item	Description	Unit	Qty	Rate (KShs)	Amount (KShs)
NOTE: All above-ground soil/waste pipes uPVC BS EN 1329-1, ring-seal joints. Fire collars at all fire compartment penetrations (BS EN 1366). Floor traps in all wards, kitchens and WCs. Testing per BS EN 12056. Rates inclusive of all taxes.					
4.1 Soil, Waste & Vent Pipes – All Floors					
A	100 mm uPVC soil and vent pipe (BS EN 1329-1, SN4, ring seal push-fit joints), complete with proprietary pipe clips at 1 m cts. All floors combined.	LM	290	800	232,000
B	Extra over 100 mm uPVC pipe: 90° long-radius bend.	No.	50	500	25,000
C	Extra over 100 mm uPVC pipe: 45° swept bend.	No.	38	500	19,000
D	Extra over 100 mm uPVC pipe: swept tee (100×100 mm branch).	No.	45	500	22,500
E	Extra over 100 mm uPVC pipe: rodding access plug (screw cap, accessible).	No.	32	860	27,520
F	Extra over 100 mm uPVC pipe: expansion joint collar (1 per 3 m in heated areas).	No.	28	700	19,600
G	50 mm uPVC waste pipe (BS EN 1329-1), complete with push-fit fittings, clips and joints, for WHBs, sinks and showers.	LM	335	300	100,500
H	Extra over 50 mm uPVC waste pipe: 90° elbow.	No.	65	150	9,750
I	Extra over 50 mm uPVC waste pipe: swept tee 50×50.	No.	45	120	5,400
J	Extra over 50 mm uPVC waste pipe: expansion joint collar.	No.	20	400	8,000
K	40 mm uPVC waste pipe for basins and shower trays, complete with fittings and clips.	LM	125	200	25,000
L	Extra over 40 mm uPVC waste pipe: 90° elbow.	No.	45	100	4,500
M	Extra over 40 mm uPVC waste pipe: swept tee.	No.	25	120	3,000
N	100 mm uPVC vent stack, extending 900 mm above roof level, complete with wire balloon guard and weathering flashing collar.	LM	85	800	68,000
O	75 mm uPVC floor drain waste pipe to nearest stack.	LM	65	450	29,250
P	uPVC pipe sleeve at floor/wall penetration (one dia. larger), mineral wool packed. Intumescent fire collar (100 mm, BS EN 1366) at fire compartment walls. Per 100 mm penetration.	No.	48	2,500	120,000
Q	uPVC pipe sleeve with fire collar as above: per 50/40 mm pipe.	No.	40	2,000	80,000
R	Cleanout access cap (100 mm, screw cap) at base of each soil stack.	No.	8	700	5,600
S	Inspection access door in duct wall (300×300 mm min., proprietary frame and door) for soil stack access.	No.	12	860	10,320
T	20 mm PVC condensate drain pipe from AC fan coil units to nearest waste stack. Per floor.	LM	65	600	39,000
Sub-Total – 4.1 Soil, Waste & Vent Pipes – All Floors					853,940

4.2 Floor Drains, Specialist Drainage & Testing					
A	100 mm floor drain (cast iron or SS304), screw-down grating, anti-mosquito deep-seal trap (75 mm water seal), in utility, sluice and plant rooms.	No.	26	4,200	109,200
B	75 mm floor drain (SS316, removable basket strainer, anti-bacterial coating) for clinical areas, theatres and ward bathrooms.	No.	14	5,500	77,000
C	Stainless steel linear channel drain 500 mm long (SS316 grating, trap) for scrub room entrances and theatre floors.	No.	6	22,000	132,000
D	75 mm P-trap connector (uPVC) for floor drain waste connections.	No.	40	200	8,000
E	Gulley trap 100 mm (uPVC, trapped, with debris basket) at external ground floor connections.	No.	8	3,500	28,000
F	Hydraulic test of completed drainage system (water test, BS EN 12056), witnessed by Engineer. Certificate issued.	Sum	1	18,000	18,000
G	Smoke test of completed vent pipe system (BS 5572), witnessed. Certificate issued.	Sum	1	12,000	12,000
Sub-Total – 4.2 Floor Drains, Specialist Drainage & Testing					384,200
TOTAL BILL 4 – INTERNAL DRAINAGE – CARRIED TO SUMMARY					1,238,140

COUNTY GOVERNMENT OF BUSIA – DIRECTORATE OF PUBLIC WORKS

PROPOSED CONSTRUCTION OF BCRH ANNEX SPECIALIZED HOSPITAL, BUSIA, KENYA

BILL 5 – EXTERNAL DRAINAGE & SEWERAGE

Item	Description	Unit	Qty	Rate (KShs)	Amount (KShs)
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NOTE: External sewer 150 mm uPVC SN8 BS EN 13476-3. 33 inspection chambers per schedule (10 No. 900 mm dia. + 4 No. 750 mm dia. = 14 No. in BQ – balance by Civil Bill). Grease trap 1,000 L dual-chamber to EN 1825-1. Rainwater downpipes 150 mm HDPE sized for 120 mm/hr rainfall. Rates inclusive of all taxes.

5.1 External Sewer Line, Inspection Chambers & Grease Trap

A	Excavate trench for 150 mm uPVC sewer pipe: average depth 1.2 m, width 600 mm, shore sides where required, backfill with approved granular material in 200 mm compacted layers.	LM	185	3,200	592,000
B	Supply and lay 150 mm uPVC sewer pipe (BS EN 13476-3, SN8, SDR 41) in 150 mm sand bedding, haunched, ring seal rubber joints. Gradient: 1:100 min.	LM	185	4,200	777,000
C	Extra over 150 mm sewer pipe: 45° bend at direction changes.	No.	10	2,200	22,000
D	Extra over 150 mm sewer pipe: junction/tee for connections.	No.	12	2,600	31,200
E	Extra over 150 mm sewer pipe: 90° bend.	No.	6	2,500	15,000
F	Precast concrete inspection manhole 900 mm internal dia., average depth 1.5 m, on 200 mm concrete base, complete with precast rings (DN900), steel step irons, heavy-duty cast iron cover and frame Class D400 (EN 124) with captive bolts, channel and benching in C25 concrete, rendering, haunching. (1 per 30 m run plus at every direction change = 10 No.)	No.	10	105,000	1,050,000
G	Precast concrete inspection manhole 750 mm dia., average depth 1.0 m, for shallow connections, with CI cover Class B125.	No.	4	72,000	288,000
H	Connection to existing public/on-site sewer (saddle strap connection, CI ferrule, concrete surround, reinstate surface).	No.	1	95,000	95,000
I	CCTV survey and report of completed sewer line with water test, witnessed. Certificate and report.	LM	185	950	175,750
J	Grease trap: precast concrete 1,000 litre capacity (dual chamber, inlet/outlet baffles, heavy-duty CI cover and frame, access manholes on each chamber), installed at kitchen discharge point. Designed to EN 1825-1.	No.	1	185,000	185,000
K	Reinstate surfaces: gravel paths 650 mm wide, block paving patching, tarmac patching where crossing existing roads.	LM	185	1,400	259,000
L	Test of completed sewer system, witnessed. Certificate.	Sum	1	18,000	18,000
Sub-Total – 5.1 External Sewer Line, Inspection Chambers & Grease Trap					3,507,950

5.2 Storm Water & Surface Drainage

A	150 mm HDPE PN8 downpipes from roof first-flush diverters to storage tanks (sized for 120 mm/hr rainfall), UV-stabilised, with pipe clips and wall brackets.	LM	85	2,800	238,000
B	100 mm uPVC downpipes from roof overflows to storm drain.	LM	40	1,950	78,000
C	Precast concrete U-channel surface drain 300×300 mm with precast grating around building perimeter.	LM	65	5,200	338,000
D	Stone-filled soakpit 1.5 m dia. × 2.0 m deep, capped, at storm water discharge points.	No.	4	38,000	152,000
E	Connection of AC unit condensate drains to external surface channel or drain.	No.	10	4,500	45,000
Sub-Total – 5.2 Storm Water & Surface Drainage					851,000

TOTAL BILL 5 – EXTERNAL DRAINAGE & SEWERAGE – CARRIED TO SUMMARY **4,358,950**

COUNTY GOVERNMENT OF BUSIA – DIRECTORATE OF PUBLIC WORKS

PROPOSED CONSTRUCTION OF BCRH ANNEX SPECIALIZED HOSPITAL, BUSIA, KENYA

BILL 6 – MEDICAL GAS PIPEWORK & TERMINAL UNITS

Item	Description	Unit	Qty	Rate (KShs)	Amount (KShs)
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NOTE: All copper to BS EN 13348 (C106), degreased for medical gas service. All joints silver-brazed, fluxless, nitrogen purge. Installation to HTM 02-01:2022 and BS EN ISO 7396-1. Tests: HTM 02-01 Annex E. Rates inclusive of all taxes.

6.1 Medical Gas Distribution Pipework, Valves & Zone Service Units

A	15 mm copper medical gas pipe (BS EN 13348, C106 temper H, degreased for medical gas service to HTM 02-01), complete with SS brackets at 1.2 m cts horizontal/1.8 m cts vertical, colour-bands at 3 m intervals, end caps. All joints silver-brazed, fluxless, nitrogen purge. All floors.	LM	680	3,200	2,176,000
B	22 mm copper medical gas pipe as above specification. All floors.	LM	295	3,850	1,135,750
C	28 mm copper medical gas pipe as above. All floors.	LM	125	4,700	587,500
D	35 mm copper medical gas pipe as above. All floors.	LM	65	6,200	403,000
E	42 mm copper medical gas pipe as above (main plant room risers and main distribution).	LM	45	7,600	342,000
F	Extra over 15 mm copper medical gas pipe: capillary (silver-braze) 90° elbow.	No.	130	750	97,500
G	Extra over 22 mm copper medical gas pipe: capillary 90° elbow.	No.	65	1,050	68,250
H	Extra over 28 mm copper medical gas pipe: capillary 90° elbow.	No.	25	1,500	37,500
I	Extra over 15 mm copper medical gas pipe: capillary equal tee.	No.	130	900	117,000
J	Extra over 22 mm copper medical gas pipe: capillary equal tee.	No.	65	1,150	74,750
K	Extra over 22 mm copper medical gas pipe: 15×22×22 reducing tee capillary.	No.	45	1,450	65,250
L	Extra over 28 mm copper medical gas pipe: capillary tee/bend fittings.	No.	35	1,800	63,000
M	Extra over 35/42 mm copper medical gas pipe: fittings (bends, tees) per fitting.	No.	25	2,500	62,500
N	Copper sleeve at wall/slab penetration (one dia. larger than pipe), mineral wool packed, labelled for gas service.	No.	90	1,100	99,000
O	15 mm medical gas line ball valve assembly (nickel-plated brass body, PTFE seats, degreased for med-gas service, PN25, with lockable lever handle and lock-off device). BS EN 737-3 compliant.	No.	38	11,500	437,000
P	22 mm medical gas line ball valve assembly as above.	No.	18	16,500	297,000
Q	28 mm medical gas line ball valve assembly as above.	No.	8	24,000	192,000
R	Zone Service Unit (ZSU): 4-gas type (O ₂ , Med Air, Vacuum, N ₂ O) with area alarm panel (HTM 02-01), pressure sensors, visual LED indicators and audible alarm (85 dB), relay output to nurses' station, labelled valve boxes with breakable panel and non-interchangeable keys.	No.	4	215,000	860,000
S	Zone Service Unit (ZSU): 3-gas type (O ₂ , Air, Vacuum) as above – outpatient/clinical areas.	No.	2	155,000	310,000
T	Medical gas pressure gauge panel at manifold room and each floor riser: pressure gauges for each gas (Bourdon type, 100 mm dia.) on common SS backplate with identification labels.	No.	5	42,000	210,000
U	Identification labelling and colour coding of all medical gas pipework per HTM 02-01 Schedule 3 and BS 1710. Labels every 2 m and at all valves, junctions and penetrations.	Sum	1	35,000	35,000
Sub-Total – 6.1 Medical Gas Distribution Pipework, Valves & Zone Service Units					7,670,000

6.2 Terminal Units, Bedhead Trunking, Theatre Pendants & Commissioning					
A	Wall terminal unit, Oxygen (O ₂): GEM-10 type (or BS EN 737-1 approved equal), NIST/DISS compatible probe, colour-coded white, with self-sealing check valve, isolating valve, non-interchangeable body, flush-mounted in labelled fascia plate.	No.	48	14,500	696,000
B	Wall terminal unit, Medical Compressed Air: GEM-10 type, colour-coded black/white quarters. As specification.	No.	42	14,500	609,000
C	Wall terminal unit, Medical Vacuum: GEM-10 type, colour-coded yellow. As specification.	No.	48	14,500	696,000
D	Wall terminal unit, Nitrous Oxide (N ₂ O): GEM-10 type, colour-coded blue. As specification.	No.	12	14,500	174,000
E	Wall terminal unit, AGSS (Anaesthetic Gas Scavenging): GEM-10 type, colour-coded black. As specification.	No.	4	14,500	58,000
F	Bedhead horizontal trunking unit per ward bed (65 units; GF excluded – ward beds 1st–3rd floor): 600 mm trunking with 1×O ₂ , 1×Vacuum, 1×Med Air gas terminal units, 2× 13 A power sockets, nurse-call point, examination light provision, equipotential bonding strip. As Beacon Medaes, Amico or approved equal.	No.	65	98,000	6,370,000
G	Operating Theatre pendant (double-arm motorised, SS316 body, ceiling-mounted): 2×O ₂ (with in-line pressure gauge each), 2×Vacuum, 2×Med Air, 1×N ₂ O, 1×AGSS, 1×Surgical Air terminal units; 8× 13 A power sockets wired in 2 circuits; 2× RJ45 data points; equipment support arms rated 50 kg each; instrument tray; equi-potential bonding. To HTM 02-01 and EN 9001. Per theatre.	No.	2	1,950,000	3,900,000
H	ICU/HDU ceiling pendant (single-arm, SS, ceiling-mounted): 2×O ₂ , 1×Med Air, 1×Vacuum terminal units; 4× 13 A power sockets; equipment rail; equipotential bonding. Per HDU/ICU bed (7 beds).	No.	7	515,000	3,605,000
I	Pressure reducing valve station per gas per floor: 28 mm PRV set at 4.0 bar, with gauge upstream and downstream, isolation valves, bypass valve. Per gas species per floor.	No.	12	42,000	504,000
J	Pressure testing, leak testing (soap bubble and electronic detector) and validation of complete medical gas pipeline system to HTM 02-01 Annex E. All tests witnessed by Engineer. Issue signed test certificate per gas per zone.	Sum	1	215,000	215,000
K	Purge and charge all medical gas pipework with appropriate gases (nitrogen purge ×3, then live gas), final commissioning checks and functional testing of all terminal units and zone valves.	Sum	1	78,000	78,000
L	Medical gas pipeline system validation report (as-installed drawings, test records, zone valve and terminal unit schedules). Validation engineer sign-off.	Sum	1	45,000	45,000
Sub-Total – 6.2 Terminal Units, Bedhead Trunking, Theatre Pendants & Commissioning					16,950,000

