

REPUBLIC OF KENYA



MINISTRY OF ROADS, TRANSPORT & PUBLIC WORKS
DEPARTMENT OF PUBLIC WORKS

**PROPOSED
ASSISTANT COUNTY COMMISSIONER
RESIDENCE
AT**

LAFEY CONSTITUENCY

BILLS OF QUANTITIES

Prepared by: -

Sub County Works Officer,
Lafey Sub-County
Department of Public Works
P.O. Box 49-70300,
MANDERA

Issued by: -

Fund Account Manager,
NG-Constituency Development Fund,
Lafey Constituency,
P.O. Box 175-70300,
MANDERA

October, 2021

**BILL NO. 01: BILLS OF QUANTITIES FOR THE PROPOSED ASSISTANT COUNTY
COMMISSIONER RESIDENCE IN LAFEY CONSTITUENCY**

ITEM	DESCRIPTION	QTY.	UNIT	RATE	SHS.
	<u>ELEMENT NO. 1: SUBSTRUCTURES</u> <u>ALL PROVISIONAL</u>				
	All work measured under this element is up to and including the floor slabs but excluding the finishes thereon: -				
	<u>Site Clearance:</u>				
A	Clear the site of all bushes, shrubs and cart away as directed.	240	SM	40.00	9,600
B	Destroy termite nests within site works, take out and destroy queens, impregnate holes and tunnels with insecticides and fill voids with approved materials.	1	ITEM	10,000	10,000
	<u>Over-site excavation</u>				
C	Excavate over site average 1,50mm deep to remove vegetable soil load up wheel and cart away from site.	23	CM	150	3,450
D	Excavate to reduce levels	11	CM	250	2,750
E	Excavate for strip foundation trenches not exceeding 1.5m deep commencing from stripped level.	110	CM	300	33,000
F	Excavate pits for column bases starting from ground level not exceeding 1.5 meters	20	CM	300	6,000
G	Ditto exceeding 1.5 but not exceeding 2.0 meters	Nil	CM	00	Nil
H	Extra-over all exaction for excavating in rock irrespective of class.	30	CM	1,800	54,000
I	Return, fill in and ram selected excavated material around foundations.	87	CM	300	26,100
J	Remove and cart from site surplus excavated materials	54	CM	300	16,200
	<u>Disposal of water</u>				
K	Keeping all excavations free from all water including spring or running water.	1	ITEM	10,000	10,000
	TOTAL CARRIED TO COLLECTION				171,100

ITEM	DESCRIPTION	QTY.	UNIT	RATE	SHS.
A	<u>Planking and strutting</u> 'uphold the sides of all excavations	1	ITEM	30,000	30,000
B	<u>Filling</u> 300m thick hardcore filling in making up levels, well compacted and rolled to layers of 150mm maximum thickness	45	CM	1500	67,500
C	50mm thick murrum blinding to surfaces	148	SM	150	22,200
D	<u>Anti-termite treatment</u> Termidor' or other equal and approved chemical insecticide treatment prepared and applied according to the manufacturer's printed instructions to tops of fill and foundation walls	148	SM	350	51,800
E	<u>In-situ concrete works: mass concrete 1:3:6/20/12mm aggregate:-</u> 50mm thick blinding under foundations	74	SM	600	44,400
F	<u>Vibrated reinforced concrete (1:2:4-20-20 aggregate) as described in:-</u> Strip foundation	7	CM	20,000	140,000
G	150 mm thick ground slab.	148	SM	2,800	414,400
H	Extra; splayed thickness to underside of bed size 300mm average wide x 150mm thick; forming sinking in hardcore; dressing polythene sheeting to profile and any additional fabric reinforcement	NIL	LM	00	00
I	Ditto size 600mm wide x 150mm thick including ditto	NIL	LM	00	00
TOTAL CARRIED TO COLLECTION					771,100.00

ITEM	DESCRIPTION	QTY.	UNIT	RATE	SHS.
	<u>STEEL REINFORCEMENT</u> <u>Supply and fix bar/rod high tensile D- bars to B.S 4661 reinforcement bars including bending hooks tying</u>				
A	10 mm diameter bars (strip)	260	KG	200 200	52,000
B	12mm ditto (columns)	110	KG	200	22,000
C	8mm ditto (Links)	145	KG		29,000
	<u>Fabric B.S. 4483</u>				
D	Reference A142 mesh 200 X 200mm, weight 2.22 kgs per square meter (measured net-no allowance made for laps) including blocks	148	SM	400	59,200
	<u>Sawn formwork to in-situ concrete as described:-</u>				
E	To vertical sides of columns	22	SM	900	19,800
F	To sides of column bases	12	SM	900	10,800
G	To edges of ground floor slab; 150mm girth	58	LM	200	11,600
	<u>Walling</u>				
H	200mm thick approved local natural stone; chisel dressed square; bedding, jointing and pointing in cement sand (1:4) mortar	183	SM	2,000	366,000
	<u>Damp proofing</u>				
I	Polythene sheet; 500 gauge, 200mm welted laps (no allowance made to laps), horizontal; 1 no. layer laid on compacted quarry dust binding	155	SM	200	31,000
J	200mm wide B.S. 743 type A bitumen hessian base 150mm laps (no allowance made for laps), 1 no. layer bedded in cement sand (1:3) mortar.	62	LM	200	12,400
	TOTAL CARRIED TO COLLECTION				613,800.00

