

GOVERNMENT OF MEGHALAYA
OFFICE OF THE DIVISIONAL FOREST OFFICER::SOCIAL FORESTRY & TERRITORIAL DIVISION
SOUTH GARO HILLS, BAGHMARA

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Compensatory Afforestation Scheme

Abstract cost of estimates

1. CA estimate submitted by DFO(T), Jowai	= Rs.04, 96, 47, 132.00
2. CA estimate submitted by DFO (SF&T), Baghmara	= <u>Rs.10, 20, 26, 800.00</u>
Total	= Rs.15, 16, 73, 932.00

Rupees (Fifteen crore sixteen lakhs seventy three thousand nine hundred thirty two) only.



Divisional Forest Officer
Social Forestry & Territorial Division
South Garo Hills, Baghmara
Divisional Forest Officer,
Social Forestry & Territorial Division
South Garo Hills, Baghmara.

DETAILED ESTIMATE FOR 52 BED (fifty two) POLYPOT BED NURSERY AND 11 ha PLANTATION AS PER COST NORMS FOR NURSERY AND PLANTATION FOR UNDERTAKING DWARF PLANTATION FOR CONSTRUCTION OF TWO lane road from BAGHMARA to Panda. (Plantation norms as per the COMPENSATORY AFFORESTATION (CAMPA) SCHEME & Wage Rate = Current Wage Rate (Rs.338/- day)

(Estimate for Dwarf species plantation in Baghmara RF in view of diversion of Forest land of 27.606 ha.)

- 1. Length of the road= 17.085 km approx.**
- 2. Spacing of dwarf species= 1.5 m x 1.5 m = 2.5 sq.m.**
- 3. No.of rows (on each side of road) = Two**
- 4. Total no. of rows required = Four**
- 5. No. of dwarf species plants required for one row = $17085/1.5 = 11,390$ nos.**
- 6. Total no. of dwarf plants required= $11,390 \times 4 = 45,560$ nos.**
- 7. No. of plants per Nursery bed= 1,000/bed**
- 8. No. of nursery bed required = $45560/1000$ beds.= 45.56 say 46 beds**
- 9. Add 6 beds extra for vacancy filling etc.= $46 + 6 = 52$ beds**
- 10. Plants required = $10,000/2.25\text{sq.m.} = 4,444/\text{ha}$**
- 11. Therefore Area = $45,560/ 4,444 = 10.25$ ha Say = 11 ha.**
- 12. Hence 11 ha area shall be covered for four rows of dwarf plantation from Baghmara to Panda.**

TEMPORARY NURSERY (Dwarf spp)**Wage rate=Rs.338****(a) POLYPOT NURSERY****(i) NORMS IN THE FIRST YEAR**

Sl. No.	Items of Work	Unified Norms	
		Mandays	Amount
1	2	3	4
1	Preparation of standard-size beds.	1.5	507.00
2	Cost of H.D polythene bags (22.5m x15mm). In 1 (one) bed 4 kg are required.	7.2	2434.00
3	Cost of up manure mixed earth in polythene bags including pounding after filling.	9	3042.00
4	Cost of cow dung including transportation.	0.6	203.00
5	Cost of seeds.	1.4	473.00
6	Cost of goat proof fencing net including cost of wooden fencing posts, erecting, fixing, fitting, etc complete and including cost of staples.	1	338.00
7	Cost of sowing including hoeing, mulching etc.	1	338.00
8	Cost of pricking and transplanting of seedlings from germination beds to poly bags	2	676.00
9	Cost of construction of shades for protection of seedlings from frost during winter and direct sunlight in warm areas. (a) Cost of Materials. (b) Labour cost	1 2	338.00 676.00
10	Cost of weeding 4 weeding@ 338.00/pw.	2.6	879.00
11	Cost of watering	1	338.00
12	Miscellaneous cost e.g fungicides, tools and plants, making of inspection path, fertilizers, chemicals, lime pesticides/insecticides, growth hormones etc.	0.2	68.00
	TOTAL IN THE FIRST YEAR	30.5	10310.00

(ii) Maintenance during the Second year

Sl. No.	Items of Work	Unified Norms	
		Mandays	Amount
1	2	3	4
1	Weeding (3 weeding only) @ 338.00/p.w.	1.3	439.00
2	Watering of Nursery beds.	0.3	101.00
	TOTAL IN THE SECOND YEAR	1.6	540.00

One bed for Temporary polypot nursery	10,310.00
Therefore for 52 bed Temporary polypot nursery	5,36,120.00
Maintenance(2nd yr) for 1 bed Temporary poly	540.00
Maintenance(2nd yr) for 52 bed Temporary pol	28,080.00
Total for 52 beds polypot nursery	5,75,050.00

NORMS FOR UNDERTAKING COMPENSATORY AFFORESTATION SCHEME

Wage Rate = Current Wage Rate (where "z" is notified wage rate by labour department on the date of payment by user Agency)

PRELIMINARY WORKS

<u>Sl. No.</u>	<u>Items of works</u>	<u>Mandays</u>	<u>Rate (In terms of z)</u>
<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
1	Survey and demarcation including fixing of boundary marks at strategic points	2.00	2.00
2	Jungle clearance, burning, land preparation including staking, pit digging, hoeing, etc	24.00	24.00
3	Fencing With 3 strand barbed wire and wooden fencing posts including cost of staples, fixing, fitting, etc, complete	64.00	64.00
4	Cost of collection seeds	5.00	5.00
5	Construction of camp hut and inspection paths	4.00	4.00
6	Purchase of tools and plants	2.00	2.00
7	Supervisory staff to be engaged on casual basis from amongst the local people	12.00	12.00
8	Raising of Polypot nursery for 2 beds or hectare to cover for mortality rate of plants in the plantation site	61.00	61.00
9	Provision for signboards, documentation, upkeep of records and other miscellaneous works	30.00	30.00
	Sub Total in the Preliminary Year	204.00	204.00
10	Soil & Moisture Conservation measures in the plantation area @ 15%	30.60	30.60
11	Monitoring and evaluation @ 2%	4.08	4.08
12	Adding 15% contingency due to escalation cost and revision of wages rate etc.	35.80	35.80
	Total in the preliminary year	274.48	274.8

CREATION AND 1ST YEAR MAINTENANCE OF PLANTATION

Wage Rate is 1.12z

Sl. No.	Item of Works	Mandays	Rate (In terms of z)
1	2	3	4
1	Planting of necessary seedling including carriage from nursery centers to plantation sites and proper ramming after planting etc.	20.00	22.40
2	Cost of manure and bio-fertilizer	40.00	44.80
3	Mulching and 3 times bio-fertilizer	50.00	56.00
4	Fire protection during dry and windy season (i) Wages if fire watchers from November of the creation year to April of the following year (ii) Fire line clearance including controlled burning from November in the creation year to April of the following Year.	10.00 10.00	11.20 11.20
5	2 nd year maintenance of poly pot nursery	3.20	3.58
6	Maintenance of cam hut, signboard, documentation, protection from grazing, upkeep of records and other miscellaneous works	30.00	33.60
7	Supervision cost	12.00	13.44
	Sub Total	175.20	196.22
8	Soil & Moisture conservation measures in the plantation area @ 15% of total Cost of 1 st year creation	26.28	29.43
9	Monitoring & Evaluation @ 2 %	3.50	3.92
10	Adding 8.5% being contingency due to escalation cost of materials etc. after ascertaining the rate of interest due to accrue from CA money to be deposited by User Agency.	17.42	19.51
	Total for 1st year creation and maintenance	222.41	249.10

SECOND YEAR MAINTENANCE OF PLANTATION

Wage Rate is 1.26z

Sl. No.	Items of Works	Mandays	Rate (in terms of z)
1	2	3	4
1	Vacancy filling by one-year old seedlings in mortality areas	5.00	6.30
2	Climber cutting and weddings 3 times	45.00	56.70
3	<u>Fire protection</u> 1.Wages of fire watchers (ii) Fire line clearance including controlled burning	10.00 10.00	12.60 12.60
4	Maintenance of camp hut, signboard, inspection paths, fencing, protection from grazing, documentation, upkeep of records and other miscellaneous	30.00	37.80
5	Supervision cost	12.00	15.12
	Sub Total	112.00	141.12
6	Provision for soil & moisture conservation measures in the plantation area @ 15%	16.80	21.17
7	Monitoring & Evaluation @2 %	2.24	2.82
	Adding 8.5% being contingency due to escalation cost etc. after ascertaining the rate of interest due to accrue from CA money to deposited by User Agency	11.14	14.03
	Total in the 2nd Year	142.18	179.14

THIRD YEAR MAINTENANCE OF PLANTATION

Wage Rate is 1.41z

Sl.No	Item of works	Mandays	Rate (In terms of z)
1	2	3	4
1	Vacancy filling wherever necessary	4.00	5.64
2	Climbing cutting and weeding 3 times	45.00	63.45
	<u>Fire protection</u>		
3	(i) Wages of fire watchers	10.00	14.10
	(ii) Fire line clearance including controlled burning	10.00	14.10
4	Maintenance of camp hut, signboard, fencing, inspection paths, protection, from grazing, documentation, upkeep of records and other miscellaneous works	30.00	42.30
5	Supervision Cost	12.00	16.92
	Sub total	111.00	156.51
6	Provision for soil & moisture conservation measures in the plantation area @ 15%	16.65	23.48
7	Monitoring & Evaluation @2%	2.22	3.13
8	Adding 8.5% being contingency due to escalation cost etc, after ascertaining the rate of interest due to accrue from CA money to be deposited by User Agency	11.04	15.56
Total in the 3rd year		140.91	198.68

FOURTH YEAR MAINTENANCE OF PLANTATION

Wage Rate is 1.58z

Sl.No	Item of works	Mandays	Rate (In terms of z)
1	2	3	4
1	Vacancy filling wherever necessary	2.00	3.16
2	Climber cutting and three times weeding	45.00	71.10
3	(i) Wages of fire watchers	10.00	15.80
	(ii) Fireline clearance including controlled burning, etc.	30.00	15.80
4	Maintenance of camp hut, signboard, fencing, inspection paths, protection from grazing, documentation, upkeep of records and other miscellaneous works	30.00	47.40
5	Supervision cost	12.00	18.96
	Sub Total	109.00	172.22
6	Provision for soil & moisture conservation measures in the plantation area @15%	16.35	25.83
7	Monitoring & Evaluation @ 2%	2.18	3.44
8	Adding 8.5% being contingency due to escalation cost etc. after ascertain the rate of interest due to accrue from CA money to be deposited by User Agency	10.84	17.13
Total in the 4th year		138.37	218.62

FIFTH YEAR MAINTENANCE OF PLANTATION

Wage rate is 1.77z

Sl.No	Item of works	Mandays	Rate (In terms of z)
1	2	3	4
1	Climber cutting including silvicultural works and two times weeding	30.00	53.10
2	(i) Wages of fire watchers	10.00	17.70
	(ii) Maintenance of fireline including controlled burning etc.	10.00	17.70
3	Maintenance of camp hut, signboard, fencing inspection paths, protection from grazing, documentation, upkeep of records and other miscellaneous works	30.00	53.10
4	Supervision cost	12.00	21.24
Sub Total		92.00	162.84
5	Provision for soil & moisture conservation measures in the plantation area @ 15%	13.80	24.43
6	Monitoring & Evaluation @ 2%	1.84	3.26
	Adding 8.5% being contingency due to escalation cost etc. after ascertaining the rate of interest due to accrue from CA money to deposited by User Agency.	9.15	16.19
	Total in the 5th Year	116.79	206.72

COST ABSTRACT FOR COMPENSATORY AFFORESTATION SCHEME

SI.NO	YEAR	Mandays	<u>Amount in terms of z (where "z" us notified wage rate on the date of payment by User Agency)</u>
1	Preliminary Year	274.48	274.48
2	First Year creation & Maintenance	222.41	249.10
3	Second Year maintenance	142.18	179.14
4	Third Year Maintenance	140.91	198.68
5	Fourth Year Maintenance	138.37	218.62
6	Fifth Year Maintenance	116.79	206.72
	Total	1035.14	1299.74

Where z = Rs.338/-

Therefore for 1 ha plantation = Rs.338 x 1299.74 = Rs. 4, 39,312.12 Say= Rs. 4, 39, 312/ha

Hence for 11 ha plantation = Rs. Rs. 4, 39, 312 X 11 = Rs.48, 32, 432/- (including for 5 years maintenance)

Rupees (Forty eight lakhs thirty two thousand four hundred thirty two) only.