6 – MEDICAL GAS PIPEWORK & TERMINAL UNITS – CARRIED TO SUMMARY	24,620,000
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COUNTY GOVERNMENT OF BUSIA – DIRECTORATE OF PUBLIC WORKS

PROPOSED CONSTRUCTION OF BCRH ANNEX SPECIALIZED HOSPITAL, BUSIA, KENYA

BILL 7 – MEDICAL GAS PLANTS & EQUIPMENT

Item	Description	Unit	Qty	Rate (KShs)	Amount (KShs)
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NOTE: All plants to HTM 02-01:2022, BS EN ISO 7396-1. Installed in dedicated plant room with fire protection, ventilation and security. Training, commissioning and validation included per plant. Rates inclusive of all

7.1 Oxygen Generation System (PSA 65 Nm³/h) & Cylinder Filling Station

A	Supply, install, test and commission PSA Medical Oxygen Generator to HTM 02-01:2022 and European Pharmacopoeia: Output 65 Nm ³ /h at 4 bar; comprising 2 No. oil-injected rotary screw air compressors (VSD driven), 3 No. refrigerant air dryers (R407c CFC-free), 3 No. coalescing air filters, 1 No. PSA molecular sieve oxygen producer (dual zeolite towers, automatic), 1 No. 250 L compressed air receiver, 1 No. 250 L oxygen receiver (SS304), oxygen concentration monitor (≥93% O ₂), dew point monitor, oil vapour analyser, control panel (IP55, BMS interface, touch-screen HMI, remote alarm relay), skid frame (hot-dip galvanised, anti-vibration mounts). As Atlas Copco OGP65 or approved equal. Includes performance certification, spare zeolite set and 1-year service contract.	Set	1	6,200,000	6,200,000
B	Standby oxygen cylinder manifold: 2×6 J-size cylinder banks (47 L each, 12 cylinders total), automatic changeover panel (electric, with battery backup), electric trace heating on manifold headers (50 W per header, thermostat), chrome tail pipes with individual NRV per cylinder, safety relief valve (vented to outside), cylinder support racks (MS hot-dip galvanised), pressure gauges (HP per bank, LP line). Cylinders not included.	Set	1	1,450,000	1,450,000
C	Allow PC Sum for 12 No. J-size oxygen cylinders (initial commissioning/purging stock). Cylinders to be owned by hospital.	PC	1	520,000	520,000
D	Plant alarm panel for oxygen system: individual LED indicators (normal/fault/alarm) per condition, audible alarm 85 dB, pressure sensors (4–20 mA), relay to nurses' station and BMS. HTM 02-01 compliant. Wall-mounted SS enclosure.	No.	1	215,000	215,000
E	Oxygen cylinder filling and booster station: oil-free high-pressure piston booster compressor (20 Nm ³ /h capacity, 15 kW motor, rated to 200 bar), high-pressure filling ramp (8 connections, individually valved, safety PRV, rated to 300 bar). Factory tested; supply test certificate. As Beacon Medaes or approved equal.	Set	1	3,200,000	3,200,000
F	Commissioning and validation of oxygen generation system: performance test (concentration, flow rate, dew point, oil vapour), witnessed by Engineer, issue test certificates per HTM 02-01 Annex E.	Sum	1	95,000	95,000
G	Training of hospital staff on oxygen plant operation and maintenance (2-day intensive). Training manual and spare parts list supplied.	Sum	1	45,000	45,000
Sub-Total – 7.1 Oxygen Generation System (PSA 65 Nm³/h) & Cylinder Filling Station					11,725,000

7.2 Combined Medical Air (4 bar) / Surgical Air (7 bar) Plant

A	Supply, install, test and commission combined Medical Air (4 bar) / Surgical Air (7 bar) plant: quadruplex oil-free scroll compressors (4×4,260 L/min FAD each, VSD drives, duty/assist/standby + 1 arrangement), multi-stage coalescent separator/filters, refrigerant air dryers (R407c, CFC-free), activated carbon filters, hopcolite filters, HEPA bacterial filters (0.01 µm), 2×2,000 L air receivers (SS304, pressure tested), automatic changeover between medical and surgical air streams, comprehensive control panel (IP55, auto duty rotation, start/stop on pressure, BMS relay output, touch-screen HMI, fault alarms). As Beacon Medaes cAIR-QGF7 or approved equal. To HTM 02-01 and EN ISO 8573-1.	Set	1	7,950,000	7,950,000
B	Emergency Medical Air 4 bar cylinder manifold: 1×5 J-cylinder bank, manual changeover, pressure regulators set at 4 bar, pressure gauges, safety relief valve. Cylinders not included.	Set	1	365,000	365,000
C	Emergency Surgical Air 7 bar cylinder manifold: 2×6 J-cylinder banks, automatic changeover panel, heated headers (electric), pressure gauges, safety relief. Cylinders not included.	Set	1	755,000	755,000
D	Plant alarm panel for medical/surgical air: combined or two separate panels as described for oxygen system.	No.	1	215,000	215,000
E	Compressed air quality validation (BS EN ISO 8573-1 Class 1.6.1): dew point, oil vapour, particulates (total oil content ≤0.1 mg/m ³), CO, CO ₂ , microbiological. Test witnessed. Certificates issued.	Sum	1	98,000	98,000
F	Training of hospital staff on air plant operation (1-day). Manual and spares list.	Sum	1	28,000	28,000
Sub-Total – 7.2 Combined Medical Air (4 bar) / Surgical Air (7 bar) Plant					9,411,000

7.3 Medical Vacuum Plant (Triplex 3 × 1,280 L/min)

A	Supply, install, test and commission medical vacuum plant: triplex oil-lubricated rotary vane vacuum pumps (3×1,280 L/min free air each, 5.5 kW TEFC motors, IP55), each with wire-mesh inlet filter and integral NRV; duplex bacteria filter system (0.01 µm HEPA, with automatic isolation on filter change); 3×1,500 L SS304 vacuum receivers (EN 13445, factory tested); anti-vibration mounts; control panel (IP55, duty rotation timer, auto start/stop, BMS relay, fail/trip alarms, hours counter per pump). Minimum vacuum level –600 mbar at terminal units. As Beacon Medaes mVAC1280T or approved equal. To HTM 02-01.	Set	1	4,450,000	4,450,000
B	Plant alarm panel for vacuum system.	No.	1	175,000	175,000
C	Vacuum system validation: suction flow rate, vacuum level, bacteria filter integrity test. Witnessed. Certificate issued.	Sum	1	75,000	75,000
D	Training of hospital staff on vacuum plant (1-day). Manual and spares list.	Sum	1	22,000	22,000
Sub-Total – 7.3 Medical Vacuum Plant (Triplex 3 × 1,280 L/min)					4,722,000

7.4 Nitrous Oxide Manifold & AGSS System					
A	Nitrous oxide cylinder manifold: 2×3 J-cylinder banks, automatic changeover panel (electric, battery backup), heated manifold headers (50 W/header, thermostat to prevent liquefaction), pressure gauges (HP per bank, LP line), NRV tail pipes, safety relief valve vented outside. Cylinders not included.	Set	1	850,000	850,000
B	AGSS (Anaesthetic Gas Scavenging System): duplex radial blowers (2×1,560 L/min each), skid mounted with motor control unit, moisture drain flask, flexible connectors, BMS interface. To HTM 02-01.	Set	1	1,950,000	1,950,000
C	Allow PC Sum for initial N ₂ O cylinder stock (6 J-cylinders for commissioning).	PC	1	132,000	132,000
D	N ₂ O manifold alarm panel, as described.	No.	1	155,000	155,000
Sub-Total – 7.4 Nitrous Oxide Manifold & AGSS System					3,087,000

7.5 Spare Parts, BMS Interface, Signage & Validation Package					
A	Spare parts set for all medical gas plants (12-month recommended spare parts per manufacturer's list): filters, oil change kits, zeolite indicator, seal kits, fuses, relay contacts.	Set	1	215,000	215,000
B	Building Management System (BMS) interface module for all medical gas plants: potential-free contacts and 4–20 mA signals wired to BMS contractor's panel. Panel terminations, programming and commissioning of medical gas points on BMS.	Sum	1	145,000	145,000
C	Medical gas plant room signage and safety notices: mandatory signs (DANGER – OXYGEN, NO NAKED FLAME, NO SMOKING, COMPRESSED GAS etc.), identification labels, emergency shutdown procedures. As required by HTM 02-01 and Kenya OSHA.	Sum	1	35,000	35,000
D	Medical gas system Validation Package: as-installed record drawings, zone valve schedules, test certificates, commissioning records, HTM 02-01 compliance statement signed by responsible qualified person.	Sum	1	85,000	85,000
Sub-Total – 7.5 Spare Parts, BMS Interface, Signage & Validation Package					480,000

TAL BILL 7 – MEDICAL GAS PLANTS & EQUIPMENT – CARRIED TO SUMMARY	29,425,000
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COUNTY GOVERNMENT OF BUSIA – DIRECTORATE OF PUBLIC WORKS

PROPOSED CONSTRUCTION OF BCRH ANNEX SPECIALIZED HOSPITAL, BUSIA, KENYA

BILL 8 – FIRE PROTECTION & HOSE REELS

Item	Description	Unit	Qty	Rate (KShs)	Amount (KShs)
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NOTE: Hose reels to BS EN 671-1, 30 m × 19 mm hose, flow ≥0.4 L/s. Extinguishers to BS EN 3 / KSISO 7165. Annual service for DLP included. Specialist suppression for plant room and ICT room included. Signage per BS 5499. Rates inclusive of all taxes.

8.1 Hose Reel System – Pump Set, Pipework & Reels

A	Supply and install fire hose reel pump set: duty centrifugal pump (2.2 kW, Q=0.4 L/s at 30 m head) + jockey pump (0.37 kW), both on common base frame with flexible connectors, suction header, discharge header, NRVs, gate valves, pressure gauges. 750 L break tank (GI sheet, float valve, overflow, drain). Control panel (IP55, auto/manual, duty-jockey sequencing, BMS alarm relay, run/fault LEDs). BS 5306 Part 1.	Set	1	425,000	425,000
B	50 mm galvanised steel medium-weight pipe (BS 1387 Class C) for hose reel mains and distribution, complete with fittings, wall clips at 1.5 m cts, painted red.	LM	155	2,200	341,000
C	Extra over 50 mm GI pipe: screwed 90° elbow.	No.	35	1,200	42,000
D	Extra over 50 mm GI pipe: equal tee.	No.	20	1,500	30,000
E	Extra over 50 mm GI pipe: reducing tee.	No.	12	1,800	21,600
F	Extra over 50 mm GI pipe: union coupling (at 6 m intervals for maintenance).	No.	26	950	24,700
G	25 mm GI pipe for hose reel branch connections.	LM	65	1,500	97,500
H	Extra over 25 mm GI pipe: screwed fittings (elbows, tees, unions).	No.	28	750	21,000
I	50 mm gate valve (full bore, PN16, screwed) at branch isolations.	No.	6	8,500	51,000
J	50 mm non-return valve (swing check, PN16, screwed) at pump outlets.	No.	2	9,500	19,000
K	Automatic swing-arm hose reel: 30 m × 19 mm non-kinking reinforced rubber hose, chrome-plated reel, wall-mounted swing bracket, 19 mm inlet isolation valve (lockable chrome globe valve, BS 1010), jet/spray/shut-off nozzle, anti-drip gland. Recess-mounted where possible. Complies with BS 5306 Part 1 and BS EN 671-1.	No.	12	45,000	540,000
L	Fire hose reel system pressure test at 1.5× working pressure, witnessed by Engineer. Functional test of pump set (duty/standby changeover, jockey cut-in, flow test at furthest reel). Issue certificate.	Sum	1	32,000	32,000
Sub-Total – 8.1 Hose Reel System – Pump Set, Pipework & Reels					1,644,800

8.2 Portable Fire Extinguishers, Fire Blankets & Signage

A	5 kg CO ₂ portable fire extinguisher (BS EN 3, Grade IV, SS cylinder, anti-frost horn, safety pin, wall bracket with identification sign). For labs, pharmacy, electrical rooms, ICT room. 1 per room.	No.	8	18,500	148,000
B	9 kg ABC dry powder multi-purpose extinguisher (BS EN 3, rating 43A/233B, stored pressure, pressure gauge) for general clinical areas at 200 m ² coverage each, with wall bracket.	No.	18	9,500	171,000
C	9 litre water (AFFF) portable fire extinguisher (BS EN 3, rating 13A) for corridors and ward areas. With wall bracket.	No.	10	8,500	85,000
D	1,800×1,200 mm fire blanket (woven fibreglass, BS EN 1869, quick-release container) for operating theatres, kitchens and clinical areas.	No.	6	5,500	33,000
E	Fire exit sign: photoluminescent (BS 5499 Part 4/ISO 7010 E001), double-sided pendant, green on white, 300×100 mm minimum, with directional arrow. At all exits and escape routes.	No.	22	2,800	61,600
F	Fire instruction notice: photoluminescent sign (BS 5499), 500×300 mm, mounted at 1.5 m centreline, at each fire point and main corridor junction.	No.	18	2,200	39,600
G	Assembly point sign (ISO 7010 E007), 500×500 mm reflective, at designated external assembly points.	No.	4	3,800	15,200
H	Fire extinguisher identification sign: colour-coded sign identifying type/rating, 200×200 mm, fixed above each extinguisher.	No.	36	950	34,200
I	Annual service and maintenance provision allowance for all fire extinguishers for 12 months (DLP period) by accredited fire safety company.	Sum	1	35,000	35,000
Sub-Total – 8.2 Portable Fire Extinguishers, Fire Blankets & Signage					622,600

8.3 Specialist Suppression Systems & Commissioning

A	Dry powder automatic fire suppression system for medical gas plant room: 5-head system with 40 kg ABC dry powder cylinder, fusible link/heat detector trigger, manual pull station at door, predischarge alarm (30-second delay), pressure gauge and discharge nozzles. To BS 5306 Part 6 and NFPA 17.	Set	1	285,000	285,000
B	CO ₂ total-flooding suppression system for ICT/server room: 2 No. CO ₂ cylinders (25 kg each), discharge nozzles, pressure detector, predischarge alarm (30 s delay with abort switch at door), audible/visual pre-discharge warning. To BS EN 15004 and NFPA 12.	Set	1	425,000	425,000
C	Test, commission and handover of all fire suppression systems. Witnessed by Fire Officer. Certificates issued. Training of facility staff (1 day).	Sum	1	45,000	45,000
Sub-Total – 8.3 Specialist Suppression Systems & Commissioning					755,000

TOTAL BILL 8 – FIRE PROTECTION & HOSE REELS – CARRIED TO SUMMARY**3,022,400**

COUNTY GOVERNMENT OF BUSIA – DIRECTORATE OF PUBLIC WORKS

PROPOSED CONSTRUCTION OF BCRH ANNEX SPECIALIZED HOSPITAL, BUSIA, KENYA

BILL 9 – SOLAR HOT WATER SYSTEM

Item	Description	Unit	Qty	Rate (KShs)	Amount (KShs)
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NOTE: Flat-plate collectors SRCC/Solar Keymark certified. System designed for 76 beds × 30 L/bed/day = 2,280 L/day. Glycol indirect system, 60°C min. cylinder temperature (Legionella control, CIBSE TM13). Builders works, electrical connection and commissioning included. Rates inclusive of all taxes.

