ESTIMATE OF FOREST GUARD QUARTER

1. C/C length of walls in quarter = 28.75 x 3 + 21.75 x 3 + 10.75 x 1 running feet
   = 160.75 running feet
   = 49 running meter

2. C/C length of court yard walls = 10.6 x 2 + 21.75 x 1 running feet
   = 42.95 running feet
   = 13.09 running meter

3. No. of columns in quarter = 12
4. No. of columns in courtyard = 3
5. Size of each column = 9 inches x 9 inches
6. Plinth = 0.5 meter above ground level
7. Beam at plinth level = 9 inches x 9 inches
8. Beam on door/windows = 9 inches x 6 inches
9. Beam at roof level = 9 inches x 9 inches
10. Thickness of slab = 4 inches

Estimate of different works

1. **Excavation:**
   - (i) For columns = (12 + 3) x 1.0 x 1.0 x 1.2 meter
     = 18.000 cubic meter
   - (ii) For walls =[(49 + 13.09) - 38 x 0.5] x 0.3 x 0.5
     = 6.464 cubic meter
   - (iii) For pavement block around building = 34x0.45=15.30 cubic meter
   - (iv) Total excavation = 39.764 cubic meter

2. **Filling foundation with 1:3:6 (M-10) cement concrete**:

(i)	For columns	= (12+ 3) x 1.0 x 1.0 x 0.1 = 1.5 cubic meter
(ii)	For walls	= (49 + 13.09) x 0.3 x 0.1 = 1.563 cubic meter
(iii)	For flooring in rooms	= 8.84 x 6.86 x 0.1 = 6.06 cubic meter
(iv)	Total CC	= 9.123 cubic meter

3. R.C.C. work in 1:1.5:3 (M-20) in columns, beams,chajjas & slab:

(i)	Columns footing	= 15 x (1 x 1 + 0.22 x 0.22)/2 x 0.3 = 2.359 cubic meter
(ii)	Columns up to plinth level	= 15 x 1.2 x 0.22 x 0.22 = 0.871 cubic meter
(iii)	Column up to roof level	= 12 x 0.22 x 0.22 x 3.1 = 1.800 cubic meter
(iv)	Column in court yard	= 3 x 0.22 x 0.22 x 1.8 = 0.261 cubic meter
(v)	Beam at plinth level	= (49 + 13.09) x 0.22 x 0.22 = 3.005 cubic meter
(vi)	Beam at door level	= 49 x 0.22 x 0.15 = 1.617 cubic meter
(vii)	Beam at roof level	= 49 x 0.22 x 0.22 = 2.372 cubic meter
(viii)	Chajjas	= 5 x 0.6 x 1.5 x 0.1 = 0.450 cubic meter
(ix)	Slab	= (8.84 x 6.86 +1.5 x 3.3) x 0.1 = 6.559 cubic meter
(x)	Total RCC	= 19.294 cubic meter

4. **Steel required in RCC** = 1.25 % of volume of RCC
= 1893 kg

5. **Masonary in foundation/plinth** = (49 + 13.09) x 0.22 x 0.9
   = 12.294 cubic meter

6. **Masonary in superstructure**:

   (i) In main building = 49 x 0.22 x 2.85
   = 30.723 cubic meter

   (ii) In bath/toilet = 3.0 x 0.22 x 2.1
   = 1.386 cubic meter

   (iii) In courtyard = 13.09 x 0.22 x 1.8
   = 5.184 cubic meter

   (iv) Deduction for doors/windows = (3 x 1.07 x 2.1 + 4 x 0.838 x 2.1 +
   3 x 1.5 x 1.35 + 2 x 1.2 x 1.35 +
   0.9 x 1.35 + 3 x 0.6 x 0.45) x 0.22
   = 5.526 cubic meter