The total amount required for dwarf plantation:

1. Nursery = Rs. 5,75,050/-
2. Plantation = Rs. 48,32,432/-

Grand Total = Rs. 54,07,482/-

Rupees (Fifty four lakhs seven thousand four hundred eighty two) only.


Divisional Forest Officer,
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South Garo Hills, Baghmara.

Estimate for Compensatory Afforestation related in view of diversion of Baghmara Forest Reserve for two lane road project from Panda to Baghmara:

Sl.no.	Name of items	Unit	Qty	Rate (Rs.)	Amount (Rs.in lakhs)	Justification
1.	GPS handset	No.	20	20,000.00	4.0	GPS handsets are required for effective locating of geo-coordinates. These will be handled by field staffs for locating and monitoring of the project related works besides using it for regular works. These GPS shall be use for creating kml files which can be uploaded in e-green watch portal.
2	GIS software (single user)	No.	2	1,60,000.00	3.2	At present, no GIS software is available with this office and hence it is a must for uploading the project related works more accurately.
3	Laptop (Dell XPS 13,i5,11 gen) with accessories	No.	1	1,50,000.00	1.5	
4	Microsoft Surface Pro latest model with accessories	No.	1	1,20,000.00	1.20	These items which are proposed are very important for day to day office works. Project related works require constant monitoring and uploading in the e-green watch portal in which good systems are very much required. All the systems required shall be used for effective monitoring and functioning of this Division. This will also be helpful for checking any violation or diversion from the DPR and may strengthen the forest field staffs.
5	Desktop PC Including UPS (i5, 11 gen)	No.	4	90,000.00	3.6	
6	Projector	No.	2	80,000.00	1.60	
7	PA system	L.S.		5,00,000.00	5.0	
8	Map printer	No.	2	50,000.00	1.0	
9	Xerox machine	No.	2	80,000.00	1.60	
10	Printer	No.	4	25,000.00	1.0	
11	Laser distance measurement	No.	6	20,000.00	1.2	
12	Flatbed Scanner	No.	1	50,000.00	0.50	
13	DSLR Camera with accessories	No.	2	1,50,000.00	3.0	
14	CCTV camera with accessories	No.	4	60,000.00	2.4	
15	Camera trap and accessories	No.	20	35,000.00	7.0	
16	GoPro Hero action camera 8 with accessories	No.	4	40,000.00	1.60	
17	Drone with accessories	No.	2	2,00,000.00	4.0	

18	Walky-talky handsets	No.	30	10,000.00	3.0	In most of the places in our RFs, no mobile network is available and hence using walky-talky shall be very useful for effective patrolling and communication among the field staffs.
19	Laser Range finder	No.	4	35,000.00	1.40	The laser range finder is useful for measuring the distance in the forest areas.
20	Forest fire equipments	L.S.		10,00,000.00	10.0	Forest fire equipments are very important for controlling forest fire. Every year forest fire occurred and having forest fire equipments shall be helpful for the staffs for effective management.
21	Camping tent, trekking bag, shoes, rain coat, jacket	L.S.		20,00,000.00	20.0	Often field staffs used to travel inside our RFs and require holding the night. In those conditions, camping tent, rain coat, trekking bag, jacket, etc shall be very useful for them.
22	Furniture for office and field staffs	L.S.		10,00,000.00	10.0	Furniture for office and field staffs shall be required for effective functioning of the Division. At present no basic furniture are available for the field staffs. Even in Division office, there is a lack of office furniture and hence the proposal.
23	Solar lights	No.	50	40,000.00	20.0	In most of the places, electricity is not available and thus solar light shall be provided for the field staffs for those are posted in remote places. These shall protect the field staffs from wild animals as well as from timber stealing from their compound.
24	Inverter with battery	No.	2	50,000.00	1.0	These are very much required for effective and smooth function of the office. In most of the time current are not available in Baghmara.
25	Kirlosker Generator	No.	1	10,00,000.00	10.0	
26	Vehicle(Mahindra Bolero or New Mahindra Thar or any vehicle which may be useful) including registration, insurance, accessories and maintenance cost atleast for 5 years)	No.	1	20,00,000.00	20.0	At present, the Territorial Division lacks of official vehicle. Whatever vehicle available is very old and difficult to manage and incurring heavy expenditure every year. Even no good vehicles are available for DFO and thus at least one good vehicle either Mahindra Bolero or New Thar shall be required for effective monitoring of the project related works. These can also be used for patrolling and other official purposes.
27	Repairing and maintenance of office vehicles for 5 years.	L.S. per yr.	L.S.	2,00,000.00	10.0	Almost all vehicles are worn out and needed constant repairing. But due to no fund available, this Division is facing very difficult to run. Hence fund for repairing and maintenance of old vehicles are very much required.

28	POL for patrolling duties for 5 years.	L.S. per yr.	L.S.	3,00,000.00	15.0	We have seven old vehicles which is using for official purposes and mostly for patrolling duties in and outside the RFs. Our field staffs regularly performing duties to check illegal felling, timber smuggling, illegal mining, etc but difficult to cover the area due to lack of fund for POL. Thus POL is required to perform the effective function of this Division to meet the above.
29	Inflatable motorboat for 12 persons	No.	1	8,00,000.00	8.0	At present we don't have any boats. Most of the illegal transportation is carried out through the rivers especially during rainy season. Hence for effective patrolling in water ways, inflatable motorboat along with life jacket is required.
30	Life jacket	No.	12	10,000.00	1.2	
31	Solar water pump including transportation, wiring, fitting, etc.	No.	6	1,50,000.00	9.0	Solar water pump is required for field staffs as they stayed in the forest areas where electricity is not available.

Total = 182.00 (lakhs)

Rupees (One crore eighty two lakhs) only.



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Engagement of Driver, Wages and Computer expert having knowledge in GIS application on temporary basis for ten years with subsequent increase of 10% per annum.

Sl.no.	Engagement of manpower	No. of personal required	Rate/head/month	Amount for ten years (Rs.)	Justification
1	1. Driver 2. Wages	1 6	10,000/-	1,33,86,912.00	We have shortage of manpower at present. These seven local people shall be employed on wage basis at least for ten years period. They will be assigned to perform duties along with the regular staffs especially for effective patrolling along the Baghmara-Panda Reserve Forest where road project shall be implemented by the NHIDCL.
2	Computer expert having knowledge in GIS application.	1	25,000/-	47,81,148.00	One GIS expert or who is having good knowledge of GIS background shall be required to help the Department. The proposed two lane road project from Baghmara to Panda to be implemented by NHIDCL is required to be monitored regularly by this Division and also need to upload in the e-green watch portal. At present we don't have personnel who know GIS and may face great difficulties if the said personnel are not provided to this office. Hence person with having good knowledge of GIS background shall be employed on temporary basis for ten years period to help the Department for effective functioning of this Division.
Total =				1,81,68,060.00	

Rupees (One crore eighty one lakh sixty eight thousand and sixty) only.



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Net Present Value (NPV)

Eco-class	Description	Rate/ha (Rs.)	Area (ha)	Total (Rs.)
Eco-class-I	Consisting of Tropical Wet Evergreen Forests. Tropical Semi Evergreen Forests and Tropical Moist Deciduous Forests	10,43,000	27.606	2,87,93,058

Net Present Value is calculated for diversion of Forest Land from Baghmara to Panda under Baghmara Reserve Forest for an area of 27.606 ha.

As per the rate, the NPV comes to **Rs. 2, 87, 93,058 (Rupees Two crore eighty seven lakhs ninety three thousand and fifty eight) only.**



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**STANDING TREES MARKED ON PWD ROAD TO BE FELLED FROM BAGHMARA TO PANDA ALONG
THE PWD ROAD REQQUIRED FOR UPGRADATION TO 2-LANE (SH-4)**

Sl. No.	Name of Trees	Girth 0.45m to 1.20m		Girth 1.21m & above	
		No of Tree	Volume(m ³)	No of Tree	Volume(m ³)
1	Tectona-Grandis (Teak)	33	5.014	9	11.766
2	Shorea-Robusta (Sal)	1071	354.477	190	193.0163
3	Dabalgia-Sisso (Sisso)	2	0.941	4	3.240
4	Gmelina-Arborea (Gamari)	19	3.263	7	4.205
5	Mesua-Ferrea (Nahor)	1	0.189	0	0
6	Duabanga-Grandiflora(Khokon)	0	0	1	1.498
7	Artocarpus-Parviflora (Kathal)	3	0.981	5	4.665
8	Toona-Cilata (Toon-Poma)	13	3.177	11	11.119
9	Canarium-Resiniferum (White-Dhup)	11	2.968	5	8.555
10	Albizia-Procera (Korai/Siris)	1	0.468	0	0
11	Lagerstroemia-Speciosa (Jarul)	0	0	1	0.422
12	Schima-Wallachii (Makri-Sal)	90	21.198	47	101.79
13	Mangifera-Indica (Mango)	2	0.493	1	1.917
14	Bombax-Ceiba (Simul)	0	0	1	3.206
15	Lagerstroemia-Indic (Sidai/Lendi)	1	0.108	0	0
16	Garuga-Pinnata (Thotmola)	17	3.216	8	6.267
17	Alstonia-Scholaris (Saitan-Tree)	4	1.833	4	12.355
18	Castanopsis-Indica (Kasi-Badam)	14	4.233	3	3.387
19	Steospernum-Chelonoides (Padri)	7	1.540	8	11.064
20	Artocarpus-Lakoocha (Bahot)	2	0.603	0	0
21	Semicar-Anacardium (Bhola)	1	0.749	0	0
22	Artocarpus-Chaplasha (Chama)	21	8.088	21	49.680
23	Melia-Azadirachta (Neem)	7	0.570	0	0
24	Litsea-Polyantha (Muga)	4	0.532	2	0.517
25	Terminalia-Belleric (Bahera)	12	3.489	9	16.717
26	Careya-Arborea (Khum/Kumbhi)	5	1.016	0	0
27	Eugenia-Jambolana)	22	4.825	7	6.935
28	Vitex-Peduncularis (Ahoi)	20	3.916	1	0.433
29	Kayea-Floribunda (Karol)	5	2.146	7	10.040
30	Sapium-Baccatum (Seleng)	3	0.752	5	8.143
31	Tetrameles-Nudosa (Bhelu)	1	0.318	4	22.462
32	Sterculia-Villosa (Udal)	1	0.538	0	0
33	Albizia-Stipulata (Siris)	1	0.468	0	0
34	Dillenia-Pentagyna (Okshi)	3	0.615	4	5.076
35	Terminalia-Chebula (Artak)	2	0.377	0	0
36	Ilex-Godajam (Sulcata)	4	0.927	0	0
37	Micromelum-Pubesceus	0	0	8	8.773
38	Diospyro-Lancifolia (Kendu)	2	0.469	2	1.568
39	Jigre (Local-Name)	27	11.446	9	5.939
40	Gangma (Local-Name)	15	4.77	13	17.443
41	Joypol (Jungle-Tree)	2	0.467	2	3.537
42	Garcinia-Cowa (Kau/Thekera)	3	0.726	0	0
43	Tewan (Local-Name)	0	0	1	4.033
44	Tejpat (Jungle-Tree)	2	1.204	0	0
45	Cassia-Nudosa (Radhachura)	4	1.097	1	0.759
TOTAL		1458	455.364	401	540.527

Total no of trees =

1859

Total volume =

995.891 m³



Divisional Forest Officer

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Social Forestry & Territorial Division,

South Garo Hills, Baghmara.