9.1 Solar Collector Panels, Mounting Frames & Glycol Fluid

A	Supply and install flat-plate solar collector panels (SRCC or Solar Keymark certified, min. $\eta_0 = 0.80$, aperture area 2.0 m ² each), mounted at 15° tilt on purpose-made galvanised steel roof frame. Allow 8 No. panels (16 m ² aperture area).	No.	8	58,000	464,000
B	Galvanised steel panel mounting frame, designed for roof mounting at 15° and Kenya wind loading, with SS fixings, waterproofing flashings and roof sealant. Per set of 4 panels.	Set	2	65,000	130,000
C	Glycol-based heat transfer fluid (propylene glycol/water 40/60 mix, inhibited, food-grade, pH 7.5–8.5, –15°C freeze protection), 100 litre initial charge including drums and filling equipment.	Sum	1	38,000	38,000
Sub-Total – 9.1 Solar Collector Panels, Mounting Frames & Glycol Fluid					632,000

9.2 Solar Hot Water Cylinders, Immersion Heaters & Controls

A	Supply and install indirect solar hot water cylinder (SS304 inner vessel, mineral wool insulation 75 mm, GI sheet cladding, single-coil heat exchanger for glycol circuit, capacity 500 L, rated to 8 bar, BS 1566, complete with temperature/pressure relief valve, drain valve, thermometer and magnesium sacrificial anode). Installed in plant room.	No.	2	185,000	370,000
B	Electric immersion heater backup (3 kW, SS element, thermostat 60°C, 25 mm BSP, manual reset thermal cutout) per cylinder.	No.	2	22,500	45,000
C	Solar circulation pump set (two-pump system, duty/standby, variable speed, SS body, 0.75 kW, suitable for glycol): pumps, pipework, non-return valves, isolation valves on common manifold.	Set	1	85,000	85,000
D	Solar thermal controller (differential temperature controller, 6 sensor inputs, pump output relays, freeze/boiling protection, legionella thermal flush programme, BMS RS485 output, LCD display).	No.	1	45,000	45,000
Sub-Total – 9.2 Solar Hot Water Cylinders, Immersion Heaters & Controls					545,000

9.3 Pipework, Fittings, Builders Work, Electrical & Commissioning					
A	22 mm copper pipe (BS EN 1057) for solar primary circuit (collector to heat exchanger), insulated with 32 mm Armaflex Class 1 (UV-resistant where external), including clips, fittings and all bends.	LM	85	3,800	323,000
B	22 mm copper pipe for secondary circuit (cylinder to distribution riser), insulated 25 mm Armaflex. Complete.	LM	45	3,200	144,000
C	32 mm copper pipe for hot water distribution riser (insulated), from cylinder to all floors.	LM	52	4,200	218,400
D	Extra over copper solar circuit pipe: fittings (bends, tees, couplings). Overall allowance.	Sum	1	35,000	35,000
E	Expansion vessel (pressurised, EPDM diaphragm, pre-charged nitrogen, 50 L) on solar primary circuit with isolation valve.	No.	1	28,500	28,500
F	Filling and flushing station for solar circuit (removable, with hand pump, pressure gauges, fill/drain valves).	Set	1	18,000	18,000
G	Flow and return manifold (SS304) with isolation valves, balancing valves, temperature gauges and test points for each collector loop.	Set	1	38,000	38,000
H	Builders work: core drills for solar pipe penetrations, make good, waterproofing around penetrations, cable containment for sensor cables.	Sum	1	22,000	22,000
I	Electrical connection: wiring from nearest isolator to pump set controller, immersion heater and BMS interface. Issue electrical test certificate.	Sum	1	28,500	28,500
J	Commissioning of solar system: fill with glycol, purge air, pressure test primary circuit at 6 bar for 1 hour (witnessed), balance flow rates, set controller parameters, functional test. Issue commissioning certificate.	Sum	1	32,000	32,000
K	Training of hospital maintenance staff on solar system operation (1 day) including legionella management protocol.	Sum	1	15,000	15,000
Sub-Total – 9.3 Pipework, Fittings, Builders Work, Electrical & Commissioning					902,400

TOTAL BILL 9 – SOLAR HOT WATER SYSTEM – CARRIED TO SUMMARY	2,079,400
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COUNTY GOVERNMENT OF BUSIA – DIRECTORATE OF PUBLIC WORKS

PROPOSED CONSTRUCTION OF BCRH ANNEX SPECIALIZED HOSPITAL, BUSIA, KENYA

BILL 10 – RAINWATER HARVESTING SYSTEM (80,000 L)

Item	Description	Unit	Qty	Rate (KShs)	Amount (KShs)
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NOTE: Annual yield: $Yr = 1,200 \text{ m}^2 \times 1.4 \text{ m} \times 0.85 \times 0.90 = 1,285,200 \text{ L/year}$. Storage 80,000 L (8 No. 10,000 L HDPE tanks, food-grade, UV-stabilised). First-flush, leaf screen, 3-micron filter, UV disinfection. Rates inclusive of all taxes.

10.1 Gutters, Downpipes & First-Flush Diverter

A	150 mm HDPE PN8 downpipe, UV-stabilised, with wall clips at 1.5 m cts, shoe at bottom. Runs from roof gutter outlets to first-flush diverter units.	LM	65	1,500	97,500
B	First-flush diverter unit (PVC, 100 mm dia., capacity diverts first 25 L per 100 m ² catchment, self-draining via ball valve, leaf guard mesh). 1 per downpipe.	No.	8	12,500	100,000
C	Coarse stainless steel leaf screen (mesh 3 mm, SS304) installed in gutter outlet at top of downpipe, with clip-on frame for removal and cleaning.	No.	8	3,800	30,400
Sub-Total – 10.1 Downpipes & First-Flush Diverter					227,900

10.2 Storage Tanks (8 × 10,000 L = 80,000 L), Treatment, Pumps & Controls

A	Supply and install rooftop-grade HDPE food-grade rainwater storage tank, UV-stabilised (min. 2% carbon black), food-grade (KS 3000), 10,000 litre capacity, rotomoulded. Complete with vented lid (mosquito-proof gauze), 63 mm HDPE inlet with pre-filter chamber, 63 mm HDPE outlet with isolation valve, 100 mm overflow pipe, 50 mm drain valve. 8 No. tanks in series/parallel = 80,000 L total. As Kentank 10,000 L or approved equal.	No.	8	120,000	960,000
B	Tank interconnecting pipework: 63 mm HDPE PN8 pipe connecting all 8 tanks in parallel, with isolating valves, union couplings and supports. Allows individual tank isolation for cleaning.	Set	1	95,000	95,000
C	3-micron cartridge fine filter unit (FRP housing, 200 mm dia., 10 mm nominal cartridge, flow 5 m ³ /h, with bypass valve, pressure gauges). Pre-treatment before storage/distribution.	No.	2	42,500	85,000
D	UV sterilisation unit (SS316L, 25 W lamp, 5 m ³ /h, with intensity monitor and alarm) for treated rainwater distribution.	No.	1	85,000	85,000
E	Submersible transfer pump (0.75 kW, SS304 body, float switch, 3 m ³ /h, H=20 m) in harvesting tank, with discharge to treatment filter. Includes valve assembly and discharge pipework.	No.	2	38,000	76,000
F	Control panel for rainwater system: float switch inputs, pump starters, UV on/off relay, BMS interface, run/fault LEDs. IP55.	No.	1	45,000	45,000
G	Commissioning of rainwater harvesting system: tank cleaning and disinfection, pump test, filter test, water quality sample analysis. Certificate issued.	Sum	1	22,000	22,000

b-Total – 10.2 Storage Tanks (8 × 10,000 L = 80,000 L), Treatment, Pumps & Controls **1,368,000**

10 – RAINWATER HARVESTING SYSTEM (80,000 L) – CARRIED TO SUMMARY **1,595,900**

COUNTY GOVERNMENT OF BUSIA – DIRECTORATE OF PUBLIC WORKS

PROPOSED CONSTRUCTION OF BCRH ANNEX SPECIALIZED HOSPITAL, BUSIA, KENYA

BILL 11 – AIR CONDITIONING & MECHANICAL VENTILATION

Item	Description	Unit	Qty	Rate (KShs)	Amount (KShs)
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NOTE: AC units R32 refrigerant, A++ min. SEER≥6.1. Theatre AHU: 100% fresh air, H14 HEPA, +25 Pa, 20–25 ACH. VRF/multi-split inverter combination for efficiency. BMS with BACnet/IP. Rates inclusive of all taxes.

11.1 Split & Multi-Split Inverter AC Units (R32, A++ Rating) with Pipework

A	Supply and install wall-mounted split inverter AC unit 2.5 kW cooling (9,000 BTU/hr), R32 refrigerant, A++ energy rating (SEER≥6.1), HEPA + activated carbon filter, auto-restart, 4-way airflow, BMS-compatible (Modbus/RS485). For small offices, consultation rooms, nurse stations. Brand equivalent: Daikin FTXF09D or Mitsubishi MSZ-AP09VG.	No.	8	48,500	388,000
B	Supply and install wall-mounted split inverter AC unit 3.5 kW cooling (12,000 BTU/hr), R32, A++, as above specification. For medium offices, wards (individual rooms), records.	No.	12	58,500	702,000
C	Supply and install ceiling cassette split inverter AC unit 5.0 kW cooling (18,000 BTU/hr), R32, A+, 4-way cassette with auto-swing, electronic drain pump, BMS interface. For clinical areas requiring concealed installation.	No.	8	95,000	760,000
D	Supply and install ceiling cassette split inverter AC unit 7.0 kW cooling (24,000 BTU/hr), R32, A+, as above. For larger clinical areas and waiting areas.	No.	6	118,000	708,000
E	Supply and install ceiling cassette split inverter AC unit 9.0 kW cooling (30,000 BTU/hr), R32, A+, for treatment rooms, seminar rooms and high-occupancy areas.	No.	6	145,000	870,000
F	Outdoor condensing unit, roof-mounted on galvanised steel anti-vibration frame with neoprene anti-vibration mounts (30 dB reduction), condenser guard, service access provisions. Per outdoor unit.	No.	20	42,000	840,000
G	Multi-split distribution manifold/branch (refnet joint): connecting 2–4 indoor units to single outdoor unit (VRF/inverter multi), with refrigerant distributor, ball valves, rated for R32.	No.	8	32,000	256,000
H	Pre-insulated refrigerant piping (copper, ASTM B280, dehydrated and sealed): 9.52 mm liquid line and 15.88 mm gas line, insulated with 13 mm Armaflex + UV-resistant PVC jacket for external runs. Per linear metre pair.	LM	285	2,800	798,000
I	Electrical wiring from nearest isolator to each indoor and outdoor unit (min. 2.5 mm ² flex, IP55 conduit, local isolator switch adjacent to outdoor unit). Per indoor unit.	No.	40	8,500	340,000
J	Commissioning of AC system: refrigerant leak test, pressure test, charge verification, functional test (heating and cooling mode), airflow measurement, noise check. Certificate per unit.	No.	40	3,500	140,000
Sub-Total – 11.1 Split & Multi-Split Inverter AC Units (R32, A++ Rating) with Pipework					5,802,000

11.2 Operating Theatre Dedicated HVAC (AHU, HEPA H14, Clean Room Validation)					
A	Operating Theatre dedicated AHU (Air Handling Unit): 100% fresh air supply, H14 HEPA terminal filters, positive pressure +25 Pa relative to adjacent areas, 20–25 air changes per hour total, dual-fan design (supply + extract), SS304 casing, heating coil, cooling coil (DX), VSD drives. To HTM 03-01 and ISO 14644-1 Class 7. 1 per theatre.	No.	2	2,250,000	4,500,000
B	HEPA H14 terminal filter unit (EN 1822, ≥99.995% at MPPS): 600×600 mm aluminium frame, gel-sealed, factory tested with scan certificate, ceiling-flush installation. 4 per theatre.	No.	8	55,000	440,000
C	AHU supply air ductwork (GMS galvanised, Class C, DW/172): rectangular duct (min. 0.9 mm gauge), complete with fire dampers (2-hr rated, fusible link + motorised, at all fire walls), access doors (min. 450×450 mm), anti-vibration flexible connection at AHU, turning vanes at bends. All theatre zone ductwork. Insulated with 50 mm Kimmco glass wool and GI sheet cladding.	m ²	85	11,500	977,500
D	Extract/return ductwork for theatre, complete with motorised low-level extract grilles and overbed extract (for gas scavenging), flexible connections, fire dampers.	m ²	65	10,500	682,500
E	BMS integration for theatre HVAC: DDC controller, sensors (temperature, RH, pressure differential, filter DP), actuated dampers, alarms and graphical display on BMS. Per theatre.	Set	2	145,000	290,000
F	Clean room validation of operating theatres (ISO 14644-3): particle count test, air change rate measurement, pressure differential, temperature and RH uniformity. Certificates issued.	Sum	1	95,000	95,000
Sub-Total – 11.2 Operating Theatre Dedicated HVAC (AHU, HEPA H14, Clean Room Validation)					6,985,000
11.3 Mechanical Ventilation – Fans, Ductwork & Grilles					
A	Inline centrifugal axial fan (BMS-connected, IP55, 3-ph, VSD): 500 m ³ /h for toilet extract, plant rooms, changing rooms. Complete with flexible duct connections, backdraft damper, discharge cowl.	No.	8	18,500	148,000
B	Inline centrifugal axial fan 800 m ³ /h for sluice, dirty utility, sterilisation areas.	No.	4	28,500	114,000
C	125 mm dia. flexible duct (Class B, aluminium, insulated) for fan connections to grilles.	LM	85	1,050	89,250
D	150 mm dia. flexible duct as above.	LM	65	1,350	87,750
E	Supply air grille (anodised aluminium, adjustable blades, 150×150 mm) for toilet/utility ventilation.	No.	28	2,800	78,400
F	Extract grille (fixed blades, anodised aluminium, with opposed blade damper, 150×150 mm or 200×200 mm).	No.	32	3,200	102,400
G	Transfer air grille (aluminium, louvered, 200×100 mm) in partition walls and WC doors.	No.	18	2,800	50,400
H	Commissioning of ventilation systems: airflow measurement (all grilles ±10%), fan test, pressure test of duct systems, BMS integration check. Certificates per system.	Sum	1	38,000	38,000
Sub-Total – 11.3 Mechanical Ventilation – Fans, Ductwork & Grilles					708,200
11.4 Building Management System (BMS) – Main Controller & Field Wiring					
A	BMS main controller and field panel for mechanical services: central DDC/BAS controller (Trend IQ3, Siemens Desigo or Schneider EcoStruxure), 100+ data points (HVAC, pumps, medical gas interfaces, power metering), colour graphical display (touch screen, min. 15"), web access, historical trending, alarm management, BACnet/IP communication. Includes programming, commissioning and 12 months support.	Set	1	485,000	485,000
B	Field cabling (CAT6, screened, in conduit) from BMS controller to all sensors, actuators and relay panels. Estimated 400 LM.	LM	400	550	220,000
Sub-Total – 11.4 Building Management System (BMS) – Main Controller & Field Wiring					705,000
L 11 – AIR CONDITIONING & MECHANICAL VENTILATION – CARRIED TO SUMMARY					14,200,200