ITEM	DESCRIPTION	QTY.	UNIT	RATE	SHS.
	<u>PLINTH AREAS</u> <u>In-situ finishings</u>				
A	15mm thick 2 no. coat work cement sand (1:3) render; wood floated to concrete or blockwork base to walls.	27	SM	400	10,800
	<u>Paintings and decorations</u> <u>Prepare and apply three coats bituminous paint:-</u>				
B	Wood floated rendered plinths over 300mm girth	27	SM	350	9,450
	<u>Paved area around the perimeter of building block</u>				
C	Dragnet FT" or other equal and approved chemical insecticide treatment prepared and applied according to the manufacturers printed instructions	36	SM	350	12,600
D	600 X 600 X 50mm thick insitu concrete paving slabs	36	SM	1200	43,200
	Total Carried to collection				76,050
	<u>COLLECTION</u>				
	From page LR/1				171,100
	From page LR/2				771,100
	From page LR/3				613,800
	From LR/04 above				76,050
	TOTAL FOR SUBSTRUCTURES CARRIED TO SUMMARY				1,632,050.00

ITEM	DESCRIPTION	QTY.	UNIT	RATE	SHS.
	<u>ELEMENT NO. 02:</u> <u>FRAME</u>				
	Reinforced concrete; class 20/ (20mm)); vibrated in:-				
A	Beams (lintel)	10	CM	20,000	200,000
B	Columns	3	CM	15000	45,000
	<u>Reinforcement</u> <u>bars; high yield steel; cold worked to b.s. 4461</u> <u>including bends, hooks, tying wire and distance</u> <u>blocks:-</u>				
C	12 mm diameter bars	700	KG	400	280,000
D	8mm ditto	185	KG	200	37,000
	<u>Sawn formwork to in-situ concrete as</u> <u>described:-</u>				
E	To sides and soffits of beams & columns	150	SM	1,000	150,000
F	Edge of risers; 75 to 150mm wide	NIL	LM	00	00
G	Edge of open strings of staircase 225 to 300mm including forming profiles of treads and risers	NIL	LM	00	00
	TOTAL FOR FRAME CARRIED TO SUMMARY				712,000

ITEM	DESCRIPTION	QTY.	UNIT	RATE	SHS.
	<u>ELEMENT NO.3</u> <u>WALLING</u> <u>Precast concrete grade 20 (20 mm aggregate) including formwork, finishing fair on all exposed surfaces and hoisting and placing in position, bedding, jointing and pointing in cement and sand (1:4) mortar.</u>				
A	Window cill; 250 X 50mm extreme height; once weathered; once throated; reinforced as necessary for handling; surface fair finish 275mm girth; bedding, jointing in cement sand (1:3) mortar	22	LM	650	14,300
	<u>Natural Stone Walling</u> <u>Fine chiseled natural stone walling bedded and jointed in cement and sand (1:3) mortar and reinforced with and including 20swg X 25mm wide hoop iron at alternate courses</u>				
B	150mm thick approved local; chisel dressed both sides; bedding, jointing and pointing in cement sand (1:3) mortar	320	SM	1600	512,000
	<u>Sundries</u>				
C	Form opening for ventilation 150mm in diameter and build in ventilating gratings.	12	NO	500	6,000
	<u>Labour and material</u>				
D	Extra over horizontal and vertical pointing in 10mm thick rod in cement and sand (1:3) mortar; one coat of bituminous paint	126	SM	500	63,000
	TOTAL FOR WALLING CARRIED TO SUMMARY				595,000