ESTIMATE

Detailed Estimate For The Construction Of Beat Forest Office Cum Quarter At Panda, Baghmara

(Rate quoted as per MPWD schedule of Rate for Building Work for the year 2015-16 for Khasi Hills, Jaintia Hills and Garo Hills.)

1/1.1 Earth work in excavation upto a depth of 2 m below the existing ground level for foundation trenches of foundations, footings of column, walls etc. complete as directed.

(a) Ordinary Soil.

In Foundation

20	x	1.20	x	1.20	x	2.00	=	57.60	m^3
2	x	4.00	x	0.35	x	0.50	=	1.40	m^3
9	x	5.00	x	0.35	x	0.50	=	7.88	m^3
3	x	3.00	x	0.35	x	0.50	=	1.58	m^3
4	x	3.50	x	0.35	x	0.50	=	2.45	m^3
1	x	2.00	x	0.80	x	0.40	=	0.64	m^3
Total							71.54	m^3	

@ Rs.179.00 per m^3

✓ Rs.12,805.66 ✓

2/2.1 Plain concrete work with coarse aggregate of sizes 13 mm to 32 mm in foundation bed for footing, steps, walls, brick work etc. complete as directed.

(b) In prop. 1:4:8

In Footing

20	x	0.90	x	0.90	x	0.10	=	1.62	m^3
20	x	1.20	x	1.20	x	0.10	=	2.88	m^3
2	x	4.00	x	0.25	x	0.10	=	0.20	m^3
9	x	5.00	x	0.35	x	0.50	=	7.88	m^3
4	x	3.00	x	0.35	x	0.50	=	2.10	m^3
3	x	3.50	x	0.35	x	0.50	=	1.84	m^3
1	x	2.00	x	0.80	x	0.10	=	0.16	m^3
Total							16.67	m^3	

@ Rs.5,900.00 per m^3

✓ Rs.98,367.75 ✓

3/2.5.1 In foundation & sub-structure including footings, columns with base, tie & plinth beam etc. not less than 100 mm thick upto plinth level.

(a) M15 OR PROP. 1:2:4 (For non structural work)

In Footing

20	x	0.90	x	0.90	x	0.20	=	3.24	m^3
20	x	(0.90 + 0.20) / 2			x	0.20	=	2.20	m^3
20	x	0.25	x	0.25	x	3.10	=	3.88	m^3
2	x	4.00	x	0.25	x	0.25	=	0.50	m^3
9	x	5.00	x	0.25	x	0.25	=	2.81	m^3
4	x	3.50	x	0.25	x	0.25	=	0.88	m^3
3	x	3.00	x	0.25	x	0.25	=	0.56	m^3
Total							14.07	m^3	

@ Rs.7,795.00 per m^3

✓ Rs.109,636.68

4/2.5.3 In columns, pillars, posts, struts, suspended floors, roof, landings etc above plinth upto 1st floor level (without using admixture, plasticiser)

(a) M15 OR PROP. 1:2:4 (For non-structural work)

In Column:

2	x	20	x	0.25	x	0.25	x	3.10	=	7.75	m^3
2	x	2	x	4.00	x	0.15	x	0.15	=	0.36	m^3
2	x	9	x	5.00	x	0.15	x	0.15	=	2.03	m^3
2	x	4	x	3.50	x	0.15	x	0.15	=	0.63	m^3

Total 10.77 m^3

✓ Rs.85,872.41

@ Rs.7,977.00 per m^3

5/2.8 Supplying fitting & fixing in position reinforcement bars upto 1st floor level etc. complete

(a) From primary sources like TATA/SAIL/ESSAIR/JINDAL/SHYAM/RINL

(i) TMT corrosion resist steel (CRS) reinforcement bar

In Footing:

20	x	22	x	2.00	x	0.8900	=	783.20	Kgs
20	x	4	x	2.00	x	1.5800	=	252.80	Kgs
20	x	39	x	0.64	x	0.3950	=	197.18	Kgs
20	x	4	x	3.10	x	1.5800	=	391.84	Kgs
2	x	4	x	4.00	x	0.8900	=	28.48	Kgs

Stirrups	9	x	5	x	5.00	x	0.8900	=	200.25	Kgs	
	4	x	2	x	3.00	x	0.8900	=	21.36	Kgs	
	3	x	3	x	3.50	x	0.8900	=	28.04	Kgs	
	2	x	42	x	4.00	x	0.3950	=	132.72	Kgs	
	9	x	38	x	5.00	x	0.3950	=	675.45	Kgs	
	4	x	21	x	3.00	x	0.3950	=	99.54	Kgs	
	2	x	26	x	3.50	x	0.3950	=	71.89	Kgs	
Column from PL to second floor level	19	x	4	x	3.10	x	1.5800	=	372.25	Kgs	
Stirrups	7	x	42	x	4.00	x	0.3950	=	464.52	Kgs	
	6	x	38	x	5.00	x	0.3950	=	450.30	Kgs	
	2	x	21	x	3.00	x	0.3950	=	49.77	Kgs	
	3	x	26	x	3.50	x	0.3950	=	107.84	Kgs	
Lintel:											
	5	x	4	x	4.00	x	0.6200	=	49.60	Kgs	
	4	x	4	x	4.00	x	0.6200	=	39.68	Kgs	
	4	x	4	x	2.50	x	0.6200	=	24.80	Kgs	
	3	x	4	x	1.00	x	0.6200	=	7.44	Kgs	
Roof Slab @ 300mm C/c & 150 mm C/c											
	2	x	9	x	28	x	4.00	x	1249.92	Kgs	
	2	x	9	x	14	x	4.00	x	897.12	Kgs	
	2	x	3	x	41	x	6.50	x	991.38	Kgs	
	2	x	3	x	14	x	3.00	x	224.28	Kgs	
	2	x	4	x	7	x	2.50	x	86.80	Kgs	
	2	x	4	x	28	x	1.00	x	199.36	Kgs	
	2	x	2	x	4	x	7	6.20	x	61.50	Kgs
	2	x	2	x	41	x	2.00	x	203.36	Kgs	
									Total	8362.67 Kgs ✓	
									Say	83.62 Qntls.	
									=	16.74 Qntls.	
									=	100.36 Qntls.	

Add 20% extra for wastage and overlapping

@ Rs.9,618.00 per Qntl.

Rs.965,300.95

6/2.10 Providing form work of ordinary timber planking of trenches not less than 25 mm & removal of the same for concrete members etc. including centering & shuttering & propping as directed

(b) In Footing	20	x	2.00	x	1.00	x	0.25	=	10.00	m ²
(c) In Plinth beams	2	x	4.00	x	0.25	x	0.25	=	0.50	m ²
	9	x	5.00	x	0.25	x	0.25	=	2.81	m ²
	4	x	3.50	x	0.25	x	0.25	=	0.88	m ²
	3	x	3.00	x	0.25	x	0.25	=	0.56	m ²
(d) In Lintels	5	x	4.00	x	0.25	x	0.25	=	1.25	m ²
	4	x	4.00	x	0.25	x	0.25	=	1.00	m ²
	4	x	4.00	x	0.25	x	0.25	=	1.00	m ²
	3	x	4.00	x	0.25	x	0.25	=	0.75	m ²
								Total	18.75	m ²

@ Rs.432.00 per m²

Rs.8,100.00

7/3.1 (a) Cement concrete work in topping 1:1:2 on R.C.C. floor, tread & rise of steps finish with a floating coat of neat cement etc. complete as directed

In steps:	2	x	2.00	x	0.80			=	3.20	m ²
In Floor:	1	x	5.00	x	4.00			=	20.00	m ²
	2	x	4.00	x	3.50			=	28.00	m ²
	1	x	2.00	x	1.50			=	3.00	m ²
	1	x	4.00	x	2.50			=	10.00	m ²
	1	x	5.00	x	2.00			=	10.00	m ²
	2	x	4.00	x	1.50			=	12.00	m ²
	1	x	4.00	x	2.00			=	8.00	m ²
								Total	94.20	m ²

@ Rs.325.00 per m²

Rs.30,615.00

8/3.4 Providing CC floor 65 mm thick consisting of 50 mm under layer cement concrete in prop 1:3:6 etc. complete as directed

In Floor of rooms:

1	x	5.00	x	4.00	=	20.00	m ²
2	x	4.00	x	3.50	=	28.00	m ²
1	x	2.00	x	1.50	=	3.00	m ²
1	x	4.00	x	2.50	=	10.00	m ²
1	x	5.00	x	2.00	=	10.00	m ²
2	x	4.00	x	1.50	=	12.00	m ²
1	x	4.00	x	2.00	=	8.00	m ²

Total 91.00 m²

@ Rs.710.00 per m²

Rs.64,610.00

9/4.1 Providing brick soling in foundation & under floor with stone/best quality etc. complete

(c.) Stone soling of thickness 100 mm

In Floor

1	x	5.00	x	4.00	=	20.00	m ²
2	x	4.00	x	3.50	=	28.00	m ²
1	x	2.00	x	1.50	=	3.00	m ²
1	x	4.00	x	2.50	=	10.00	m ²
1	x	5.00	x	2.00	=	10.00	m ²
2	x	4.00	x	1.50	=	12.00	m ²
1	x	4.00	x	2.00	=	8.00	m ²

Total 91.00 m²

@ Rs.391.00 per m²

Rs.35,581.00

10/4.4 Brick work in cement mortar with 1st class brick including racking out joints & curing complete etc. as directed

(d) In prop. 1:6 (1 cement:6 sand)

In Plinth wall:

2	x	4.00	x	0.25	x	0.80	=	1.60	m ³
9	x	5.00	x	0.25	x	0.80	=	9.00	m ³
4	x	3.50	x	0.25	x	0.80	=	2.80	m ³
3	x	3.00	x	0.25	x	0.80	=	1.80	m ³

Total 15.20 m³

@ Rs.4,983.00 per m³

Rs.75,741.60

11/4.4 Brick work in cement mortar with 1st class brick including racking out joints & curing complete in super structure above plinth level upto 1st floor level etc as directed

In prop. 1:4 (1 cement:4 sand)

In Walls:

2	x	3.00	x	10.00	x	3.10	=	186.00	m ³
2	x	(1.60)	+	(0.90)/2	x	3.10	=	7.75	m ³
2	x	4.00	x	8.00	x	3.10	=	198.40	m ³
2	x	(1.60)	+	(0.90)/2	x	3.10	=	7.75	m ³

399.90 m³

Deduct Openings(-)

Doors:	D	14	x	0.90	x	2.10	=	26.46	m ³
	D1	4	x	0.60	x	2.10	=	5.04	m ³
Windows/Ventilation	W	18	x	1.00	x	1.40	=	25.20	m ³
Ventilation	V2	4	x	0.50	x	0.30	=	0.60	m ²

Total 57.30 m³

Deduct for openings:-

= (399.90 - 57.30)

342.60 m³

@ Rs.8,185.00 per m³

Rs.2,804,181.00

12/14.2 Providing fitting and fixing M.S Grill of required pattern for windows/clerestory windows/opening/railing with M.S flats at required spacing in frame all round, square or round M.S bars with round headed bolts and nuts or screws.