COUNTY GOVERNMENT OF BUSIA – DIRECTORATE OF PUBLIC WORKS

PROPOSED CONSTRUCTION OF BCRH ANNEX SPECIALIZED HOSPITAL, BUSIA, KENYA

BILL 12 – HOSPITAL BED LIFT (ELEVATOR)

Item	Description	Unit	Qty	Rate (KShs)	Amount (KShs)
12.1 Hospital Stretcher Lift (MRL Traction, 1,600 kg, 4 Stops) – Full Package					
A	Supply, install, test and commission hospital stretcher/bed lift to EN 81-20:2014 (Electric Lifts) and EN 81-70:2018 (Accessibility): Car internal dimensions min. 1,400 mm (W) × 2,100 mm (D); rated load 1,600 kg; travel speed 1.0 m/s; 4 stops (Ground to Third Floor, approx. 10.8 m travel); machine room-less (MRL) traction drive; Automatic Rescue Device (ARD) for power failure; SS satin-finish car interior (walls, ceiling, floor threshold); automatic bi-parting doors (1,100 mm clear opening × 2,100 mm clear height); multi-beam infrared door edge; digital floor indicators (inside car + all landings); overload indicator and alarm; emergency lighting (min. 5 lux) and intercom (to security desk); car ventilation fan; priority service key switch for hospital/firefighter mode; VVVF soft-start drive; energy regeneration (min. 30% energy saving); anti-vandal buttons. Compliance with Kenya Building Code 2024 and Kenya PWD Act 2003. Brand equivalent: Kone MonoSpace 500, ThyssenKrupp Evolution 200, OTIS GeN2 Comfort or Schindler 3300.	No.	1	9,800,000	9,800,000
B	Lift shaft civil works builder's interface: core drilling for door openings, provision of lift pit (800 mm deep min., waterproofed, with sump and drainage), guide rail fixing brackets (embedded in shaft walls per lift manufacturer's shop drawings), overhead beam/sheave fixings, conduit sleeves for electrical services. Liaison with main contractor.	Sum	1	285,000	285,000
C	Lift pit ladder (GI hot-dip, fixed, min. 600 mm wide rungs, to lift manufacturer's specification).	No.	1	18,500	18,500
D	Lift pit lighting (IP65 LED, 200 lux) and socket outlet (13 A, IP55).	No.	1	12,500	12,500
E	Machine room (MRL control cabinet) provisions: cable management, ventilation fan and louvre, IP55 isolator, 1 No. fluorescent light and socket.	Set	1	22,000	22,000
F	Electrical supply from main distribution board to lift motor control centre (MCC): 3-phase 50 A MCB, armoured cable, terminations.	Sum	1	35,000	35,000
G	Earth bonding of lift guides, car frame, pit equipment and metalwork to main earth bar.	Sum	1	12,000	12,000
H	Factory tests at lift manufacturer's works: witnessed by Engineer or client representative. Issue test certificates.	Sum	1	85,000	85,000

I	Site commissioning and acceptance tests to EN 81-20 Annex C: speed, rated load, safety gear test, limit switch test, door operation test, ARD test, intercom test, firefighter operation test. Tests witnessed by Engineer and KEBS/County Inspector. Certificates issued.	Sum	1	55,000	55,000
J	Government/county approval and certificate of installation from Kenya Bureau of Standards (KEBS) or relevant regulatory body, including application fees.	Sum	1	42,000	42,000
K	Operation and Maintenance Manual (4 copies, hard bound): lubrication schedule, spare parts list, emergency operation instructions, wiring diagrams, as-installed drawings.	Sum	1	25,000	25,000
L	Training of hospital maintenance staff on lift operation, emergency manual lowering, safety checks and routine maintenance (1-day training, max. 4 persons).	Sum	1	22,000	22,000
M	12-month maintenance contract (DLP period): monthly preventive maintenance visits, 24-hr emergency call-out (4-hour response), all spare parts and lubrication included.	Sum	1	95,000	95,000
N	Lift car interior accessories: SS304 handrail (38 mm dia., 1,100 mm height, rear and side walls), fold-down upholstered bench seat (one side), SS card holder for load notice.	Set	1	28,500	28,500
Sub-Total – 12.1 Hospital Stretcher Lift (MRL Traction, 1,600 kg, 4 Stops) – Full Package					10,537,500

TOTAL BILL 12 – HOSPITAL BED LIFT (ELEVATOR) – CARRIED TO SUMMARY	10,537,500
--------------------------------------------------------------------------	-------------------

COUNTY GOVERNMENT OF BUSIA – DIRECTORATE OF PUBLIC WORKS**PROPOSED CONSTRUCTION OF BCRH ANNEX SPECIALIZED HOSPITAL, BUSIA, KENYA****BILL 13 – PC SUMS & PROVISIONAL SUMS**

Item	Description	Unit	Qty	Rate (KShs)	Amount (KShs)
------	-------------	------	-----	-------------	---------------

NOTE: PC Sums to be expended only on Engineer's written instruction. All amounts inclusive of all

Section 13: Prime Cost Sums & Provisional Sums

A	PRIME COST SUM: Equipment statutory inspections and third-party certifications required by Kenya law: KEBS pressure vessel inspections, lift registration certificate, medical gas validation by Authorised Verifier, fire suppression FPA inspection, annual water quality analysis (all years of DLP).	PC	1	110,000	110,000
B	PRIME COST SUM: Building Management System (BMS) integration for all mechanical services (where not included in Bill 11) – main controller programming, additional field devices, fire and lift alarms to BMS, 12-month support licence and training.	PC	1	150,000	150,000
C	Allow PROVISIONAL SUM of 150,000: Future expansion provisions – capped stub ends in medical gas mains (6 No.), capped tees in plumbing distribution (8 No.), spare inverter AC condenser positions (4 No.), conduit sleeves for additional services.	PC	1	150,000	150,000
D	PC SUM: First-week handover assistance – mechanical sub-contractor's technical representative on site during first two weeks of hospital operational period to assist staff with all mechanical systems.	PC	1	75,000	75,000
Sub-Total – PC Sums & Provisional Sums					485,000
TOTAL BILL 13 – PC SUMS – CARRIED TO SUMMARY					485,000

**PRIME COST (P.C.) AND PROVISIONAL
SUM**

Item	Description	Quantity	Unit	Rate	Amount
	<u>SECTION NO. 12:</u>				
	<u>PRIME COST (P.C.) AND PROVISIONAL SUMS:</u>				
	<u>The following sums may be expended or omitted in whole or in part on sole written authority of the Architect:</u>				
	<u>Contingency sum:</u>				
A	Provide a Provisional Sum of Shillings Six Million only (Kshs.6,000,000.00) for Contingencies		SUM		6,000,000.00
	<u>PRIME COST SUMS</u>				
	<u>Structured Cabling Installation:</u>				
B	Provide a Prime Cost sum of shillings Two Million Eight Hundred and Fifty Thousand Only (Shs 2,850,000/=) for Structured Cabling Installation Services		SUM		2,850,000.00
C	<u>Add:</u> for profit and overheads		3%		85,500.00
D	<u>Add:</u> for attendance		SUM		85,500.00
	<i>Total Amount Carried to Main Summary</i>			Shs	9,021,000.00

GRAND SUMMARY

ITEM	DESCRIPTION	PAGE NO	TENDERER'S AMOUNT	OFFICIAL USE ONLY
<u>PROPOSED CONSTRUCTION BCRH ANNEX SPECIALISED HOSPITAL GRAND SUMMARY</u>				
1	Section No. 1 Preliminaries	1/23		7,593,750.00
2	Section No. 2 Substructure	2/3		27,853,130.00
3	Section No. 3 Ground Floor	3/14		53,413,120.00
4	Section No. 3 First Floor	4/15		48,473,330.00
5	Section No. 5 Second Floor	5/14		45,694,076.00
6	Section No. 6 Third Floor	6/14		43,366,745.00
7	Section No. 7 Roof	7/10		15,423,240.00
8	Section No .8 Perimeter Wall	PW/4		11,824,620.00
9	Section No .9 Civil Works	CW/1		11,696,020.00
10	Section No .10 Electrical Works	ELEC/19		16,105,550.00
11	Section No .11 Mechanical Works	ME		109,338,520.00
12	Section No .12 Prime cost and Provisional Sums	12/1		9,021,000.00
TOTAL				399,803,101.00
Add Capacity Building Levy @ 0.03%				119,940.93
TOTAL CARRIED TO FORM OF TENDER & IFMIS PORTAL (V.A.T INCLUSIVE)				399,923,041.93

If by reason of obvious errors in this totalling, extensions of calculations and/or any sum added or deducted by the Tenderers, the correct total of Bills of Quantities differs from the Tenderer's price, such difference will be calculated as a percentage of the corrected total of Bills of Quantities after excluding preliminaries and P.C. and Provisional sums. Should such percentage (addition or deduction) exceed 0.25% it will be applied to all rates and prices used in pricing variations.

Amount of Tender in words:-

.....

Tenderer's Signature and Stamp.....

Address.....

Date.....

Witness Name and Signature.....

Description.....

Address.....

Date.....

DRAWINGS

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- GENERAL NOTES**
1. All dimensions are in millimetres, unless otherwise stated.
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 3. Written dimensions overrides scaled dimensions, thus all dimensions are to be read and not at any time scaled from the drawing.
 4. Any discrepancy to be reported to the project Architect promptly before proceeding.

NO.	REVISION	DATE	SIGN

CLIENT:
 DEPARTMENT OF HEALTH SERVICES AND SANITATION

PROJECT:
 PROPOSED CONSTRUCTION OF BCRH ANNEX SPECIALIZED HOSPITAL

DRAWING TITLE:

PROJECT TEAM

DRAWN BY	
CHECKED BY	
APPROVED BY	

PROJECT NO.



GROUND FLOOR PLAN

1:100

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CLIENT:
 DEPARTMENT OF HEALTH SERVICES AND SANITATION

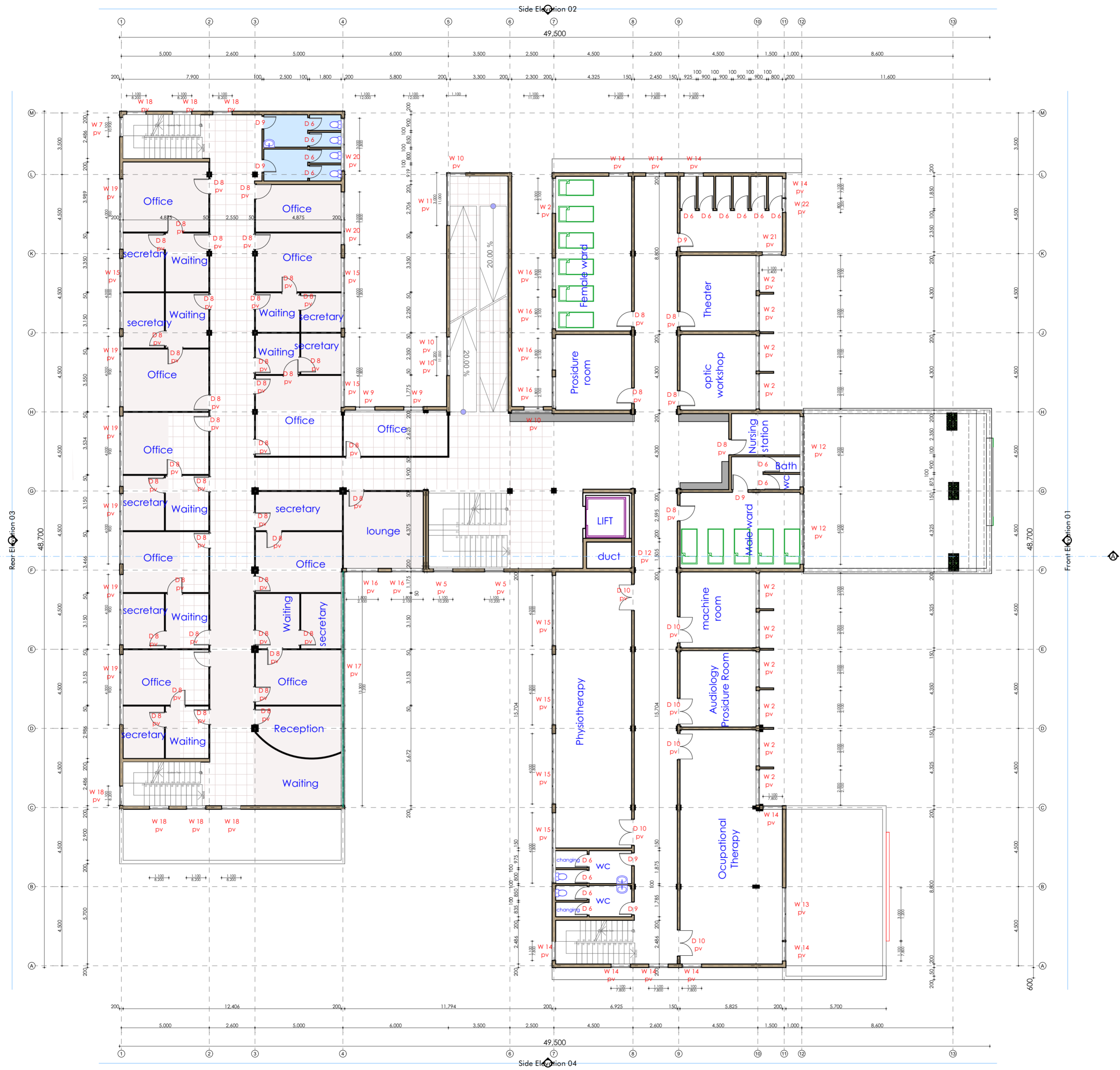
PROJECT:
 PROPOSED CONSTRUCTION OF BCRH ANNEX SPECIALIZED HOSPITAL

DRAWING TITLE:

PROJECT TEAM

DRAWN BY	
CHECKED BY	
APPROVED BY	

PROJECT NO.