ITEM	DESCRIPTION	QTY.	UNIT	RATE	SHS.
	<u>ELEMENT NO. 04</u> <u>DOORS</u>				
	<u>EXTERNAL</u> <u>Standard steel casement doors</u>				
A	Metal casement steel door in 50 X 45 mm RHS bottom, middle and top rails, 50 X 45 mm RHS stiles infilled with cranked steel panels welded to frames or glazing (m/s); all framed to detail; overall size 900 X 2400 high; single leaf.	1	NO	15,700	15,700
B	Ditto but size 1200 x 2400mm	1	NO	20000	20,000
	<u>INTERNAL</u> <u>Doors, frames and finishing in wrought cypress:-</u>				
	<u>wrot cypress framed frames and framings</u>				
C	150 x 50 mm; 2 No. labours; plugged door frame	65	LM	1200	78,000
D	150 x 50 mm transom	12	LM	1200	14,400
E	40 x 35 mm moulded architrave	65	LM	250	16,250
F	25 x 25 mm moulded quadrants	65	LM	150	9,750
G	45 mm solid core flush door faced both sides with 3mm plywood veneered and hardwood lipped all round, size 900 x 2100mm including fanlight 600 x 600 mm	11	NO	15000	165,000
	<u>Sundries</u>				
	<u>Iron mongery</u> <u>Supply and fix the following to UNION catalogue or other equal and approved to softwood, hardwood or the like fixing with screws</u>				
F	3 lever satin chrome lock case 57mm centres with phoenix aluminium handle on plate	11	NO	5000	55,000
I	100 mm brass butt hinges	16 ¹ / ₂	PCS	500	8,250
	TOTAL CARRIED TO COLLECTION				382,350.00

ITEM	DESCRIPTION	QTY.	UNIT	RATE	SHS.
A	<p><u>To concrete or blockwork; fixing with bolts; plugging</u></p> <p>Rubber door stop; oval satin anodized aluminium-floor</p> <p><u>Painting and decorations</u></p> <p><u>Prepare and apply one coat etching primer, one undercoat and two coats gloss oil paint to crown solo or other equal and approved to:-</u></p>	13	NO	350	4,550
B	<p>General surfaces of glazed casement metal doors; both sides</p> <p><u>On wood</u> <u>Aluminium primer or other equal and approved wood primer before fixing</u></p>	8	LM	400	3,200
C	<p>Backs of frame, board, etc over 100mm but not exceeding 200mm girth</p> <p><u>Knot, prime and stop; prepare and apply one undercoat and two coats of gloss oil paint</u></p>	65	LM	150	9,750
D	<p>General surfaces of timber doors over 300mm girth; external</p>	42	SM	400	16,800
Total Carried to Collection					34,300
<u>COLLECTION</u>					
Brought forward from page LR/07					382,350
Brought forward from LR/08 above					34,300
TOTAL FOR DOORS CARRIED TO SUMMARY					416,650

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<p><u>ELEMENT NO. 05:</u> <u>WINDOWS</u></p> <p><u>Ball nosed burnt clay, finishing fair on all exposed surfaces and hoisting and placing in position, bedding, pointing and providing in pigmented cement and sand (1:3) mortar</u></p>				
A	150 x 25mm thick clay window sills	NIL	LM	00	00
B	6mm thick ceramic tiles finish to internal surfaces of window sill; 150mm girth	NIL	LM	00	00
	<u>Wrot mahogany</u>				
C	150 X 25 mm thick window boards including bull-nosed edges and 25 X 25 mm bearer; plugged, counter sinking	NIL	LM	00	00
	<p><u>METAL WORK</u> <u>PURPOSE- MADE UNITS</u></p> <p><u>Supply, assemble and fix the following purpose made mild steel casement windows; standard metal section from approved manufacturer complete with frames, transoms, mullions and with and including permanent ventilators comprising "T" bar, gauze and 16 gauge sheet metal hood 50mm high X 50mm projections to full width of window, coupling mullions, approved iron monger and one coat manufacturers primer; all welding ground to smooth finish:-</u></p>				
	Window, overall size 2,500 X 1,500mm high	3	No	20500	61,500
	Window, overall size 2,000 X 1,500mm high	1	No	16500	16,500
	Window, overall size 2,000 X 1,900mm high	NIL	No	00	NIL
	Window, overall size 1,500 X 1,500mm high	2	No	14000	28,000
	Window, overall size 600 X 900 mm high	6	No	3500	21,000
	TOTAL CARRIED TO COLLECTION				127,000