(b) Ornamental Grill

(i) Fixed to wooden frames

W	18	x	1.00	x	1.00	x	1.40	x	4.90	=	123.48	kg
V2	4	x	0.50	x	0.50	x	0.30	x	4.90	=	1.47	kg
Varandah	2	x	1.00	x	1.00	x	1.40	x	4.90	=	13.72	kg
	2	x	4.00	x	4.00	x	1.40	x	4.90	=	219.52	kg

Total = 358.19 kg

@ Rs.176.00 per kg

Rs.63,041.44

13/5.1 10 mm thick cement plaster in single coat on pair side of brick/concrete walls for interior plastering upto 1st floor level etc. complete

(b) In cement mortar 1:4

I. Interior walls:	2	x	3.00	x	10.00	x	3.10	=	186.00	m ²
	2	x	4.00	x	8.00	x	3.10	=	198.40	m ²
	1	x	1.00	x	5.00	x	3.10	=	15.50	m ²
	2	x	2.00	x	(1.60 x 0.90)/2			=	2.88	m ²

402.78 m²

Deduct Openings(-)

Doors:	D	14	x	0.90	x	2.10	=	26.46	m ³
	D1	4	x	0.60	x	2.10	=	5.04	m ³
Windows/Ventilation	W	18	x	1.00	x	1.40	=	25.20	m ³
Ventilation	V2	4	x	0.50	x	0.30	=	0.60	m ²

Total 57.30 m³

Deduct for openings:- = (402.78 - 57.30)

@ Rs.196.00 per m²

Rs.67,698.40

14/8.1 Providing dressed wood work in post, walls, battens, post plate etc. including supplying fitting & fixing with spikes, nails, bolts etc. complete as directed,

(b). With 1st class local timber(pooma/hallock/gamari etc)

I. Doors:	D	14	x	2.3	x	0.10	x	0.08	=	0.26	m ³
	D1	4	x	2.3	x	0.10	x	0.08	=	0.07	m ³

Total 0.33 m³

@ Rs.116.372 per m³

Rs.38,542.41

15/11.1 Providing and fixing steel windows ventilators openable of standard rolled steel section as per I.S code joints mitred & welded with 15 mmx3mmx100mm etc. complete....

Windows & Ventilations	W	18	x	1.00	x	1.40	=	25.20	m ²
Ventilation	V2	4	x	0.50	x	0.30	=	0.60	m ²

25.80 m²

@ Rs.3,443 per m²

Rs.88,829.40

16/15.4 White washing with lime on wall surfaces (two coats) to give an even shades including thoroughly brooming etc. complete

In walls	2	x	13.00	x	3.50	=	91.00	m ²
	2	x	4.00	x	4.00	=	32.00	m ²
In ceiling	2	x	13.00	x	3.50	=	91.00	m ²
	2	x	4.00	x	4.00	=	32.00	m ²

Total 214.00 m²

244.00 m²

Deduction For Openings (-)

Doors:	D	14	x	0.90	x	2.10	=	26.46	m ³
	D1	4	x	0.60	x	2.10	=	5.04	m ³
Windows/Ventilation	W	18	x	1.00	x	1.40	=	25.20	m ³
Ventilation	V2	4	x	0.50	x	0.30	=	0.60	m ²

Total 57.30 m³

156.70 m³

Deduct for openings:- = (214 - 57.30)

@ Rs.32 per m²

Rs.5,014.40

17/15.69 Painting two coats (excluding priming coat) on new steel and other metal surface with enamel paint of approved brand etc. complete.

(a) surface over 100 mm in width or girth

(a) With high gloss paint.

I. Two coat (new work):

Doors:	D	14	x	0.90	x	2.10	=	26.46	m ³
	D1	4	x	0.60	x	2.10	=	5.04	m ³
Windows/Ventilation	W	18	x	1.00	x	1.40	=	25.20	m ³
Ventilation	V2	4	x	0.40	x	0.20	=	0.32	m ²

Total 57.02 m³

@ Rs.151 per m²

Rs.8,610.02

18/19.4 Providing CC/Brick/Stone open surface drain with 15 mm thick cement plastering in prop. 1:3 finish with a floating coat of cement slurry as directed with necessary shuttering for sides and earthwork in excavation of foundation trenches and refilling the sides after completion of work etc. as specified.

(a) With cement concrete (1:3:6) having 100 mm thick sides and 100 mm thick bed laid over brick flat soiling.

(i) 300mm wide and average 150mm deep

1	x	56.00	=	56.00	Rm	
@	Rs.1,340	per R.m.	Total	=	56.00	Rm
						Rs.75,040.00
						Rs.4,637,588.11
			Add 4 % for Carrying Charge			Rs.185,503.52
			Add 3 % for Contingencies			Rs.139,127.64
			Add 7% for electrification & Water Pipe Fittings			Rs.324,631.17
			Add 2 % for Work Charge Establishment			Rs.92,751.76
			Grand Total			Rs.5,379,602.21
			Say			Rs.5,379,600.00

(Rupees Fifty Three Lakhs Seventy Nine Thousand Six Hundred) Only

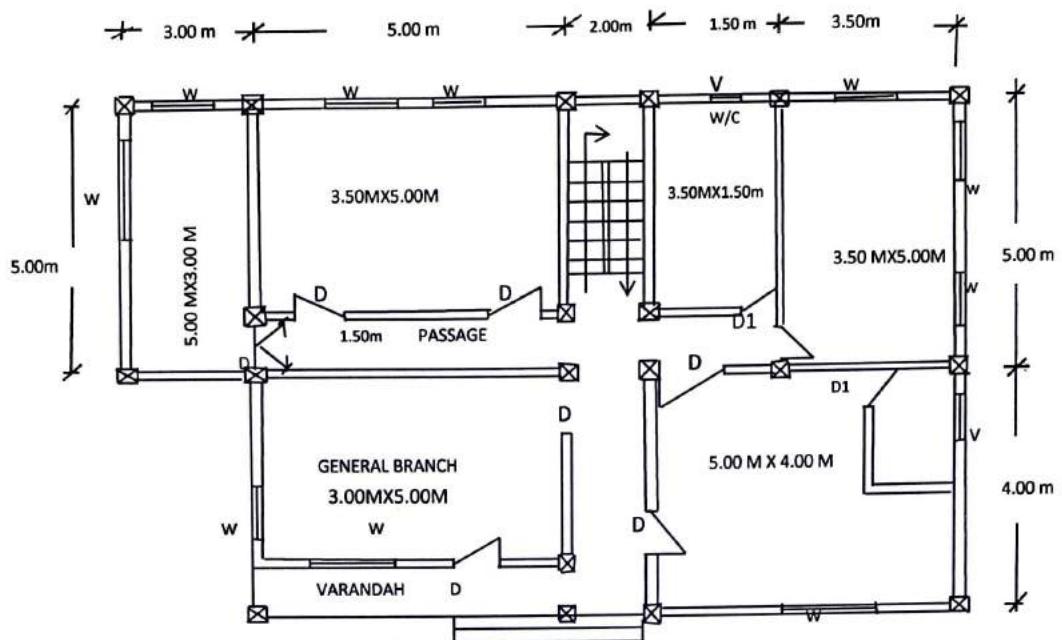
Prepared By

Countersigned By
COUNTERSIGNED
Executive Engineer P.W.D.
Tura Building Division, Tura

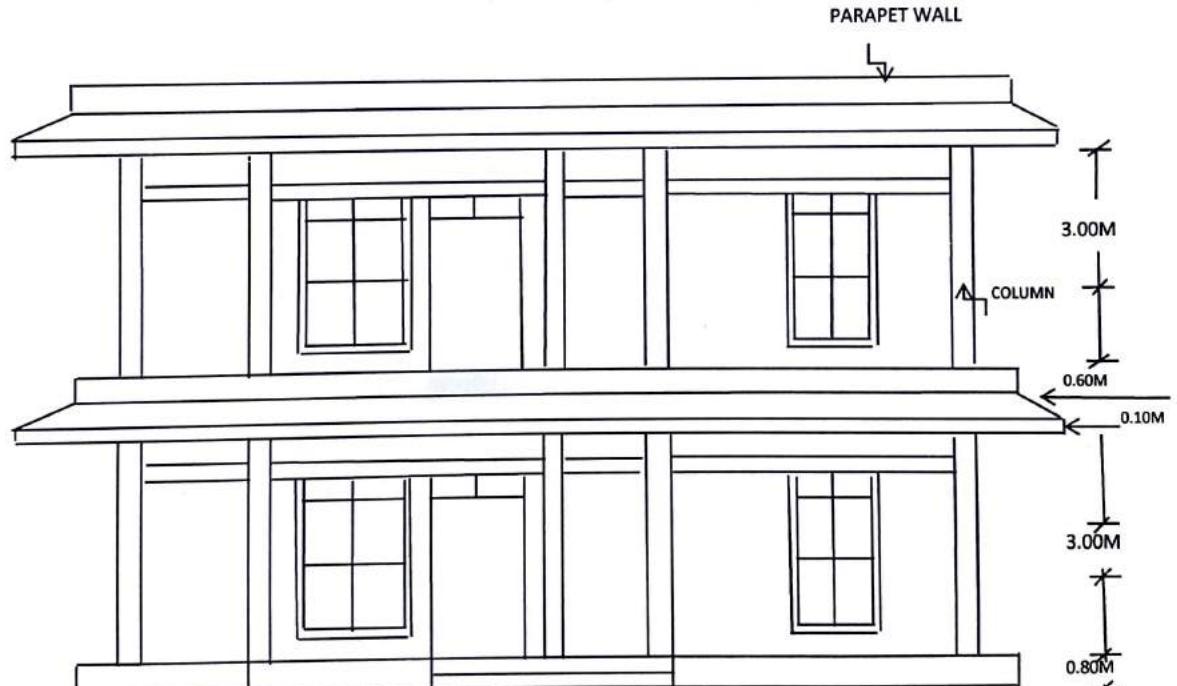
Checked by


JUNIOR ENGINEER, P.W.D.
BUILDING DIVISION, TURA.