FIRST FLOOR PLAN

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 DEPARTMENT OF HEALTH SERVICES AND SANITATION

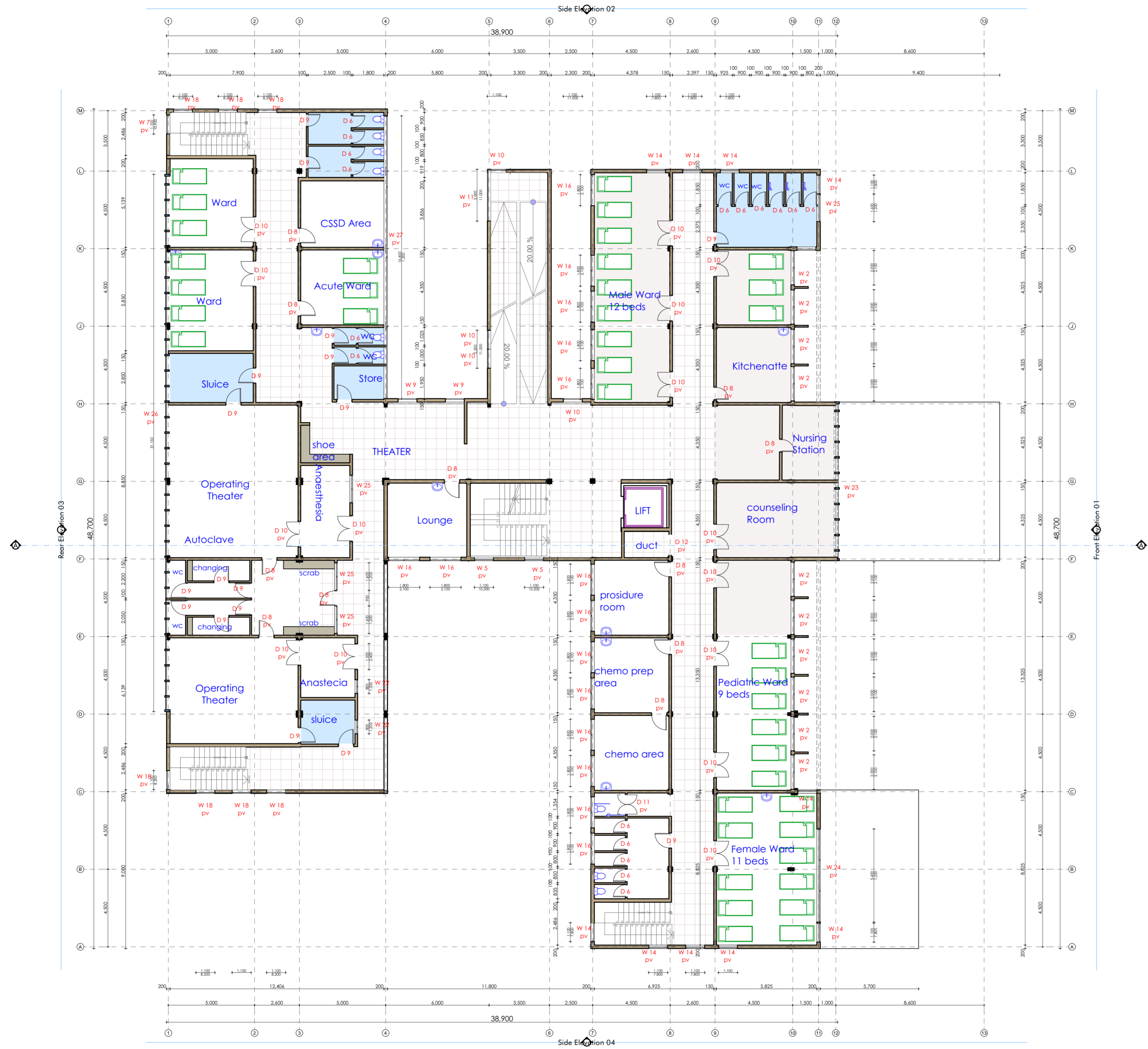
PROJECT:
 PROPOSED CONSTRUCTION OF BCRH ANNEX SPECIALIZED HOSPITAL

DRAWING TITLE:

PROJECT TEAM

DRAWN BY	
CHECKED BY	
APPROVED BY	

PROJECT NO.



SECOND FLOOR PLAN

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NO.	REVISION	DATE	SIGN

CLIENT:
 DEPARTMENT OF HEALTH SERVICES AND SANITATION

PROJECT:
 PROPOSED CONSTRUCTION OF BCRH ANNEX SPECIALIZED HOSPITAL

DRAWING TITLE:

PROJECT TEAM

DRAWN BY	
CHECKED BY	
APPROVED BY	

PROJECT NO.



THIRD FLOOR PLAN

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NO.	REVISION	DATE	SIGN

CLIENT:
DEPARTMENT OF HEALTH SERVICES AND SANITATION

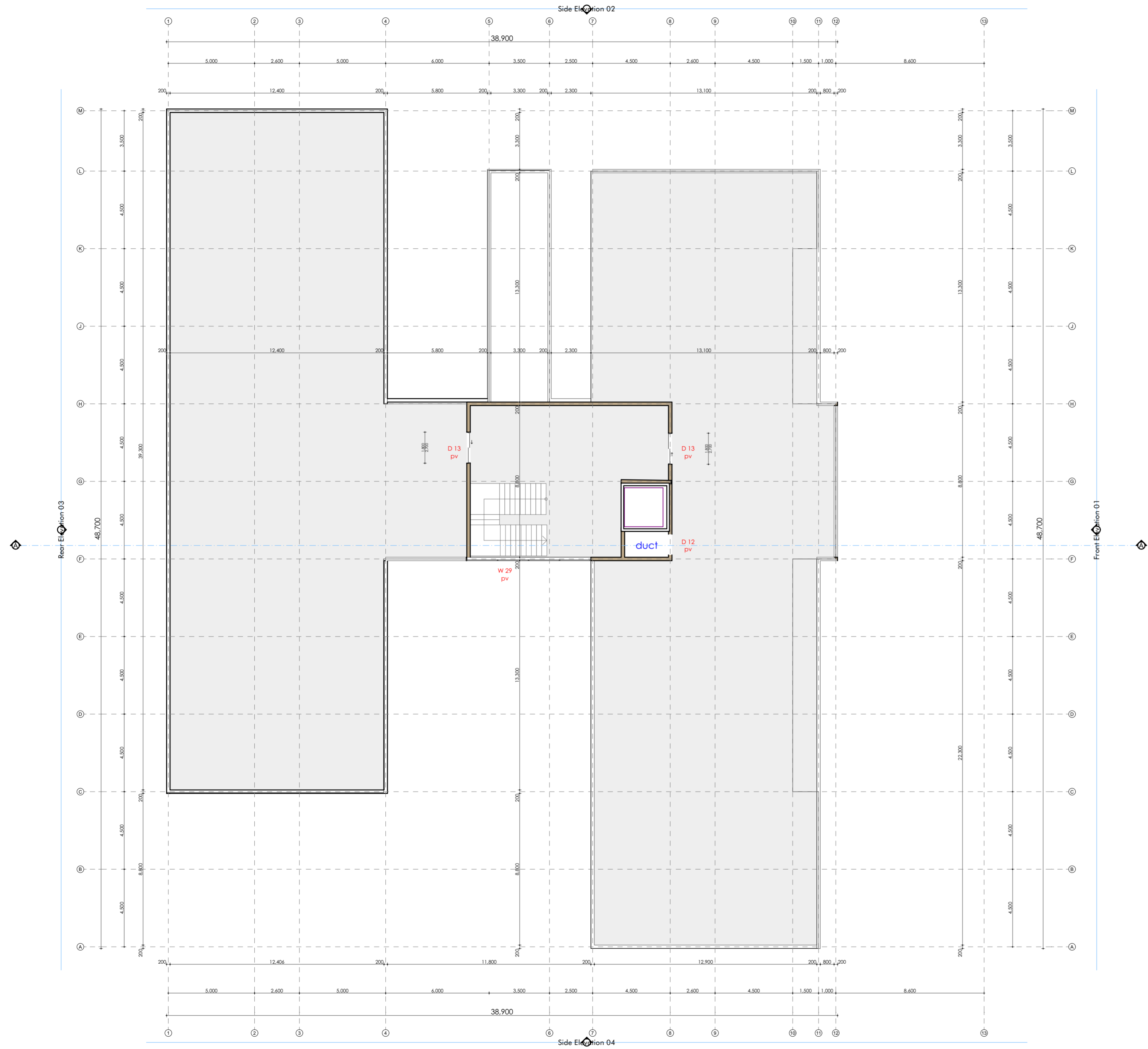
PROJECT:
PROPOSED CONSTRUCTION OF BCRH ANNEX SPECIALIZED HOSPITAL

DRAWING TITLE:

PROJECT TEAM

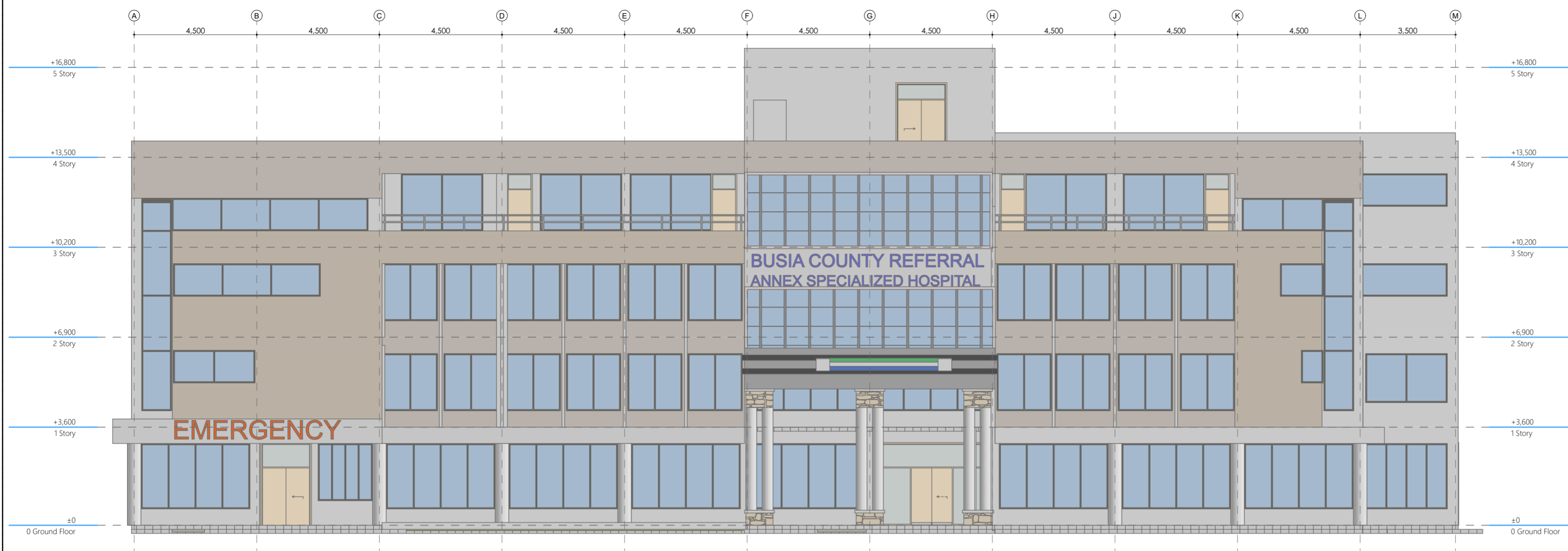
DRAWN BY	
CHECKED BY	
APPROVED BY	

PROJECT NO.



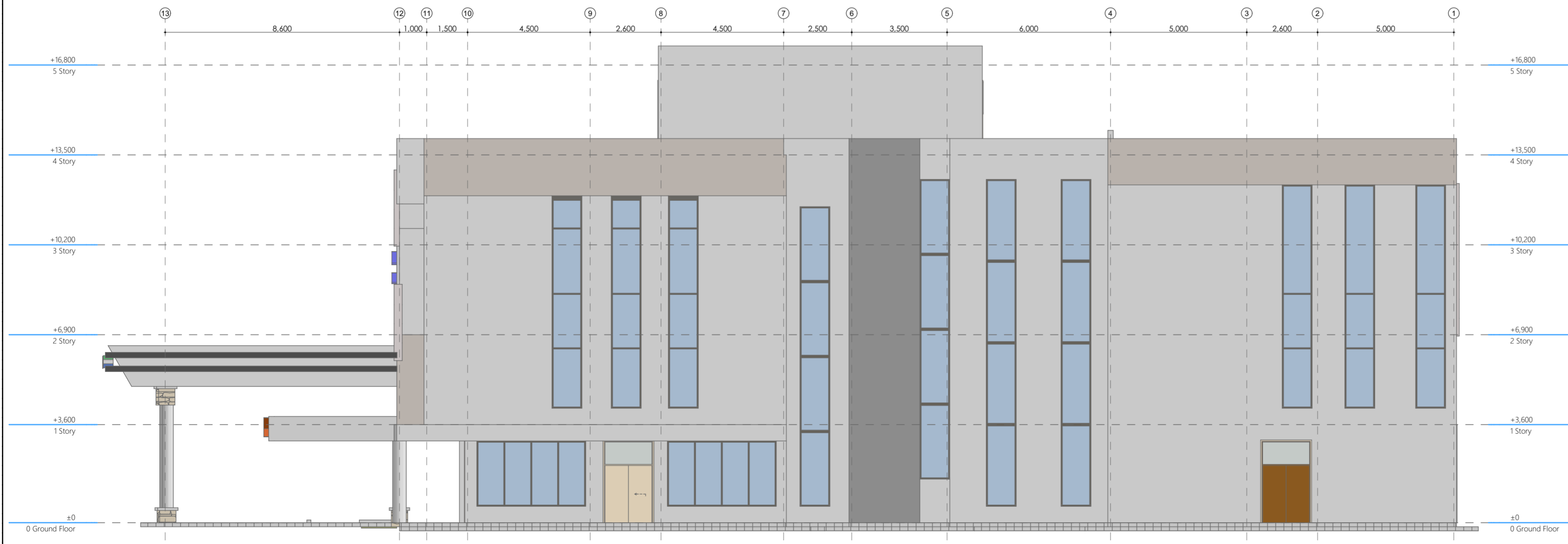
ROOF PLAN

1:100



FRONT ELEVATION 01

1:100



SIDE ELEVATION 02

1:100

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NO.	REVISION	DATE	SIGN

CLIENT:
DEPARTMENT OF HEALTH SERVICES AND SANITATION

PROJECT:
PROPOSED CONSTRUCTION OF BCRH ANNEX SPECIALIZED HOSPITAL

DRAWING TITLE:

PROJECT TEAM

DRAWN BY	
CHECKED BY	
APPROVED BY	

PROJECT NO.