   (v) Masonary in parapet wall = 31.40 x 0.75 x 0.22
   = 5.181 cubic meter

   (vi) Total Masonary = 36.948 cubic meter

7. **Plaster in 1:6 cement mortar**

   (i) In main building = 2 x 49.0 x 3.0
   = 294 square meter

   (ii) Parapet wall = 2 x 31.40 x 0.75
   = 47.10 square meter

   (iii) In bath/toilet = 2 x 3.1 x 2.1
   = 13.02 square meter

   (iv) In courtyard = 2 x 13.02 x 1.8
   = 46.872 square meter

   (v) In roof = 8.84 x 6.86 +1.5 x 3.3
   = 65.59 square meter

   (v) Deduction for doors/windows =2 x (3 x 1.07 x 2.1 + 4 x 0.838 x 2.1 +
   3 x 1.5 x 1.35 + 2 x 1.2 x 1.35 +
   0.9 x 1.35 + 3 x 0.6 x 0.45)

= 50.236 square meter

(vi) Total plaster = 416.346 square meter

8. **Centering and shuttering**:

(i)For Columns in main building = 12 x 4 x 0.22 x 4.6

= 47.52 square meter

(ii)For columns in courtyard = 3 x 4 x 0.22 x 3.3

= 8.712 square meter

(iii)For beam at plinth level = (49 + 13.09) x 0.3

= 18.627 square meter

(iv)For beam at door level = 13 x 2 x 0.15 x 1.5

= 5.85 square meter

(vi) For chajjas = 5 x 0.6 x 1.5

= 4.5 square meter

(vii) For slab = 8.84 x 6.86 +1.5 x 3.3

= 65.59 square meter

(viii) Total shuttering =150.799 square meter

9. **Filling foundation with moorum** = 8.84 x 6.86 x 0.5+34 x 0.30

= 40.52 cubic meter

10. **Wood required for frames** = 0.0635 x 0.127 x (3 x 5.334 + 4 x 5.105

= 0.29 cubic meter

11. **Frame work for doors/window** = 3 x 1.07 x 2.1 + 4 x 0.838 x 2.1

= 13.78 square meter

12. **Flooring** = 8.84 x 6.86 +1.5 x 3.3

= 65.59 square meter

13. **Pavement block around building** = 2x10x1+ 2x7x1

34 sqm

Estimate of expenditure of Forest Guard/Forester/Dy.Ranger Residence

Sr.	CSR item no.	Description of the work	Quantity	As per PWD SOR Sept 2022		
				Rate in Rs.		Amount
				Amount	Unit	
1	2.2	Clearing jungle including uprooting of rank vegetation, grass, brush wood etc	285	4.14	Sqm	1180
2	2.6.	Earth work in excavation in all kinds of soil	39.764	129.00	Cum	5130
3	4.1.1.4,	Filling foundation- Providing and laying in position cement concrete of M-10 grade with 20 mm nominal size graded stone aggregate	9.123	3890.00	Cum	35488
4	5.1.1	Providing and laying in position M-20 grade of reinforced cement concrete with 20 mm nominal size graded stone aggregate excluding cost of centering/shuttering/steel	19.294	6153.00	Cum	118716
5	5.16.6,	Reinforcement for RCC work including straighening, cutting, bending etc with TMT bars	1893	80.00	Kg	151440
6	6.5.2,	Brick work with well burnt open bhatta bricks with crushing strength no less than 25 kg/sq.cm and absorption not more than 20% in 1:6 cement mortar	12.294	4155.00	Cum	51082
7	6.6.2,	Brick work with well burnt chimney bricks with crushing strength no less than 25 kg/sq.cm and absorption not more than 20% in 1:6 cement mortar	36.948	4350.00	Cum	160724
8	13.2.2,	15 mm thick plaster in 1:6 cement mortar	416.346	168.00	Sqm	69946
9	5.9.1,	Centering and shuttering including removal in beams, columns, slab etc	150.799	190.60	Sqm	28742
10	2.26	Supplying and filling in plinth with stone dust	40.52	672.00	Cum	27229
11	9.1.2	Providing wood work in frames of doors/windows and fixed in position with sal wood	0.29	71309.00	Cum	20680
12	9.5.2.2,	Providing and fixing panelled shutters for doors & windows with kiln seasoned and chemically treated haldu/bija wood 30mm thick	13.78	1956.00	Sqm	26954
13 (1)	11.78.1.1	Providing and laying vitrified floor tiles Multi/Double charged (Minimum top layer thickness 2.0 mm) additional 10% for skirting	72.09	1104.00	Sqm	79587
14	11.66	Concrete interlocking paver block around building (1 mtr width)	34	586.00	Sqm	19924
15		Cost of window grills	220	80.00	Kg	17600
16		Aluminium window frame 3 track sliding (2 Glass+ 1 Mosquito mesh shutter) and fly proof outer doors	LS			45000
17		Cost of septic tank of size 5 feet x 5 feet x 5 feet	LS			45000
18		Cost of stair case (Approx. 1.314 qum)	LS			25000
19		Miscelllaneous expenditure	LS			10000
		Total				**939422**
19		Add 4% for electrification				37577
20		Add 4% for white washing/painting				37577
21		Add for sanitary fitting in bath/toilet/kitchen	LS			12000
22		Add for shade in court yard/flag stone flooring	LS			22000
23		Add for the cost of 02 kota stone covered almirah of size 7 feet high, 4 feet wide and 20 inches deep in each room				20000
24		Add for stone/granite plateform in kitchen with stone shelves in 3 layer.	LS			10000
		Total				**1078576**
25		Add 18% for GST	18%			194144