CONSTRUCTION OF BEAT FOREST OFFICE



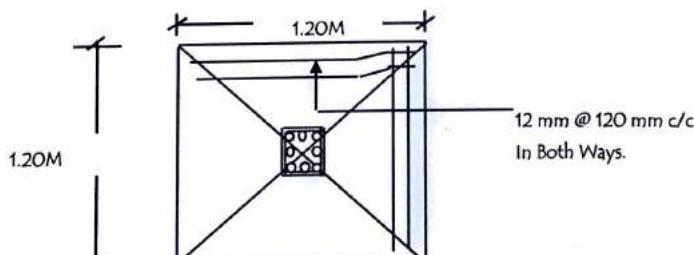
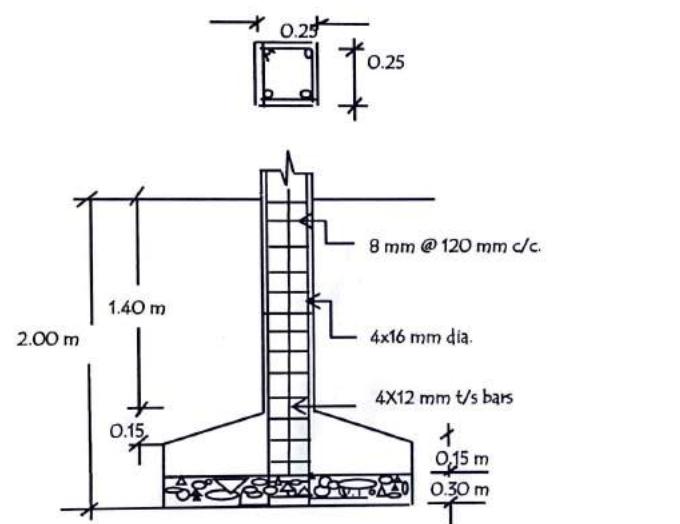
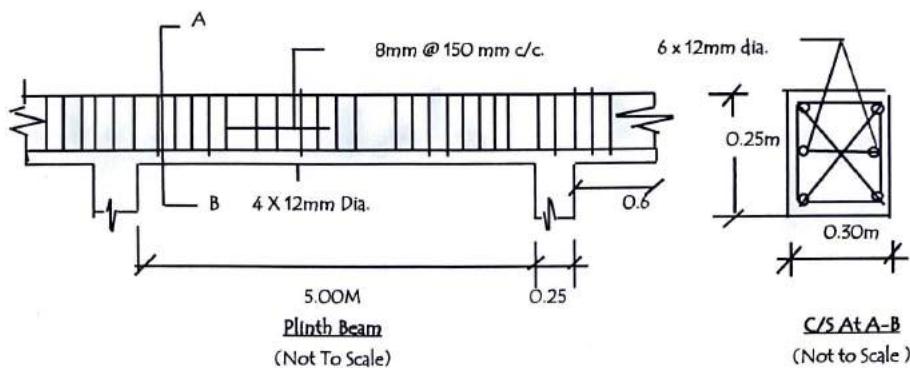
PLAN
(Not To Scale)



Traced by

~~COUNTER SIGNED~~

Details Of Reinforcement



C/S Of Footing & Column
(Not to Scale)

Traced by

COUNTERSIGNED
Executive Engineer P.W.D.
Tura Building Division, Tura

ESTIMATE

Detailed Estimate For The Construction Of Beat Forest Office Cum Quarter At Rewak, Baghmara
(Rate quoted as per MPWD schedule of Rate for Building Work for the year 2015-16 for Khasi Hills, Jaintia Hills and Garo Hills.)

1/1.1 Earth work in excavation upto a depth of 2 m below the existing ground level for foundation trenches of foundations, footings of column, walls etc. complete as directed.

(a) Ordinary Soil.

In Foundation

20	x	1.20	x	1.20	x	2.00	=	57.60	m ³
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In P/walls:

2	x	4.00	x	0.35	x	0.50	=	1.40	m ³
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9	x	5.00	x	0.35	x	0.50	=	7.88	m ³
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3	x	3.00	x	0.35	x	0.50	=	1.58	m ³
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4	x	3.50	x	0.35	x	0.50	=	2.45	m ³
---	---	------	---	------	---	------	---	------	----------------

1	x	2.00	x	0.80	x	0.40	=	0.64	m ³
---	---	------	---	------	---	------	---	------	----------------

Total	71.54	m ³
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Rs.12,805.66

@ Rs.179.00 per m³

2/2.1 Plain concrete work with coarse aggregate of sizes 13 mm to 32 mm in foundation bed for footing, steps, walls, brick work etc. complete as directed.

(b) In prop. 1:4:8

In Footing

20	x	0.90	x	0.90	x	0.10	=	1.62	m ³
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In Foundation

20	x	1.20	x	1.20	x	0.10	=	2.88	m ³
----	---	------	---	------	---	------	---	------	----------------

In P/walls:

2	x	4.00	x	0.25	x	0.10	=	0.20	m ³
---	---	------	---	------	---	------	---	------	----------------

9	x	5.00	x	0.35	x	0.50	=	7.88	m ³
---	---	------	---	------	---	------	---	------	----------------

4	x	3.00	x	0.35	x	0.50	=	2.10	m ³
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3	x	3.50	x	0.35	x	0.50	=	1.84	m ³
---	---	------	---	------	---	------	---	------	----------------

1	x	2.00	x	0.80	x	0.10	=	0.16	m ³
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Total	16.67	m ³
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Rs.98,367.75

@ Rs.5,900.00 per m³

3/2.5.1 In foundation & sub-structure including footings, columns with base, tie & plinth beam etc. not less than 100 mm thick upto plinth level.

(a) M15 OR PROP. 1:2:4 (For non structural work)

In Footing

20	x	0.90	x	0.90	x	0.20	=	3.24	m ³
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20	x	(0.90 + 0.20) / 2	x	0.20	x	0.20	=	2.20	m ³
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In col. stem:

20	x	0.25	x	0.25	x	3.10	=	3.88	m ³
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In Tie Beam:

2	x	4.00	x	0.25	x	0.25	=	0.50	m ³
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9	x	5.00	x	0.25	x	0.25	=	2.81	m ³
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4	x	3.50	x	0.25	x	0.25	=	0.88	m ³
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3	x	3.00	x	0.25	x	0.25	=	0.56	m ³
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Total	14.07	m ³
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Rs.109,636.68

@ Rs.7,795.00 per m³

4/2.5.3 In columns, pillars, posts, struts, suspended floors, roof, landings etc above plinth upto 1st floor level (without using admixture, plasticiser)

(a) M15 OR PROP. 1:2:4 (For non-structural work)

In Column:

2	x	20	x	0.25	x	0.25	x	3.10	=	7.75	m ³
---	---	----	---	------	---	------	---	------	---	------	----------------

In Lintels

2	x	2	x	4.00	x	0.15	x	0.15	=	0.36	m ³
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2	x	9	x	5.00	x	0.15	x	0.15	=	2.03	m ³
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2	x	4	x	3.50	x	0.15	x	0.15	=	0.63	m ³
---	---	---	---	------	---	------	---	------	---	------	----------------

Total	10.77	m ³
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Rs.85,872.41

@ Rs.7,977.00 per m³

5/2.8 Supplying fitting & fixing in position reinforcement bars upto 1st floor level etc. complete

(a) From primary sources like TATA/SAIL/ESSAIR/JINDAL/SHYAM/RINL

(i) TMT corrosion resist steel (CRS) reinforcement bar

In Footing:

20	x	22	x	2.00	x	0.8900	=	783.20	Kgs
----	---	----	---	------	---	--------	---	--------	-----

20	x	4	x	2.00	x	1.5800	=	252.80	Kgs
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20	x	39	x	0.64	x	0.3950	=	197.18	Kgs
----	---	----	---	------	---	--------	---	--------	-----

20	x	4	x	3.10	x	1.5800	=	391.84	Kgs
----	---	---	---	------	---	--------	---	--------	-----

2	x	4	x	4.00	x	0.8900	=	28.48	Kgs
---	---	---	---	------	---	--------	---	-------	-----

Stirrups	9	x	5	x	5.00	x	0.8900	=	200.25	Kgs
	4	x	2	x	3.00	x	0.8900	=	21.36	Kgs
	3	x	3	x	3.50	x	0.8900	=	28.04	Kgs
	2	x	42	x	4.00	x	0.3950	=	132.72	Kgs
	9	x	38	x	5.00	x	0.3950	=	675.45	Kgs
	4	x	21	x	3.00	x	0.3950	=	99.54	Kgs
	2	x	26	x	3.50	x	0.3950	=	71.89	Kgs
Column from PL to second floor level	19	x	4	x	3.10	x	1.5800	=	372.25	Kgs
Stirrups	7	x	42	x	4.00	x	0.3950	=	464.52	Kgs
	6	x	38	x	5.00	x	0.3950	=	450.30	Kgs
	2	x	21	x	3.00	x	0.3950	=	49.77	Kgs
	3	x	26	x	3.50	x	0.3950	=	107.84	Kgs
Lintel:										
	5	x	4	x	4.00	x	0.6200	=	49.60	Kgs
	4	x	4	x	4.00	x	0.6200	=	39.68	Kgs
	4	x	4	x	2.50	x	0.6200	=	24.80	Kgs
	3	x	4	x	1.00	x	0.6200	=	7.44	Kgs
Roof Slab @ 300mm C/c & 150 mm C/c										
	2	x	9	x	28	x	0.6200	=	1249.92	Kgs
	2	x	9	x	14	x	0.8900	=	897.12	Kgs
	2	x	3	x	41	x	6.50	x	991.38	Kgs
	2	x	3	x	14	x	3.00	x	224.28	Kgs
	2	x	4	x	7	x	2.50	x	86.80	Kgs
	2	x	4	x	28	x	1.00	x	199.36	Kgs
	2	x	2	x	4	7	6.20	x	61.50	Kgs
	2	x	2	x	41	x	2.00	x	203.36	Kgs
								Total	8362.67	Kgs ✓
								Say	83.62	Qntls.
								=	16.74	Qntls.
								=	100.36	Qntls.

Add 20% extra for wastage and overlapping

Rs.965,300.95

@ Rs.9,618.00 per Qntl.