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>Grills</u> <u>High tensile steel burglar proof bars at 150mm cros centres horizontal and vertical; ends lugged in masonry</u>				
A	12mm diameter bars welded and ground smooth to approval	25	SM	4,500	112,500
	<u>Glazing</u>				
B	4mm thick clear sheet glass panes over 0.1 but not exceeding 0.5 square meters; fixing with putty	25	SM	1000	25,000
C	Ditto but obscured panes ditto	4	SM	1600	6,400
	<u>Paintings and Decorations</u>				
	<u>On metal work</u>				
	<u>Prepare and apply three coats oil paint full gloss to crown solo or other equal and approved to:-</u>				
D	General window surfaces	25	SM	400	10,000
E	surfaces of metal over 300mm girth (burglar proofing grills)	25	SM	400	10,000
	Total Carried to Collection				163,900
	<u>COLLECTION</u>				
	Brought forward from page LR/09				127,000
	Brought forward from LR/10 above				163,900
	TOTAL FOR WINDOWS CARRIED TO SUMMARY				290,900

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>ELEMENTNO.6</u> <u>FINISHES</u> <u>Wall finishes</u> <u>In-situ finishes</u> <u>Render; 18mm thick, 1 no. coat work of cement and sand (1:3); wood floated to concrete or blockwork base</u>				
A	Wall, beams and columns; external	65	SM	450	29,250
	<u>Plaster; 18mm thick, 2 no. coatwork, 12mm first coat of cement sand (1:3); 3mm second coat of cement:-</u>				
B	Wall, beams and columns; internal	353	SM	450	158,850
	<u>Ceramic floor tiles</u>				
C	Supply and fix 330 x 330 x 8mm ceramic tiles approved by client and architecture	130	SM	1,800	234,000
	<u>Skirting</u>				
D	100 X 8mm thick skirting	94	LM	250	23,500
	<u>Beds or backings</u> <u>Render; cement and sand (1:3)</u>				
E	14mm thick one coat backings; wood floated to receive ceramic tiles (m/s) to concrete or blockwork base; to walls internal	75	SM	450	33,750
	<u>Paintings and decorations</u> <u>Prepare and apply one undercoat and three coats of first quality plastic emulsion paint to:-</u>				
F	Plastic walls	353	SM	350	123,550
G	Wood floated rendered surfaces	65	SM	350	22,750
	TOTAL CARRIED TO COLLECTION				625,650

ITEM	DESCRIPTION	QTY.	UNIT	RATE	SHS.
	<u>Floor finishes (wet Areas)</u> <u>Tiles , Slab or Block Finishings</u> <u>Imported porcelain tiles as supplied by "Tiles and Carpet Center" or other equal and approved supplier; approved colour to regular or other approved pattern; bedding and jointing in cement sand(1:4) mortal</u>				
A	330x330x8mm thick; but joints both ways; to cement sand base (m/s); to walls and floors ;internal	92	SM	1800	165,600
B	100 mm thick skirting straight junction with wall and floor finish	28	LM	250	7,000
	<u>Ceiling finishes</u> <u>12mm(minimum) two-coat plaster; 9mm first coat of cement sand (1:6), 3mm second coat of cement and lime putty (1:10);steel troweled to;-</u>				
C	Concrete soffits	NIL	SM	00	00
	<u>Wrot cypress</u>				
D	100x25mm moulded cornice	125	LM	200	25,000
	<u>Approved sawn softwood;second grade;pressure impregnated;-</u>				
E	50x50mm brandering.	544	LM	200	108,800
F	75x50mm ditto; plugged on walls.	125	LM	250	31,250
	<u>Clipboard finishings</u>				
G	12mm thick clipboard ceiling board fixed to aluminum hanges(m/s); punched and puttied	148	SM	800	118,400
H	Extra ;access panels 600x600mm,50x50mm softwood framing all round; fixing with chromium planted screws and cup washers.	3	NO.	1,600	4,800
	TOTAL CARRIED TO COLLECTION				460,850

ITEM	DESCRIPTION	QTY.	UNIT	RATE	SHS.
	<u>Painting and Decorations</u> <u>Prepare and apply one undercoat and three coats of first quality emulsion paint to the following surfaces:-</u>				
A	Steel troweled surfaces	NIL	SM	00	00
B	Ceiling boards	148	SM	350	51,800
C	Moulded cornice not exceeding 100mm grith	125	LM	100	12,500
	TOTAL CARRIED TO COLLECTION				64,300
	<u>COLLECTION</u> From page LR/11				625,650
	From page LR/12				460,850
	From page LR/13 above				64,300
	TOTAL FOR FINISHES CARRIED TO SUMMARY				1,150,800