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NO.	REVISION	DATE	SIGN

CLIENT:
DEPARTMENT OF HEALTH SERVICES AND SANITATION

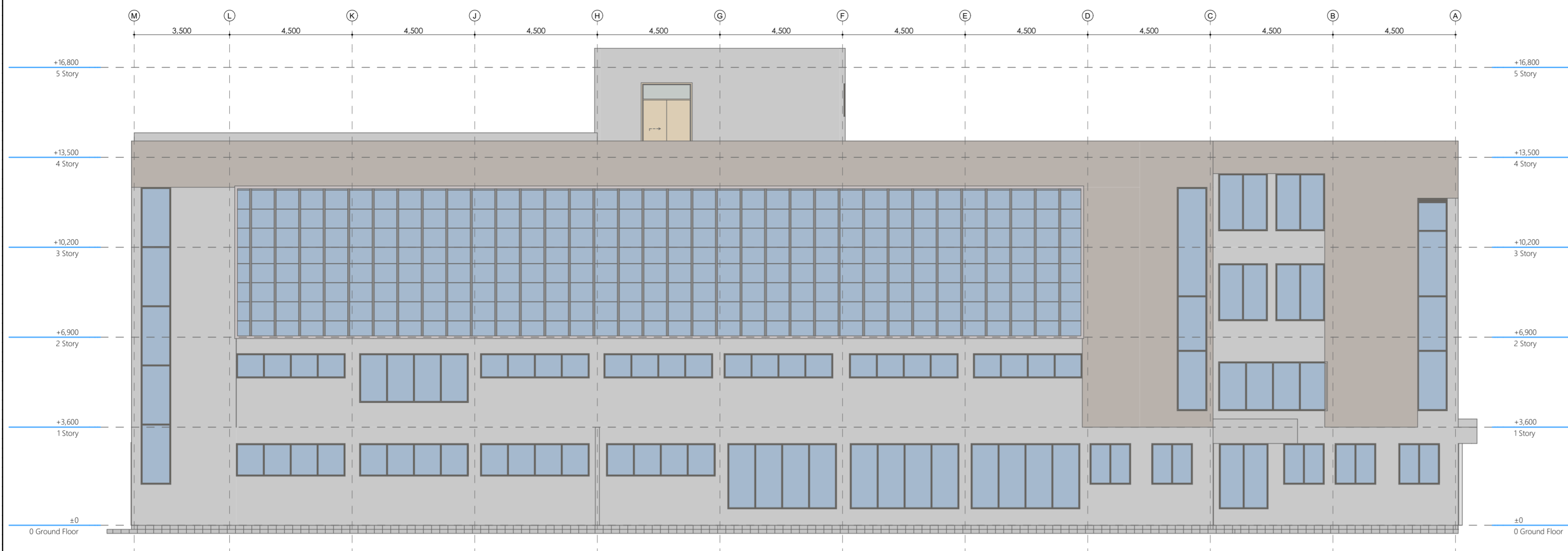
PROJECT:
PROPOSED CONSTRUCTION OF BCRH ANNEX SPECIALIZED HOSPITAL

DRAWING TITLE:

PROJECT TEAM

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APPROVED BY	

PROJECT NO.



REAR ELEVATION 03

1:100



SIDE ELEVATION 04

1:100

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NO.	REVISION	DATE	SIGN

CLIENT:
DEPARTMENT OF HEALTH SERVICES AND SANITATION

PROJECT:
PROPOSED CONSTRUCTION OF BCRH ANNEX SPECIALIZED HOSPITAL

DRAWING TITLE:

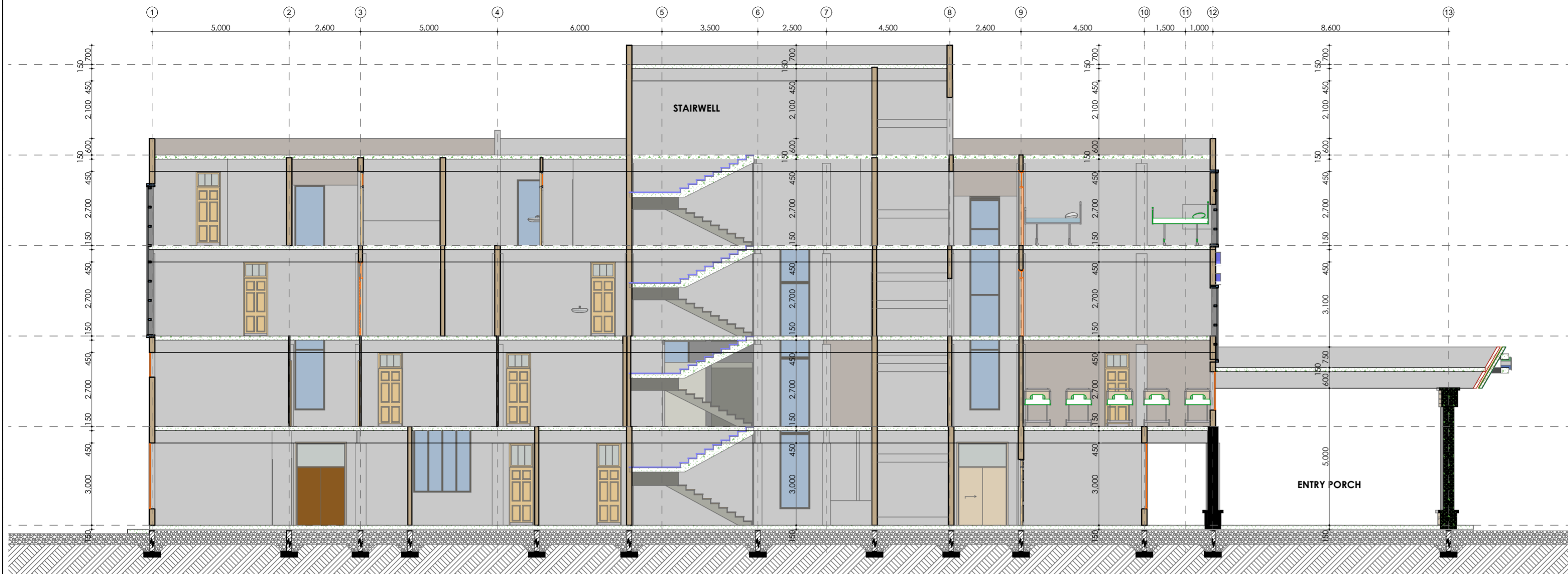
PROJECT TEAM

DRAWN BY

CHECKED BY

APPROVED BY

PROJECT NO.

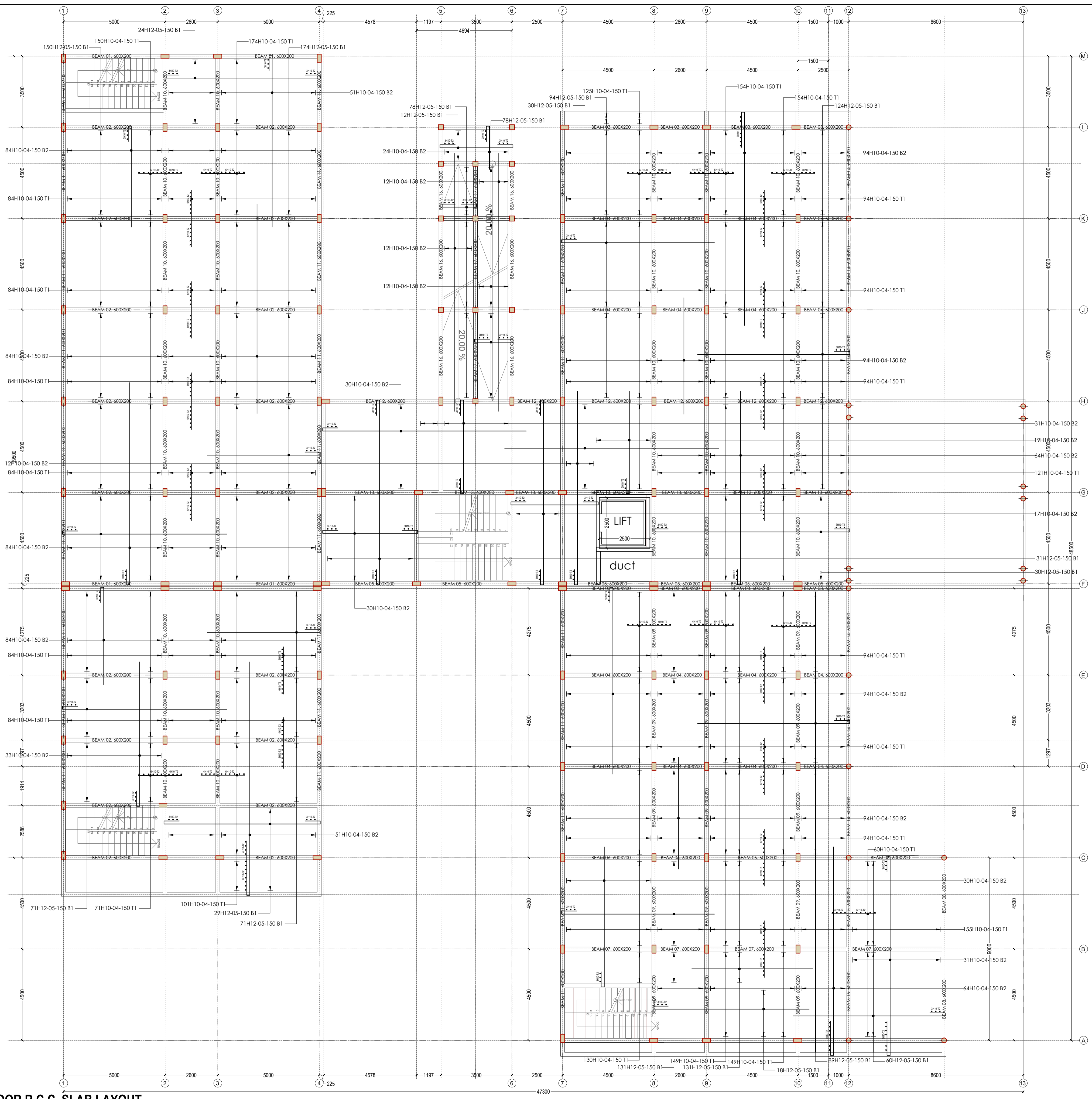


SECTION A-A

1:100

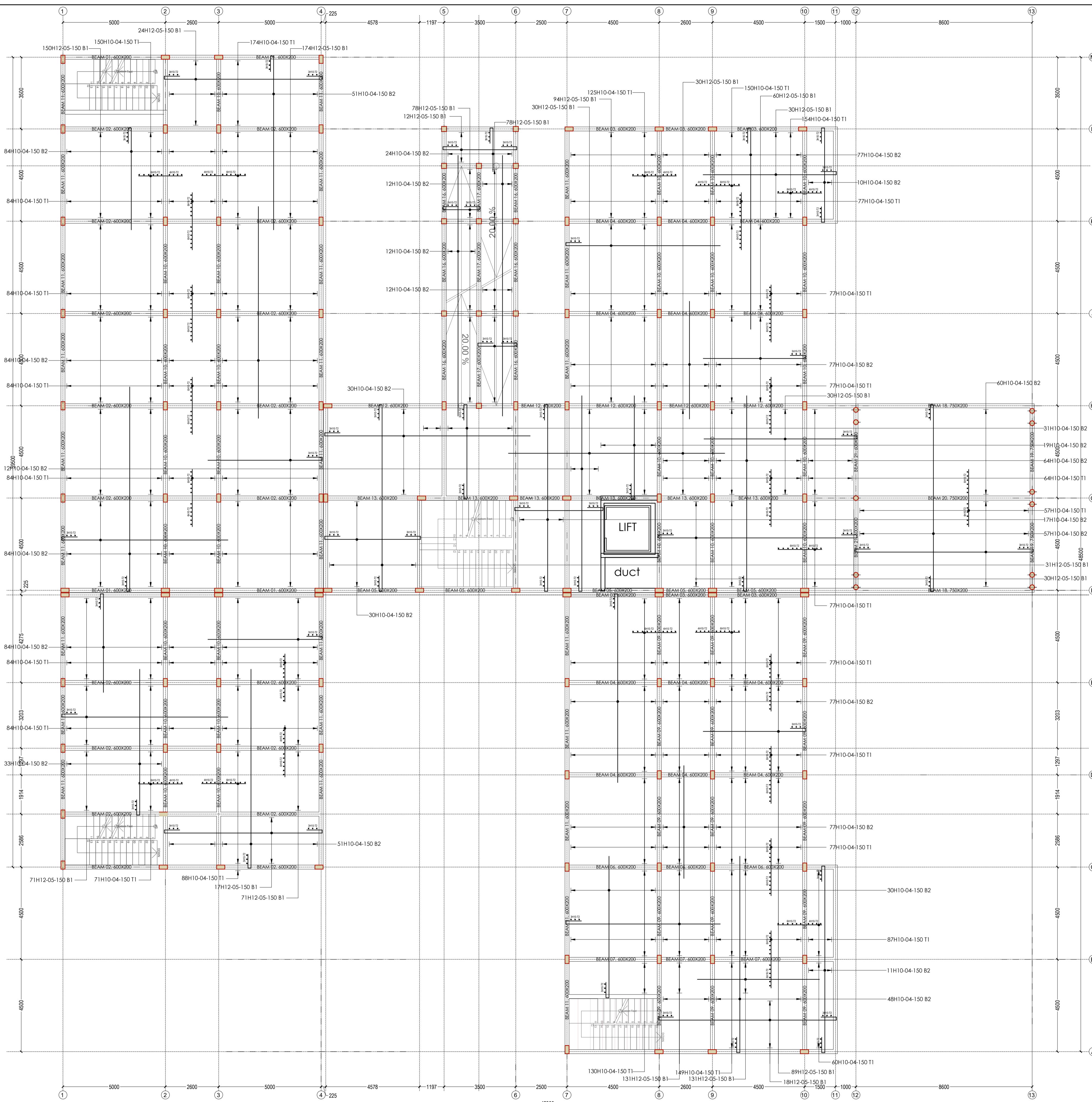
Doors					Windows					Windows				
Code	W	H	No	Description	Code	W	H	No	Description	Code	W	H	No	Description
D1	4000	3000	1	MS - SLIDING	W1	4000	2400	26	STEEL CASEMENT	W17	13300	1200	2	STEEL CASEMENT
D2	900	3000	31	PANEL	W2	2000	2100	23	STEEL CASEMENT	W18	1100	8200	7	STEEL CASEMENT
D3	1500	3000	8	PANEL	W3	1500	1500	5	STEEL CASEMENT	W19	4000	900	6	STEEL CASEMENT
D4	900	3000	5	PANEL	W4	1800	2400	1	STEEL CASEMENT	W20	3000	1800	2	STEEL CASEMENT
D5	1800	3000	6	MS-SLIDING	W5	1100	10200	2	STEEL CASEMENT	W21	1100	5400	1	STEEL CASEMENT
D6	900	2100	51	FLUSH	W6	4000	1200	4	STEEL CASEMENT	W22	800	1200	3	STEEL CASEMENT
D7	900	3000	1	LEAD DOOR	W7	1100	10900	1	STEEL CASEMENT	W23	2700	9100	2	CURTAIN WALL
D8	900	2700	82	PANEL	W8	3000	2400	1	STEEL CASEMENT	W24	5400	1200	1	STEEL CASEMENT
D9	900	2700	48	PANEL	W9	1100	12000	2	STEEL CASEMENT	W25	1600	1200	4	STEEL CASEMENT
D10	1500	2700	28	PANEL	W10	1100	11000	4	STEEL CASEMENT	W26	31050	5500	1	CURTAIN WALL
D11	1200	2700	1	PANEL	W11	3000	11000	1	STEEL CASEMENT	W27	16400	1200	2	STEEL CASEMENT
D12	1200	2700	5	PANEL	W12	4000	1400	2	STEEL CASEMENT	W28	3000	2100	5	STEEL CASEMENT
D13	1800	2700	2	MS - SLIDING	W13	3000	1200	2	STEEL CASEMENT	W29	7200	1200	3	STEEL CASEMENT
					W14	1100	7800	10	STEEL CASEMENT					
					W15	4000	1800	7	STEEL CASEMENT					
					W16	1800	2100	36	STEEL CASEMENT					