6/2.10 Providing foam work of ordinary timber planking of trenches not less than 25 mm & removal of the same for concrete members etc. including centering & shuttering & propping as directed

(b) In Footing	20	x	2.00	x	1.00	x	0.25	=	10.00	m ²
(c) In Plinth beams	2	x	4.00	x	0.25	x	0.25	=	0.50	m ²
	9	x	5.00	x	0.25	x	0.25	=	2.81	m ²
	4	x	3.50	x	0.25	x	0.25	=	0.88	m ²
	3	x	3.00	x	0.25	x	0.25	=	0.56	m ²
(d) In Lintels	5	x	4.00	x	0.25	x	0.25	=	1.25	m ²
	4	x	4.00	x	0.25	x	0.25	=	1.00	m ²
	4	x	4.00	x	0.25	x	0.25	=	1.00	m ²
	3	x	4.00	x	0.25	x	0.25	=	0.75	m ²
								Total	18.75	m ²

@ Rs.432.00 per m²

Rs.8,100.00

7/3.1 (a) Cement concrete work in topping 1:1:2 on R.C.C. floor, tread & rise of steps finish with a floating coat of neat cement etc. complete as directed

In steps :	2	x	2.00	x	0.80			=	3.20	m ²
In Floor:	1	x	5.00	x	4.00			=	20.00	m ²
	2	x	4.00	x	3.50			=	28.00	m ²
	1	x	2.00	x	1.50			=	3.00	m ²
	1	x	4.00	x	2.50			=	10.00	m ²
	1	x	5.00	x	2.00			=	10.00	m ²
	2	x	4.00	x	1.50			=	12.00	m ²
	1	x	4.00	x	2.00			=	8.00	m ²
								Total	94.20	m ²

@ Rs.325.00 per m²

Rs.30,615.00

8/3.4 Providing CC floor 65 mm thick consisting of 50 mm under layer cement concrete in prop 1:3:6 etc. complete as directed

In Floor of rooms:

1	x	5.00	x	4.00	=	20.00	m ²
2	x	4.00	x	3.50	=	28.00	m ²
1	x	2.00	x	1.50	=	3.00	m ²
1	x	4.00	x	2.50	=	10.00	m ²
1	x	5.00	x	2.00	=	10.00	m ²
2	x	4.00	x	1.50	=	12.00	m ²
1	x	4.00	x	2.00	=	8.00	m ²

Total 91.00 m²

@ Rs.710.00 per m²

Rs.64,610.00

9/4.1 Providing brick soiling in foundation & under floor with stone/best quality etc. complete

(c.) Stone soiling of thickness 100 mm

In Floor

1	x	5.00	x	4.00	=	20.00	m ²
2	x	4.00	x	3.50	=	28.00	m ²
1	x	2.00	x	1.50	=	3.00	m ²
1	x	4.00	x	2.50	=	10.00	m ²
1	x	5.00	x	2.00	=	10.00	m ²
2	x	4.00	x	1.50	=	12.00	m ²
1	x	4.00	x	2.00	=	8.00	m ²

Total 91.00 m²

@ Rs.391.00 per m²

Rs.35,581.00

10/4.4 Brick work in cement mortar with 1st class brick including racking out joints & curing complete etc. as directed

(d) In prop. 1:6 (1 cement:6 sand)

In Plinth wall:

2	x	4.00	x	0.25	x	0.80	=	1.60	m ³
9	x	5.00	x	0.25	x	0.80	=	9.00	m ³
4	x	3.50	x	0.25	x	0.80	=	2.80	m ³
3	x	3.00	x	0.25	x	0.80	=	1.80	m ³

Total 15.20 m³

@ Rs.4,983.00 per m³

Rs.75,741.60

11/4.4 Brick work in cement mortar with 1st class brick including racking out joints & curing complete in super structure above plinth level upto 1st floor level etc as directed

In prop. 1:4 (1 cement:4 sand)

In Walls:

2	x	3.00	x	10.00	x	3.10	=	186.00	m ³
2	x	(1.60)	+	0.90)/2	x	3.10	=	7.75	m ³
2	x	4.00	x	8.00	x	3.10	=	198.40	m ³
2	x	(1.60)	+	0.90)/2	x	3.10	=	7.75	m ³

399.90 m³

Deduct Openings(-)

Doors:

D	14	x	0.90	x	2.10	=	26.46	m ³
D1	4	x	0.60	x	2.10	=	5.04	m ³

Windows/Ventilation

W	18	x	1.00	x	1.40	=	25.20	m ³
V2	4	x	0.50	x	0.30	=	0.60	m ²

Total 57.30 m³

342.60 m³

Deduct for openings:-

@ Rs.8,185.00 per m³

Rs.2,804,181.00

12/14.2 Providing fitting and fixing M.S Grill of required pattern for windows/clerestory windows/opening/railing with M.S flats at required spacing in frame all round, square or round M.S bars with round headed bolts and nuts or screws.

(b) Ornamental Grill

(i) Fixed to wooden frames

W	18	x	1.00	x	1.00	x	1.40	x	4.90	=	123.48	kg
V2	4	x	0.50	x	0.50	x	0.30	x	4.90	=	1.47	kg
Varandah	2	x	1.00	x	1.00	x	1.40	x	4.90	=	13.72	kg
	2	x	4.00	x	4.00	x	1.40	x	4.90	=	219.52	kg

Total = 358.19 kg

@ Rs.176.00 per kg

Rs.63,041.44

13/5.1 10 mm thick cement plaster in single coat on pair side of brick/concrete walls for interior plastering upto 1st floor level etc. complete

(b) In cement mortar 1:4

I. Interior walls:

2	x	3.00	x	10.00	x	3.10	=	186.00	m ²
2	x	4.00	x	8.00	x	3.10	=	198.40	m ²
1	x	1.00	x	5.00	x	3.10	=	15.50	m ²
2	x	2.00	x	(1.60 x 0.90)/2			=	2.88	m ²

402.78 m²

Deduct Openings(-)

Doors:	D	14	x	0.90	x	2.10	=	26.46	m ³
	D1	4	x	0.60	x	2.10	=	5.04	m ³
Windows/Ventilation	W	18	x	1.00	x	1.40	=	25.20	m ³
Ventilation	V2	4	x	0.50	x	0.30	=	0.60	m ²

Total 57.30 m³

Deduct for openings:- = (402.78 - 57.30)

@ Rs.196.00 per m²

Rs.67,698.40

14/8.1 Providing dressed wood work in post, walls, battens, post plate etc. including supplying fitting & fixing with spikes, nails,

bolts etc. complete as directed,

(b). With 1st class local timber(pooma/hallock/gamari etc)

I. Doors:	D	14	x	2.3	x	0.10	x	0.08	= 0.26 m ³
	D1	4	x	2.3	x	0.10	x	0.08	= 0.07 m ³

Total 0.33 m³

@ Rs.116,372 per m³

Rs.38,542.41

15/11.1 Providing and fixing steel windows ventilators openable of standard rolled steel section as per I.S. code joints mitred & welded with 15 mm x 3 mm x 100 mm etc. complete....

Windows & Ventilations	W	18	x	1.00	x	1.40	=	25.20	m ²
Ventilation	V2	4	x	0.50	x	0.30	=	0.60	m ²

25.80 m²

@ Rs.3,443 per m²

Rs.88,829.40

16/15.4 White washing with lime on wall surfaces (two coats) to give an even shades including thoroughly brooming etc. complete

In walls	2	x	13.00	x	3.50	=	91.00	m ²
	2	x	4.00	x	4.00	=	32.00	m ²
In ceiling	2	x	13.00	x	3.50	=	91.00	m ²
	2	x	4.00	x	4.00	=	32.00	m ²

Total 214.00 m²

Deduction For Openings (-)

Doors:	D	14	x	0.90	x	2.10	=	26.46	m ³
	D1	4	x	0.60	x	2.10	=	5.04	m ³
Windows/Ventilation	W	18	x	1.00	x	1.40	=	25.20	m ³
Ventilation	V2	4	x	0.50	x	0.30	=	0.60	m ²

Total 57.30 m³

156.70 m³

Deduct for openings:-

@ Rs.32 per m²

Rs.5,014.40

17/15.69 Painting two coats (excluding priming coat) on new steel and other metal surface with enamel paint of approved brand etc. complete.

(a) surface over 100 mm in width or girth

(a) With high gloss paint.

I. Two coat (new work):

Doors:	D	14	x	0.90	x	2.10	=	26.46	m ³
	D1	4	x	0.60	x	2.10	=	5.04	m ³
Windows/Ventilation	W	18	x	1.00	x	1.40	=	25.20	m ³
Ventilation	V2	4	x	0.40	x	0.20	=	0.32	m ²

Total 57.02 m³

Rs.8,610.02

@ Rs.151 per m²

18/19.4 Providing CC/Brick/Stone open surface drain with 15 mm thick cement plastering in prop. 1:3 finish with a floating coat of cement slurry as directed with necessary shuttering for sides and earthwork in excavation of foundation trenches and refilling the sides after completion of work etc. as specified.

(a) With cement concrete (1:3:6) having 100 mm thick sides and 100 mm thick bed laid over brick flat soiling.
(i) 300mm wide and average 150mm deep

1	x	56.00	=	56.00	Rm	
Total			=	56.00	Rm	
@	Rs.1,340	per R.m.				Rs.75,040.00
Add 4 % for Carrying Charge						Rs.4,637,588.11
Add 3 % for Contingencies						Rs.185,503.52
Add 7% for electrification & Water Pipe Fittings						Rs.139,127.64
Add 2 % for Work Charge Establishment						Rs.324,631.17
					Grand Total	Rs.92,751.76
						Rs.5,379,602.21
					Say	Rs.5,379,600.00