	no.			Rate in Rs.		Amount
				Amount	Unit	
		Total				**1272719**
26		Add 1% for labour welfare tax				12727
27		Chainlink Fencing 100 rmt	LS			100000
		Grand total				**1385446**
				or Rs. 13,85,000		

महेंद्र सिंह धाकड़
मुख्य कार्यपालन अधिकारी
(कैम्पा), मध्यप्रदेश, भोपाल

राजेश खरे
[redacted] वन संरक्षक ,भोपाल

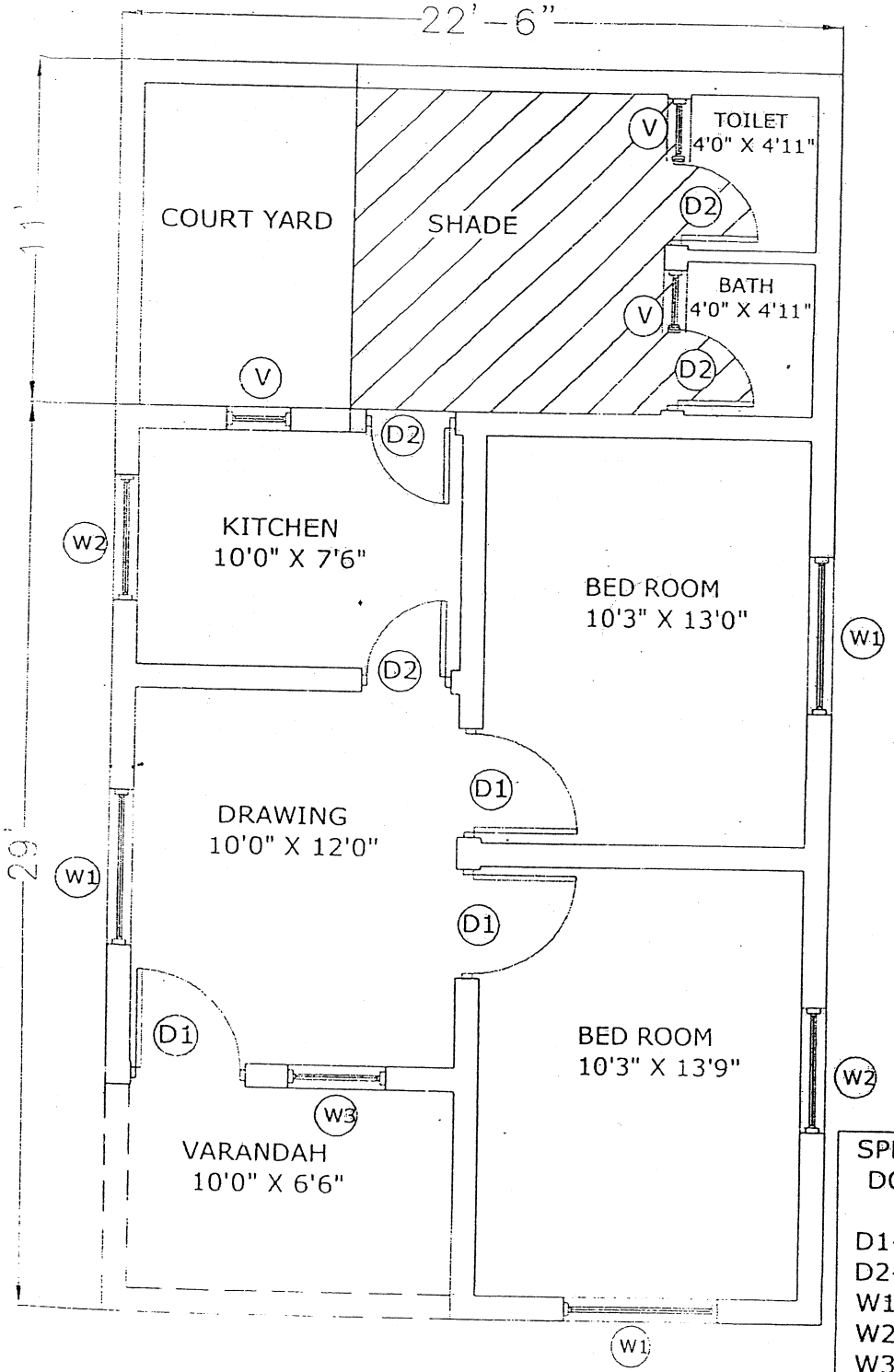
चितरंजन त्यागी
प्रधान मुख्य वन संरक्षक
(विकास), मध्यप्रदेश, भोपाल

सुनील अग्रवाल
प्रधान मुख्य वन संरक्षक (कैम्पा),
मध्यप्रदेश, भोपाल

Estimate of Quantities of Forest Guard/Forester/Dy.Ranger Residence

Estimate of Quantities

Sr.	Description of the work	Quantity	Cement (bag)	Sand (cu m)	Aggregate (cu m)	Brick	Steel in kg	Stone sdust (cu m)
1	M-10 grade CC	9.123 cu.m	41	4.1	8.32	0	0	0