DOORS & WINDOW SCHEDULES



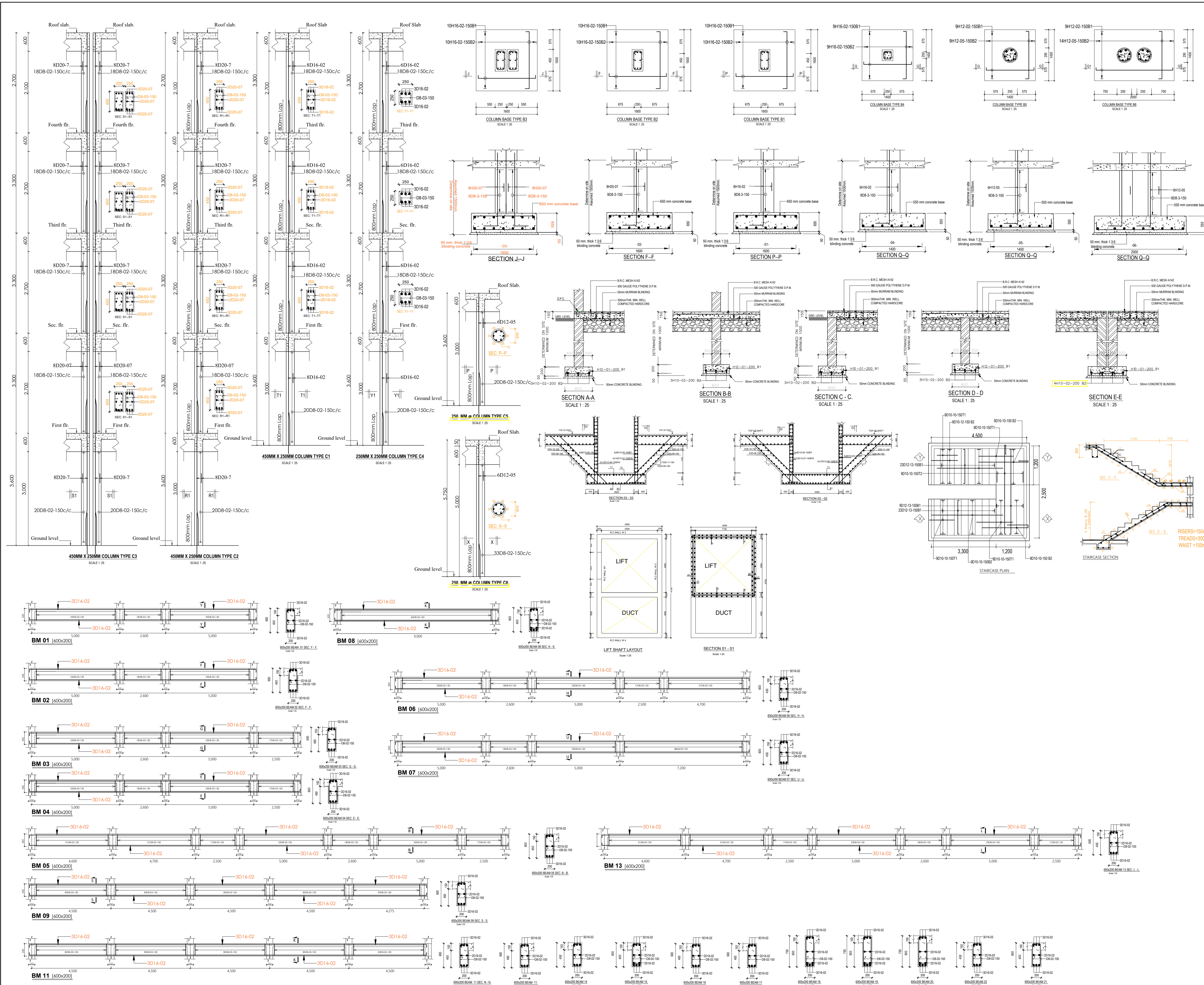
FIRST FLOOR R.C.C. SLAB LAYOUT
 N.B. Slab thickness is 150mm thick unless otherwise specified
 Scale: 1:100

No.	NOTES		
1.	The Structural Engineer to inspect all the reinforcement cages before concreting		
2.	All dimensions are in millimetres (mm) unless otherwise shown or stated.		
3.	Cover to the main reinforcement to be :- Foundation 50mm Columns 40mm Beams 35mm Slabs 25mm		
4.	Reinforced concrete to be class 25 / 20 (1 : 1.5 : 3) for all structural concrete, Blinding concrete to be class 15 / 20 (1 : 3 : 6)		
5.	Reinforcement steel to be :- R - Round mild steel bars to BS 4449		
6.	This drawing is to be read in conjunction with all other relevant drawings associated with these works. Any discrepancy to be reported to the Structural Engineer before proceeding.		
7.	Timber to be second grade, treated cypress (GS) seasoned to the Equilibrium Moisture Content (EMC).		
8.	Abbreviations :- T1 - Means the first topmost layer of reinforcement T2 - Means the second topmost layer of reinforcement B1 - Means the bottommost layer of reinforcement B2 - Means the second bottommost layer of reinforcement HTS - Means High Tensile Stress		
9.	Coarse aggregate to be machine crushed graded aggregate or equivalent and fine aggregate to be river sand to engineer's approval.		
10.	Maximum allowable Soil Bearing Capacity (SBC) to be 150 Kn/m ² . Foundation details to be confirmed on site by the Engineer.		
11.	Fabrication drawings to be done by the contractor and to be approved by the Engineer.		
12.	All fabrication works to be carried out under engineer's supervision. Steel works to BS449 and BS 5950.		
13.	All dimensions to be confirmed on site.		
14.	190mm X 190mm X 390mm block load bearing 5.6/Nmm ² - 7N/mm ² .		
PROJECT :			
PROPOSED BCRH DEVELOPMENT			
DRAWING TITLE:			
FIRST FLOOR R.C.C. SLAB LAY OUT.			
DRAWING TYPE:			
STRUCTURAL DRAWING			
CLIENT:			
DESIGNED BY:			
ENG. KENNETH OMONDI			
CHECKED BY:			
SCALE As shown			
	NAME	SIGNATURE	DATE
Designed			
Drawn			
Checked			
DRG No.	Revision Suffix		
03			



SECOND FLOOR R.C.C. SLAB LAYOUT
 N.B. Slab thickness is 150mm thick unless otherwise specified
 Scale: 1:100

No.	NOTES		
1.	The Structural Engineer to inspect all the reinforcement cages before concreting		
2.	All dimensions are in millimetres (mm) unless otherwise shown or stated.		
3.	Cover to the main reinforcement to be :- Foundation 50mm Columns 40mm Beams 35mm Slabs 25mm		
4.	Reinforced concrete to be class 25 / 20 (1 : 1.5 : 3) for all structural concrete, Blinding concrete to be class 15 / 20 (1 : 3 : 6)		
5.	Reinforcement steel to be :- R - Round mild steel bars to BS 4449		
6.	This drawing is to be read in conjunction with all other relevant drawings associated with these works. Any discrepancy to be reported to the Structural Engineer before proceeding.		
7.	Timber to be second grade, treated cypress (GS) seasoned to the Equilibrium Moisture Content (EMC).		
8.	Abbreviations :- T1 - Means the first topmost layer of reinforcement T2 - Means the second topmost layer of reinforcement B1 - Means the bottommost layer of reinforcement B2 - Means the second bottommost layer of reinforcement HTS - Means High Tensile Stress		
9.	Coarse aggregate to be machine crushed graded aggregate or equivalent and fine aggregate to be river sand to engineer's approval.		
10.	Maximum allowable Soil Bearing Capacity (SBC) to be 150 Kn/m ² . Foundation details to be confirmed on site by the Engineer.		
11.	Fabrication drawings to be done by the contractor and to be approved by the Engineer.		
12.	All fabrication works to be carried out under engineer's supervision.		
13.	Steel works to BS449 and BS 5950.		
14.	All dimensions to be confirmed on site.		
15.	190mm X 190mm X 390mm block load bearing 5.6/Nmm ² - 7N/mm ² .		
PROJECT :			
PROPOSED BCRH DEVELOPMENT			
DRAWING TITLE:			
SECOND FLOOR R.C.C. SLAB LAY OUT.			
DRAWING TYPE:			
CLIENT:			
DESIGNED BY			
ENG. KENNETH OMONDI			
CHECKED BY			
SCALE As shown			
Designed	NAME	SIGNATURE	DATE
Drawn			
Checked			
DRG No.	Revision Suffix		
04			



- NOTES**
- The Structural Engineer to inspect all the reinforcement cages before concreting
 - All dimensions are in millimetres (mm) unless otherwise shown or stated.
 - Cover to the main reinforcement to be :-

Foundation	50mm
Columns	40mm
Beams	35mm
Slabs	25mm
 - Reinforced concrete to be class 25 / 20 (1 : 1.5 : 3) for all structural concrete, Blinding concrete to be class 15 / 20 (1 : 3 : 6)
 - Reinforcement steel to be :-
R - Round mild steel bars to BS 4449
 - This drawing is to be read in conjunction with all other relevant drawings associated with these works. Any discrepancy to be reported to the Structural Engineer before proceeding.
 - Timber to be second grade, treated cypress (GS) seasoned to the Equilibrium Moisture Content (EMC).
 - Abbreviations :-
T1 - Means the first topmost layer of reinforcement
T2 - Means the second topmost layer of reinforcement
B1 - Means the bottommost layer of reinforcement
B2 - Means the second bottommost layer of reinforcement
HTS - Means High Tensile Stress
 - Coarse aggregate to be machine crushed graded aggregate or equivalent and fine aggregate to be river sand to engineer's approval.
 - Maximum allowable Soil Bearing Capacity (SBC) to be 150 Kn/m². Foundation details to be confirmed on site by the Engineer.
 - Fabrication drawings to be done by the contractor and to be approved by the Engineer.
 - All fabrication works to be carried out under engineer's supervision.
 - Steel works to BS449 and BS 5950.
 - All dimensions to be confirmed on site.
 - 190mm X 190mm X 390mm block load bearing 5.6/Nmm² - 7N/mm².

PROJECT :

PROPOSED BCRH DEVELOPMENT

DRAWING TITLE:

COLUMN, BASES, STRIP FOUNDATION, STAIRS AND LIFT

DRAWING TYPE:

STRUCTURAL DRAWING

CLIENT:

BCRH

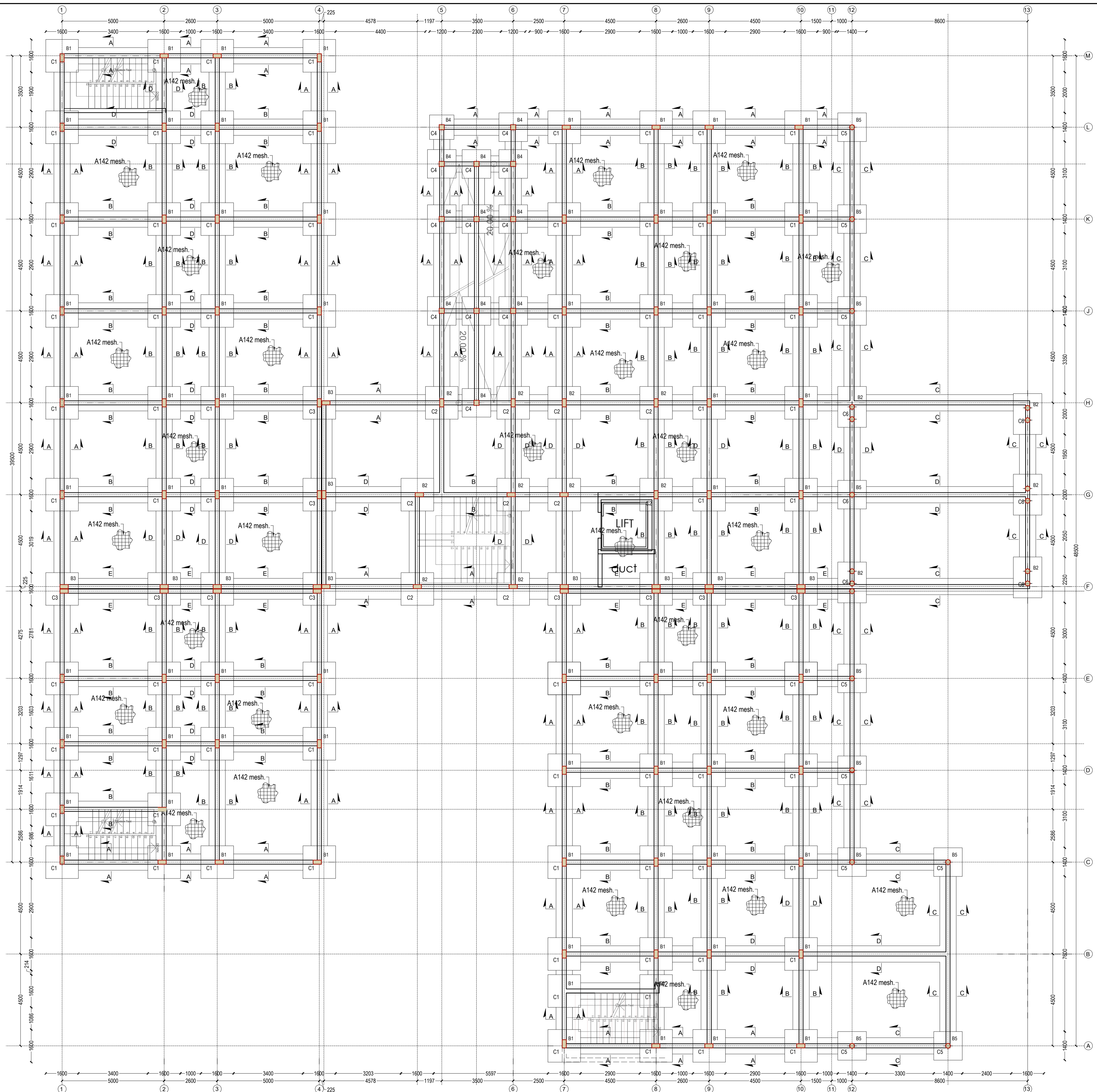
DESIGNED BY:

ENG. KENNETH OMONDI

CHECKED BY:

SCALE: As shown

	NAME	SIGNATURE	DATE
Designed			
Drawn			
Checked			
DRG No.	Revision Suffix		
02			



FOUNDATION LAYOUT PLAN
SCALE. 1:100

- No. NOTES**
- The Structural Engineer to inspect all the reinforcement cages before concreting
 - All dimensions are in millimetres (mm) unless otherwise shown or stated.
 - Cover to the main reinforcement to be :-
 - Foundation 50mm
 - Columns 40mm
 - Beams 35mm
 - Slabs 25mm
 - Reinforced concrete to be class 25 / 20 (1 : 1.5 : 3) for all structural concrete, Blinding concrete to be class 15 / 20 (1 : 3 : 6)
 - Reinforcement steel to be :-
R - Round mild steel bars to BS 4449
 - This drawing is to be read in conjunction with all other relevant drawings associated with these works. Any discrepancy to be reported to the Structural Engineer before proceeding.
 - Timber to be second grade, treated cypress (GS) seasoned to the Equilibrium Moisture Content (EMC).
 - Abbreviations :-
T1 - Means the first topmost layer of reinforcement
T2 - Means the second topmost layer of reinforcement
B1 - Means the bottommost layer of reinforcement
B2 - Means the second bottommost layer of reinforcement
HTS - Means High Tensile Stress
 - Coarse aggregate to be machine crushed graded aggregate or equivalent and fine aggregate to be river sand to engineer's approval.
 - Maximum allowable Soil Bearing Capacity (SBC) to be 150 Kn/m². Foundation details to be confirmed on site by the Engineer.
 - Fabrication drawings to be done by the contractor and to be approved by the Engineer.
 - All fabrication works to be carried out under engineer's supervision.
Steel works to BS449 and BS 5950.
 - All dimensions to be confirmed on site.
 - 190mm X 190mm X 390mm block load bearing 5.6/Nmm² - 7N/mm².