(Rupees Fifty Three Lakhs Seventy Nine Thousand Six Hundred) Only

Prepared By

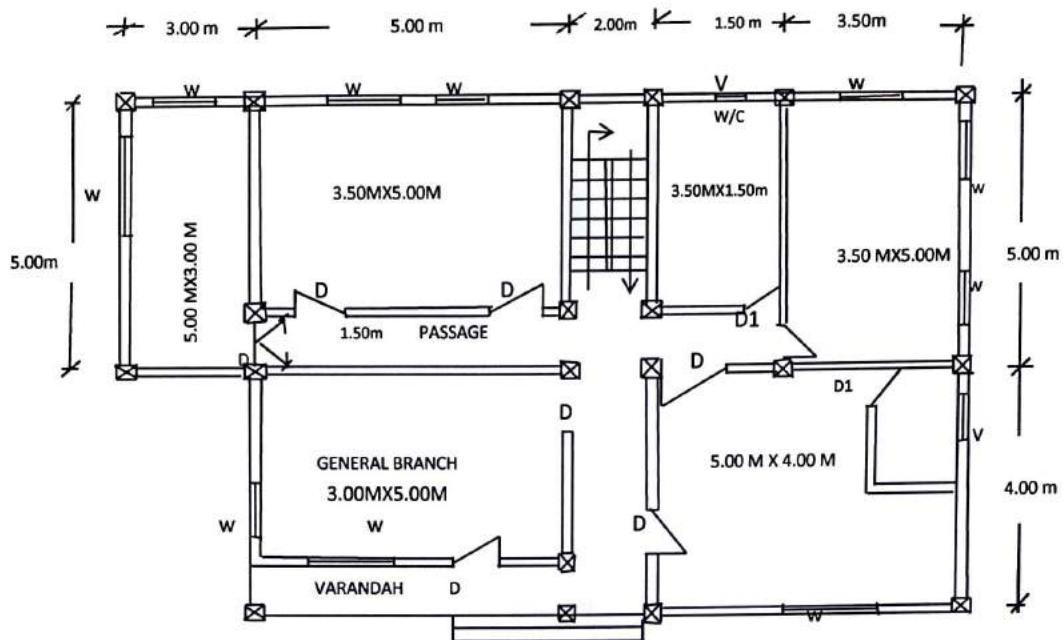
COUNTER SIGNED

Executive Engineer P.W.D.
Tura Building Division, Tura

Checked by

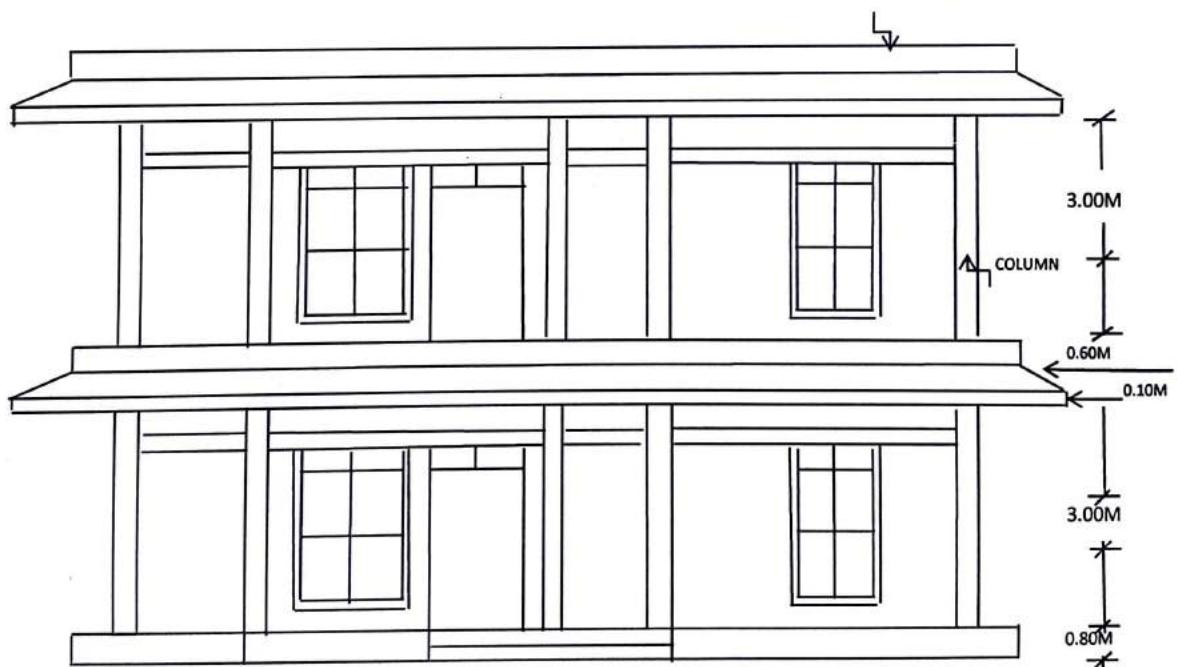

JUNIOR ENGINEER, P.W.D.
BUILDING DIVISION, TURA

CONSTRUCTION OF BEAT FOREST OFFICE



PLAN
(Not To Scale)

PARAPET WALL

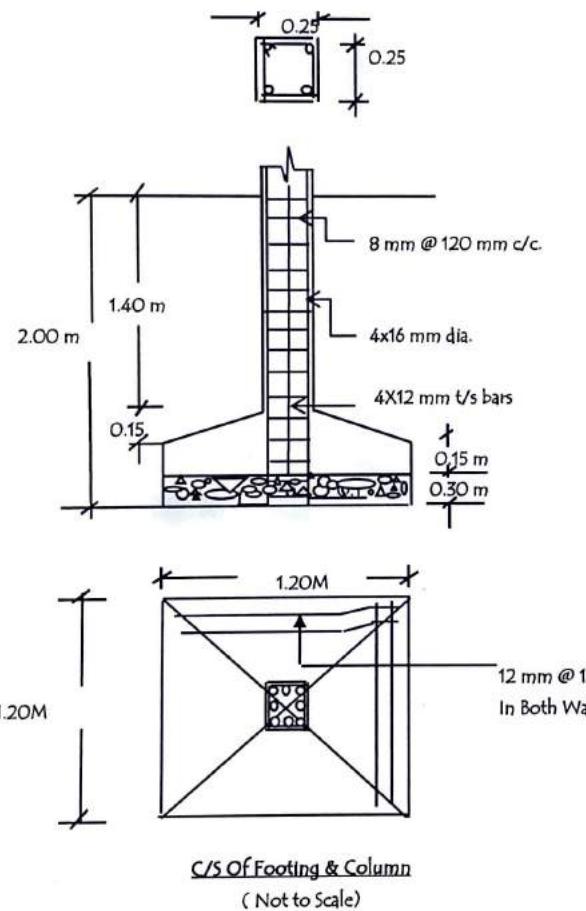
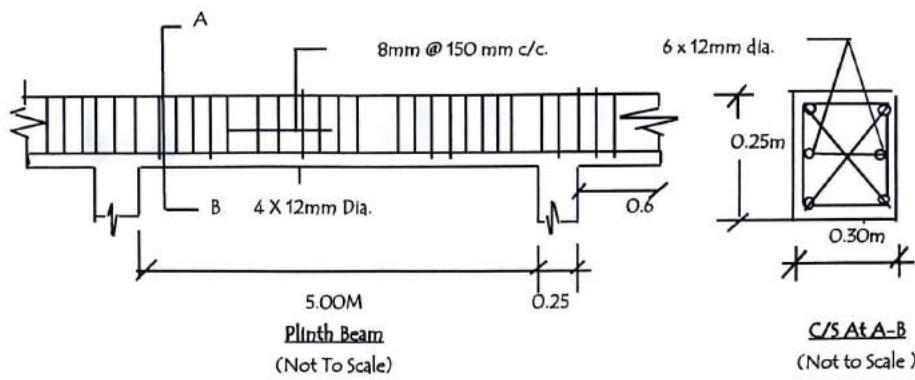


FRONT ELEVATION

Traced by

COUNTERSIGNED
Executive Engineer P.W.D.
Tura Building Division, Tura

Details Of Reinforcement



Traced by

COUNTERSIGNED
Executive Engineer P.W.D.
Tura Building Division, Tura

ESTIMATE

Detailed Estimate For The Construction Of Sub-Beat Forest Office Cum Quarter At Gillingan, Baghmara
(Rate quoted as per MPWD schedule of Rate for Building Work for the year 2015-16 for Khasi Hills, Jaintia Hills and Garo Hills.)

1/1.1 Earth work in excavation upto a depth of 2 m below the existing ground level for foundation trenches of foundations, footings of column, walls etc. complete as directed.

(a) Ordinary Soil.

In Foundation

16	x	1.20	x	1.20	x	2.00	=	46.08	m ³
----	---	------	---	------	---	------	---	-------	----------------

In P/walls:

2	x	5.00	x	0.35	x	0.50	=	1.75	m ³
---	---	------	---	------	---	------	---	------	----------------

8	x	5.00	x	0.35	x	0.50	=	7.00	m ³
---	---	------	---	------	---	------	---	------	----------------

3	x	3.50	x	0.35	x	0.50	=	1.84	m ³
---	---	------	---	------	---	------	---	------	----------------

In steps:

1	x	2.00	x	0.80	x	0.40	=	0.64	m ³
---	---	------	---	------	---	------	---	------	----------------

Total	57.31	m³
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Rs.10,258.04

@ **Rs.179.00** per m³

2/2.1 Plain concrete work with coarse aggregate of sizes 13 mm to 32 mm in foundation bed for footing, steps, walls, brick work etc. complete as directed.

(b) In prop. 1:4:8

In Footing

16	x	0.90	x	0.90	x	0.10	=	1.30	m ³
----	---	------	---	------	---	------	---	------	----------------

In Foundation

16	x	1.20	x	1.20	x	0.10	=	2.30	m ³
----	---	------	---	------	---	------	---	------	----------------

In P/walls:

2	x	5.00	x	0.25	x	0.10	=	0.25	m ³
---	---	------	---	------	---	------	---	------	----------------

8	x	5.00	x	0.35	x	0.50	=	7.00	m ³
---	---	------	---	------	---	------	---	------	----------------

4	x	3.50	x	0.35	x	0.50	=	2.45	m ³
---	---	------	---	------	---	------	---	------	----------------

In Steps:

1	x	2.00	x	0.80	x	0.10	=	0.16	m ³
---	---	------	---	------	---	------	---	------	----------------

Total	13.46	m³
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Rs.79,414.00

@ **Rs.5,900.00** per m³

3/2.5.1 In foundation & sub-structure including footings, columns with base, tie & plinth beam etc. not less than 100 mm thick upto plinth level.

(a) M15 OR PROP. 1:2:4 (For non structural work)

In Footing

16	x	0.90	x	0.90	x	0.20	=	2.59	m ³
----	---	------	---	------	---	------	---	------	----------------

16	x	(0.90 + 0.20) / 2	x	0.20	x	0.20	=	1.76	m ³
----	---	-------------------	---	------	---	------	---	------	----------------

In col. stem:

16	x	0.25	x	0.25	x	3.10	=	3.10	m ³
----	---	------	---	------	---	------	---	------	----------------

In Tie Beam:

2	x	5.00	x	0.25	x	0.25	=	0.63	m ³
---	---	------	---	------	---	------	---	------	----------------

8	x	5.00	x	0.25	x	0.25	=	2.50	m ³
---	---	------	---	------	---	------	---	------	----------------

4	x	3.50	x	0.25	x	0.25	=	0.88	m ³
---	---	------	---	------	---	------	---	------	----------------

Total	11.45	m³
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Rs.89,268.34

@ **Rs.7,795.00** per m³

4/2.5.3 In columns, pillars, posts, struts, suspended floors, roof, landings etc above plinth upto 1st floor level (without using admixture, plasticiser)

(a) M15 OR PROP. 1:2:4 (For non-structural work)

In Column:

16	x	0.25	x	0.25	x	3.10	=	3.10	m ³
----	---	------	---	------	---	------	---	------	----------------

In Lintels:

2	x	5.00	x	0.15	x	0.15	=	0.23	m ³
---	---	------	---	------	---	------	---	------	----------------

8	x	5.00	x	0.15	x	0.15	=	0.90	m ³
---	---	------	---	------	---	------	---	------	----------------

4	x	3.50	x	0.15	x	0.15	=	0.32	m ³
---	---	------	---	------	---	------	---	------	----------------

Total	4.54	m³
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Rs.36,215.58

@ **Rs.7,977.00** per m³

5/2.8 Supplying fitting & fixing in position reinforcement bars upto 1st floor level etc. complete

(a) From primary sources like TATA/SAIL/ESSAIR/JINDAL/SHYAM/RINL

(i) TMT corrosion resist steel (CRS) reinforcement bar

In Footing:

16	x	22	x	2.00	x	0.8900	=	626.56	Kgs
----	---	----	---	------	---	--------	---	--------	-----

Column from footing upto PL

16	x	4	x	2.00	x	1.5800	=	202.24	Kgs
----	---	---	---	------	---	--------	---	--------	-----

Stirrups

16	x	32	x	0.64	x	0.3950	=	129.43	Kgs
----	---	----	---	------	---	--------	---	--------	-----

Column from PL to First floor level

16	x	4	x	3.10	x	1.5800	=	313.47	Kgs
----	---	---	---	------	---	--------	---	--------	-----

In Plinth Beam:

2	x	4	x	4.00	x	0.8900	=	28.48	Kgs
---	---	---	---	------	---	--------	---	-------	-----

8	x	5	x	5.00	x	0.8900	=	178.00	Kgs
---	---	---	---	------	---	--------	---	--------	-----

4	x	2	x	3.00	x	0.8900	=	21.36	Kgs
---	---	---	---	------	---	--------	---	-------	-----

2	x	29	x	4.00	x	0.3950	=	91.64	Kgs
---	---	----	---	------	---	--------	---	-------	-----

8	x	24	x	5.00	x	0.3950	=	379.20	Kgs
4	x	21	x	3.00	x	0.3950	=	99.54	Kgs
2	x	22	x	3.50	x	0.3950	=	60.83	Kgs

Roof Slab @ 300mm C/c & 150 mm C/c

1	x	8	x	28	x	4.00	x	0.6200	=	555.52	Kgs
1	x	8	x	14	x	4.00	x	0.8900	=	398.72	Kgs
1	x	3	x	35	x	6.50	x	0.6200	=	423.15	Kgs
1	x	3	x	14	x	3.00	x	0.8900	=	112.14	Kgs
1	x	4	x	7	x	2.50	x	0.6200	=	43.40	Kgs
1	x	4	x	26	x	1.00	x	0.8900	=	92.56	Kgs
1	x	2	x	4	x	7	x	0.6200	=	30.75	Kgs
1	x	2	x	33	x	2.00	x	0.6200	=	81.84	Kgs
									<u>Total</u>	3868.84	Kgs
									<u>Say</u>	38.69	Qntls.
									<u>=</u>	3.87	Qntls.
									<u>=</u>	42.56	Qntls.