2	M-20 CC	19.294 cu.m	157	7.998	16.39	0	0	0
3	Steel	1893 kg	0	0	0	0	1893	0
4	Brick work (12.31 cum mortar)	49.242 cu.m	57	12.31	0	31962	0	0
5	Plaster (7.494 cum mortar)	416.346 sq.m	35	7.494	0	0	0	0
6	Stone Dust	40.52 cu.m	0	0	0	0	0	40.52
7	Tiles flooring	72.09 sq.m	31	3.1	0	0	0	0
		Total	321	35.002	24.71	31962	1893	40.52
	Note:- Quantity of material not include quantity required in septic tank and stair case							



SPECIFICATION OF DOOR & WINDOW

D1- 3'6" X 7'0"	=	3NOS.
D2- 2'9" X 7'0"	=	4NOS.
W1- 5'0" X 4'6"	=	3NOS.
W2- 4'0" X 4'6"	=	2NOS.
W3- 3'0" X 4'6"	=	1NOS.
V- 2'0" X 1'6"	=	3NOS.

PLAN OF FG / FORESTER / DY RO QUARTER

SIZE - 22'6" X 29'0" = 653.0 SQFT &

NOTE- WALL THICKNESS 9" & 4.5"

BATH & TOI.=60.0SQFT, TOTAL =713.0 SQFT + COURT YARD