PROJECT:

PROPOSED BCRH DEVELOPMENT

DRAWING TITLE:

FOUNDATION LAYOUT PLAN

DRAWING TYPE:

STRUCTURAL DRAWING

CLIENT:

DESIGNED BY:

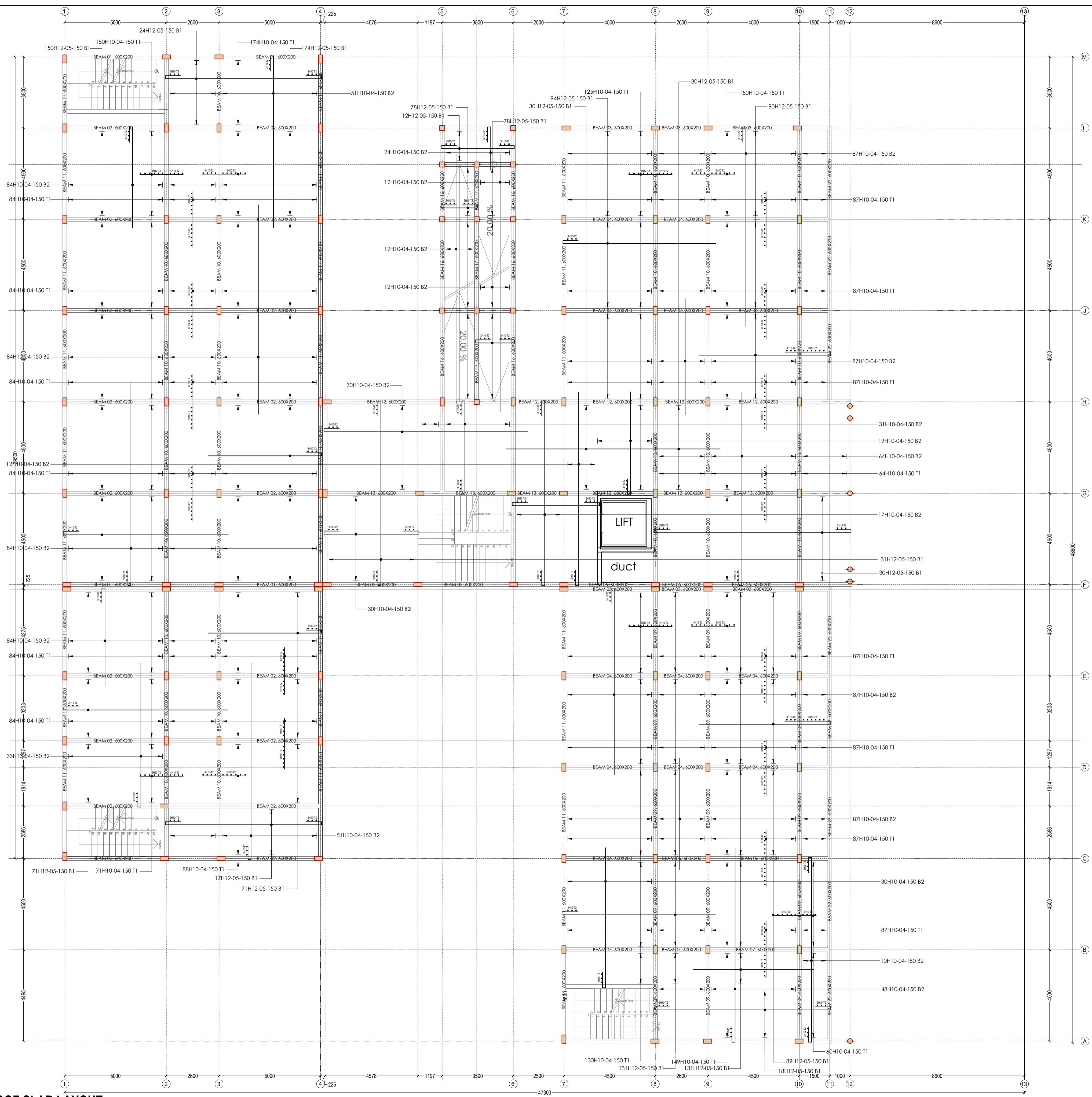
ENG. KENNETH OMONDI

CHECKED BY:

SCALE As shown

	NAME	SIGNATURE	DATE
Designed			
Drawn			
Checked			

DRG No.	Revision Suffix
01	



R.C.C. ROOF SLAB LAYOUT
 N.B. Slab thickness is 150mm thick unless otherwise specified
 Scale: 1:100

- | No. | NOTES |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. | The Structural Engineer to inspect all the reinforcement cages before concreting |
| 2. | All dimensions are in millimetres (mm) unless otherwise shown or stated. |
| 3. | Cover to the main reinforcement to be :-
Foundation 50mm
Columns 40mm
Beams 35mm
Slabs 25mm |
| 4. | Reinforced concrete to be class 25 / 20 (1 : 1.5 : 3) for all structural concrete,
Blinding concrete to be class 15 / 20 (1 : 3 : 6) |
| 5. | Reinforcement steel to be :-
R - Round mild steel bars to BS 4449 |
| 6. | This drawing is to be read inconjunction with all other relevant drawings associated with these works. Any discrepancy to be reported to the Structural Engineer before proceeding. |
| 7. | Timber to be second grade, treated cypress (GS) seasoned to the Equilibrium Moisture Content (EMC). |
| 8. | Abbreviations :-
T1 - Means the first topmost layer of reinforcement
T2 - Means the second topmost layer of reinforcement
B1 - Means the bottommost layer of reinforcement
B2 - Means the second bottommost layer of reinforcement
HTS - Means High Tensile Stress |
| 9. | Coarse aggregate to be machine crushed graded aggregate or equivalent and fine aggregate to be river sand to engineer's approval. |
| 10. | Maximum allowable Soil Bearing Capacity (SBC) to be 150 Kn/m ² . Foundation details to be confirmed on site by the Engineer. |
| 11. | Fabrication drawings to be done by the contractor and to be approved by the Engineer. |
| 12. | All fabrication works to be carried out under engineer's supervision.
Steel works to BS449 and BS 5950. |
| 13. | All dimensions to be confirmed on site. |
| 14. | 190mm X 190mm X 390mm block load bearing 5.6/Nmm ² |
| 15. | - 7N/mm ² . |

PROJECT :
PROPOSED BCRH DEVELOPMENT

DRAWING TITLE:
R.C.C. 1ROOF SLAB LAY OUT.

DRAWING TYPE:
STRUCTURAL DRAWING

CLIENT:

DESIGNED BY
ENG. KENNETH OMONDI

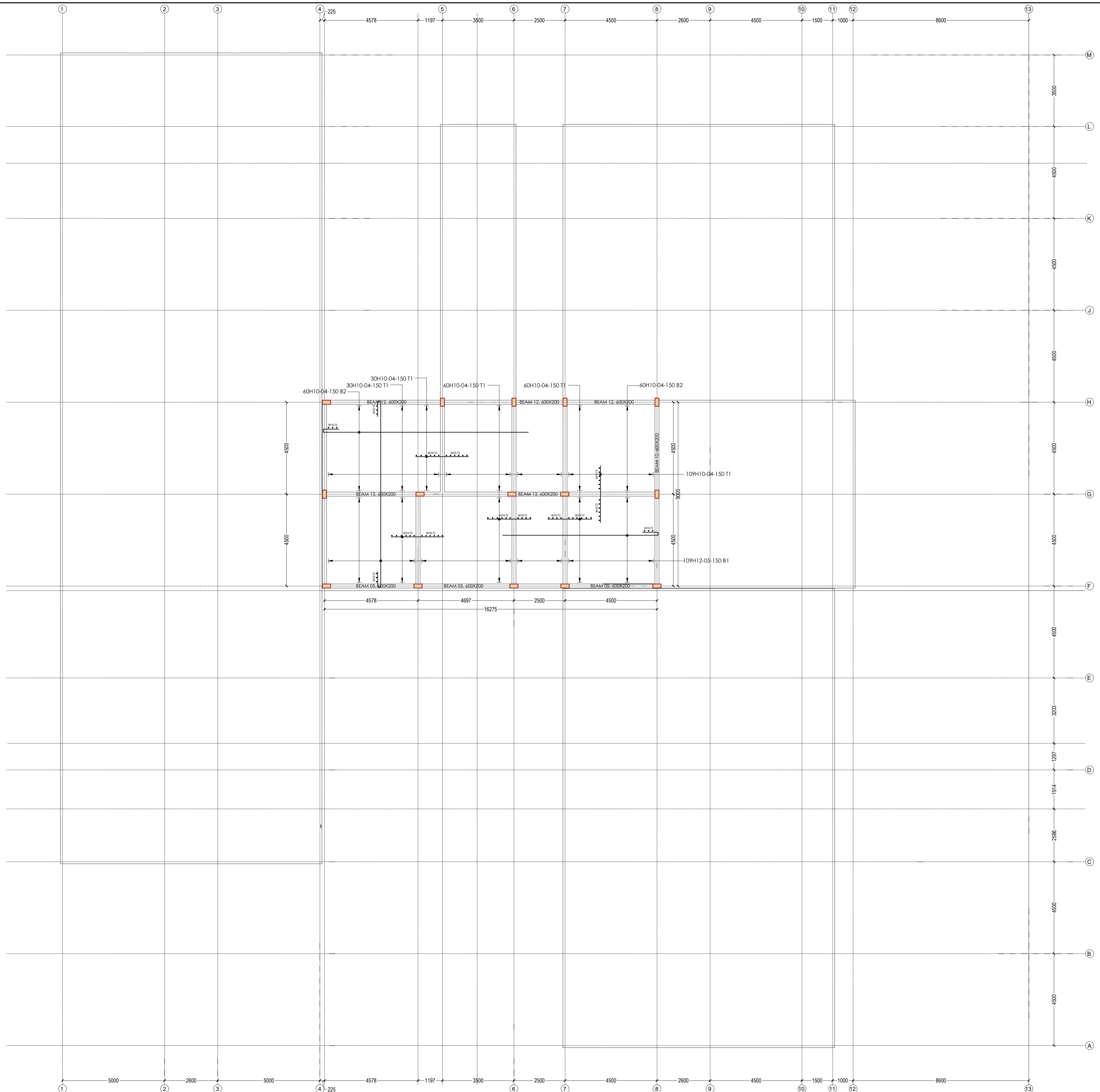
CHECKED BY

SCALE As shown

	NAME	SIGNATURE	DATE
Designed			
Drawn			
Checked			

DRG No. 06

Revision	Suffix



R.C.C. ROOF SLAB 2 LAYOUT
 N.B. Slab thickness is 150mm thick unless otherwise specified
 Scale: 1:100

No.	NOTES
1.	The Structural Engineer to inspect all the reinforcement cages before concreting
2.	All dimensions are in millimetres (mm) unless otherwise shown or stated.
3.	Cover to the main reinforcement to be :- Foundation 50mm Columns 40mm Beams 35mm Slabs 25mm
4.	Reinforced concrete to be class 25 / 20 (1 : 1.5 : 3) for all structural concrete, Blinding concrete to be class 15 / 20 (1 : 3 : 6)
5.	Reinforcement steel to be :- R - Round mild steel bars to BS 4449
6.	This drawing is to be read in conjunction with all other relevant drawings associated with these works. Any discrepancy to be reported to the Structural Engineer before proceeding.
7.	Timber to be second grade, treated cypress (GS) seasoned to the Equilibrium Moisture Content (EMC).
8.	Abbreviations :- T1 - Means the first topmost layer of reinforcement T2 - Means the second topmost layer of reinforcement B1 - Means the bottommost layer of reinforcement B2 - Means the second bottommost layer of reinforcement HTS - Means High Tensile Stress
9.	Coarse aggregate to be machine crushed graded aggregate or equivalent and fine aggregate to be river sand to engineer's approval.
10.	Maximum allowable Soil Bearing Capacity (SBC) to be 150 Kn/m ² . Foundation details to be confirmed on site by the Engineer.
11.	Fabrication drawings to be done by the contractor and to be approved by the Engineer.
12.	All fabrication works to be carried out under engineer's supervision.
13.	Steel works to BS449 and BS 5950.
14.	All dimensions to be confirmed on site.
15.	190mm X 190mm X 390mm block load bearing 5.6/Nmm ² - 7N/mm ² .

<u>PROJECT:</u>			
PROPOSED BCRH DEVELOPMENT			
<u>DRAWING TITLE:</u>			
R.C.C. 2ROOF SLAB LAY OUT.			
<u>DRAWING TYPE:</u>			
STRUCTURAL DRAWING			
<u>CLIENT:</u>			
<u>DESIGNED BY:</u>			
ENG. KENNETH OMONDI			
<u>CHECKED BY:</u>			
<u>SCALE:</u> As shown			
	NAME	SIGNATURE	DATE
Designed			
Drawn			
Checked			
<u>DRG No.</u>	<u>Revision Suffix</u>		
07			