ITEM	DESCRIPTION	QTY.	UNIT	RATE	SHS.
	<u>ELEMENT NO.7</u> <u>ROOFING CONSTRUCTION</u> <u>Coloured corrugated iron sheets covering</u> <u>G30 degrees pitch</u>				
A	Roof covering; 150mm laps on one end one and a half corrugation side lap; and nailing to 75x50mm celcured sawn cypress purlins (m/s).	240	SM	800	192,00
B	Extra over for raking and cutting	46	LM	350	16,100
	<u>Accessories, fixing as necessary to roof sheets CARPENTRY</u> <u>The following in sawn celcured cypress timber trusses nailed connections, spamming, hoisting 3.3 above ground:-</u>				
C	100x50mm rafters and tie beam	265	ML	300	79,500
D	100x50mm rafters and tie beam	160	LM	300	48,000
	100x50mm king-post	25	LM	300	7,500
E	150x25mm nailing plates	45	LM	150	6,750
	<u>The following in sawn celcured cypress:-</u>				
F	100x50mm wall plate rag-bolted at 1200 centres with 12mm diameter bolts (m/s)	60	LM	300	18,000
G	150x25 mm ridge board	50	LM	150	7,500
H	75x50mm purlins	214	LM	250	53,500
	TOTAL CARRIED TO COLLECTION				428,850

ITEM	DESCRIPTION	QTY.	UNIT	RATE	SHS.
A	<u>The following in wrot cypress:-</u> 200x25mm thick fascia/barge board	70	LM	450	31,500
B	50x50mm celcured wrot cypress bearers or brandering at 600mm centers	35	SM	1,100	34,100
C	<u>Labour and materials (Provisional)</u> 12mm diameter rag bolt, 200mm long complete with and including head, nut and two washer cast into and including mortice in stone or concrete and run with cement and sand (1:3) mortar.	22	NO	150	3,300
D	Drill 50mm thick timber to receive 12mm dia. bolt	22	NO	50	1,100
E	<u>RAINWATER DISPOSAL</u> <u>26G Galvanized mild steel sheeting.</u> Ranking flashing overall 400mm girth with top end turned and wedged into and including 50x50mm mortice in stone or concrete and in with cement and sand (1:3) mortar and bottom edge dressed over roofing.	NIL	LM	NIL	NIL
F	<u>24G Galvanised mild steel sheeting; all welds ground smooth</u> 150x100mm box gutter including soldered joints in the running length fixed to fascia board with and including brackets at approved centers	70	LM	800	56,000
G	Extra ; ends	10	NO	500	5,000
H	Extra ; 100 mm dia. outlet 100mm long	10	NO	500	5,000
I	100mm dia. rain water downpipe fixed with and including mild steel straps at 900mm centres, plugged and screwed to wall	50	LM	800	32,000
J	Extra swan neck bend with 1135mm projection	12	NO	500	6,000
K	Extra: horse shoe bend	12	NO	500	500
	TOTAL CARRIED TO COLLECTION				180,000

ITEM	DESCRIPTION	QTY.	UNIT	RATE	SHS.
	<u>Painting and Decorations</u>				
	<u>On woodwork</u>				
	<u>Prepare and apply one zinc plumbate primer and three coats of 'CROWN SOLO' or other equal and approved super gloss oil paint to:-</u>				
A	Fascias;200 to 300 mm girth; external	70	LM	150	10,500
	<u>On Metal work</u>				
B	General surfaces of gutters; over 300mm girth external	70	SM	200	14,000
C	Down pipes	50	LM	150	7,500
	<u>Tongue and Grooved timber surfaces prepare and apply three coats of 'CROWN SOLO' or other equal and approved polyurethane varnish to:-</u>				
D	Surface of eaves; over 300mm girth external`	35	SM	350	12,250
	Total Carried to collection				44,250
	<u>COLLECTION</u>				
	From page LR/14				428,850
	From page LR/15				180,000
	From LR/16 above				44,250
	TOTAL FOR ROOF CONSTRUCTION CARRIED TO SUMMARY				653,100.00

ITEM	DESCRIPTION	QTY.	UNIT	RATE	SHS.
	<u>ACC LAFEY RESIDENCE</u> <u>SUMMARY</u>				
1.	SUBSTRUCTURES(PROVISIONAL)				1,632,050.00
2.	FRAME				712,000.00
3.	WALLING				595,000.00
4.	DOORS				416,650.00
5.	WINDOWS				290,900.00
6.	FINISHES				1,150,800.00
7.	ROOF CONSTRUCTION				653,100.00
	SUBTOTAL (01)				5,450,500.00
	<u>PROVISIONAL SUMS:</u>				
8.	ALLOW FOR ELECTRICAL WORKS (3 %)				180,000.00
9.	ALLOW FOR PLUMBING AND DRAINAGE WORKS (3%)				180,000.00
10.	ALLOW FOR CONTRINGENCIES (5%)				300,000.00
	TOTAL ESTIMATED COST				6,110,500.00

LR/17

Prepared by: -



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MANDERA