Add 10% extra for wastage and overlapping

@ Rs.9,618.00 per Qntl.

Rs.409,315.53

6/2.10 Providing foam work of ordinary timber planking of trenches not less than 25 mm & removal of the same for concrete members etc. including centering & shuttering & propping as directed

(b) In Footing	16	x	2.00	x	1.00	x	0.25	=	8.00	m ²
(c) In Plinth beams	2	x	5.00	x	0.25	x	0.25	=	0.63	m ²
	8	x	5.00	x	0.25	x	0.25	=	2.50	m ²
	4	x	3.50	x	0.25	x	0.25	=	0.88	m ²
(d) In Lintels	5	x	4.00	x	0.25	x	0.25	=	1.25	m ²
	4	x	4.00	x	0.25	x	0.25	=	1.00	m ²
	4	x	4.00	x	0.25	x	0.25	=	1.00	m ²
	3	x	4.00	x	0.25	x	0.25	=	0.75	m ²
								<u>Total</u>	16.00	m ²

@ Rs.432.00 per m²

Rs.6,912.00

7/3.1 (a) Cement concrete work in topping 1:1:2 on R.C.C. floor ,tread & rise of steps finish with a floating coat of neat cement etc. complete as directed

In steps :	2	x	2.00	x	0.80			=	3.20	m ²
In Floor:	2	x	5.00	x	3.50			=	35.00	m ²
	2	x	5.00	x	3.00			=	30.00	m ²
	1	x	2.00	x	7.00			=	14.00	m ²
	1	x	2.00	x	12.00			=	24.00	m ²
	1	x	1.50	x	12.00			=	18.00	m ²
								<u>Total</u>	124.20	m ²

@ Rs.325.00 per m²

Rs.40,365.00

8/3.4 Providing CC floor 65 mm thick consisting of 50 mm under layer cement concrete in prop 1:3:6 etc. complete as directed

In Floor of rooms:	2	x	5.00	x	3.50			=	35.00	m ²
	2	x	5.00	x	3.00			=	30.00	m ²
	1	x	2.00	x	7.00			=	14.00	m ²
	1	x	2.00	x	12.00			=	24.00	m ²
	1	x	1.50	x	12.00			=	18.00	m ²
								<u>Total</u>	121.00	m ²

@ Rs.710.00 per m²

Rs.85,910.00

9/4.1 Providing brick soling in foundation & under floor with stone/best quality etc. complete

(c.) Stone soling of thickness 100 mm

In Floor	1	x	5.00	x	3.50			=	17.50	m ²
	2	x	5.00	x	3.00			=	30.00	m ²
	1	x	2.00	x	7.00			=	14.00	m ²
	1	x	2.00	x	12.00			=	24.00	m ²
	1	x	1.50	x	12.00			=	18.00	m ²
								<u>Total</u>	103.50	m ²

@ Rs.391.00 per m²

Rs.40,468.50

10/4.4 Brick work in cement mortar with 1st class brick including racking out joints & curing complete etc. as directed

(d) In prop. 1:6 (1 cement:6 sand)

In Plinth wall:

2	x	5.00	x	0.25	x	0.80	=	2.00	m ³
8	x	5.00	x	0.25	x	0.80	=	8.00	m ²
4	x	3.50	x	0.25	x	0.80	=	2.80	m ²
1	x	3.00	x	0.25	x	0.80	=	0.60	m ²
							Total	13.40	m ³

@ Rs.4,983.00 per m³

Rs.66,772.20

11/4.4 Brick work in cement mortar with 1st class brick including racking out joints & curing complete in super structure above plinth level upto 1st floor level etc as directed

In prop. 1:4 (1 cement:4 sand)

In Walls:

2	x	3.50	x	5.00	x	3.10	=	108.50	m ³
2	x	(1.60)	+	(0.90)/2	x	3.10	=	7.70	m ³
2	x	5.00	x	3.00	x	3.10	=	93.00	m ³
2	x	(1.60)	+	(0.90)/2	x	3.10	=	7.70	m ³
							Total	216.90	m ³

Deduct Openings(-)

Doors:	D	8	x	0.90	x	2.10	=	15.12	m ³
	D1	1	x	0.60	x	2.10	=	1.26	m ³
Windows/Ventilation	W	7	x	1.00	x	1.40	=	9.80	m ³
Ventilation	V2	1	x	0.50	x	0.30	=	0.15	m ²
							Total	26.33	m ³

Deduct for openings:-

= (216.900 - 26.33)

@ Rs.8,185.00 per m³

Rs.1,559,815.45

12/4.2 Providing fitting and fixing M.S Grill of required pattern for windows/clerestory windows/opening/railing with M.S flats at required spacing in frame all round, square or round M.S bars with round headed bolts and nuts or screws.

(b) Ornamental Grill

(i) Fixed to wooden frames

W	7	x	1.00	x	1.00	x	1.40	x	4.90	=	48.02	kg
V2	1	x	0.50	x	0.50	x	0.30	x	4.90	=	0.37	kg
Varandah	1	x	2.00	x	7.00	x	1.40	x	4.90	=	96.04	kg
									Total	=	144.43	kg

@ Rs.176.00 per kg

Rs.25,419.24

13/5.1 10 mm thick cement plaster in single coat on pair side of brick/concrete walls for interior plastering upto 1st floor level etc. complete

(b) In cement mortar 1:4

I. Interior walls:

2	x	5.00	x	3.50	x	3.10	=	108.50	m ²
2	x	5.00	x	3.00	x	3.10	=	93.00	m ²
1	x	2.00	x	12.00	x	3.10	=	74.40	m ²
1	x	2.00	x	7.00	x	3.10	=	43.40	m ²
1	x	1.50	x	12.00	x	3.10	=	55.80	m ²
2	x	2.00	x	(1.60 x 0.90)/2			=	2.88	m ²
							Total	377.98	m ²

Deduct Openings(-)

Doors:	D	8	x	0.90	x	2.10	=	15.12	m ³
	D1	1	x	0.60	x	2.10	=	1.26	m ³
Windows/Ventilation	W	7	x	1.00	x	1.40	=	9.80	m ³
Ventilation	V2	1	x	0.50	x	0.30	=	0.15	m ²
							Total	26.33	m ³

Deduct for openings:-

= (377.98 - 26.33)

@ Rs.196.00 per m²

Rs.68,923.40

14/8.1 Providing dressed wood work in post,walls,battens,post plate etc. including supplying fitting & fixing with spikes,nails, bolts etc. complete as directed.

(b).With 1st class local timber(pooma/hallock/gamari etc)

I. Doors:

D	8	x	2.3	x	0.10	x	0.08	=	0.15	m ³
D1	1	x	2.3	x	0.10	x	0.08	=	0.02	m ³

Total 0.17 m³

Rs.19,271.20

@ Rs.116.372 per m³

15/11.1 Providing and fixing steel windows ventilators openable of standard rolled steel section as per I.S code joints mitred & welded with 15 mm x 3 mm x 100 mm etc. complete....

Windows & Ventilations	W	8	x	1.00	x	1.40	=	11.20 m ²
Ventilation	V2	1	x	0.50	x	0.30	=	0.15 m ²
								11.35 m ²

Rs.39,078.05

@ Rs.3,443 per m²

16/15.4 White washing with lime on wall surfaces (two coats) to give an even shades including thoroughly brooming etc. complete

In walls	2	x	12.00	x	3.10	=	74.40 m ²
	1	x	12.00	x	3.10	=	37.20 m ²
	1	x	10.00	x	3.10	=	31.00 m ²
In ceiling	2	x	5.00	x	3.50	=	35.00 m ²
	2	x	5.00	x	3.00	=	30.00 m ²
	1	x	2.00	x	12.00	=	24.00 m ²
	1	x	2.00	x	7.00	=	14.00 m ²
	1	x	1.50	x	12.00	=	18.00 m ²
						Total	263.60 m ²

Deduction For Openings (-)

Doors:	D	8	x	0.90	x	2.10	=	15.12 m ³
	D1	1	x	0.60	x	2.10	=	1.26 m ³
Windows/Ventilation	W	7	x	1.00	x	1.40	=	9.80 m ³
Ventilation	V2	1	x	0.50	x	0.30	=	0.15 m ²
						Total	26.33 m ³	

Rs.7,592.64

Deduct for openings:- = (263.60 - 26.33) 237.27 m³

@ Rs.32 per m²

17/15.69 Painting two coats (excluding priming coat) on new steel and other metal surface with enamel paint of approved brand etc. complete.

(a) surface over 100 mm in width or girth

(a) With high gloss paint.

I. Two coat (new work):

Doors:	D	8	x	0.90	x	2.10	=	15.12 m ³
	D1	1	x	0.60	x	2.10	=	1.26 m ³
Windows/Ventilation	W	7	x	1.00	x	1.40	=	9.80 m ³
Ventilation	V2	1	x	0.40	x	0.20	=	0.08 m ²
						Total	26.18 m ³	

Rs.3,953.18

@ Rs.151 per m²

18/19.4 Providing CC/Brick/Stone open surface drain with 15 mm thick cement plastering in prop. 1:3 finish with a floating coat of cement slurry as directed with necessary shuttering for sides and earthwork in excavation of foundation trenches and refilling the sides after completion of work etc. as specified.

(a) With cement concrete (1:3:6) having 100 mm thick sides and 100 mm thick bed laid over brick flat soiling.

(i) 300mm wide and average 150mm deep

1	x	56.00	=	56.00 Rm
			Total	= 56.00 Rm

Rs.75,040.00

@ Rs.1,340 per R.m.

Rs. 2663992.35 Rs.2,638,573.12

Add 4 % for Carrying Charge Rs. 106557.69 Rs.105,542.92

Add 7% for electrification & Water Pipe Fittings 186477.46 Rs.184,700.12

Grand Total Rs.2,928,816.16

Rs. 29,57,031.50

Say Rs.2,928,800.00

Fifty Seven Rs. 29,57,000.00

(Rupees Twenty Nine Lakhs Twenty Eight Thousand Eight Hundred) Only

checked by

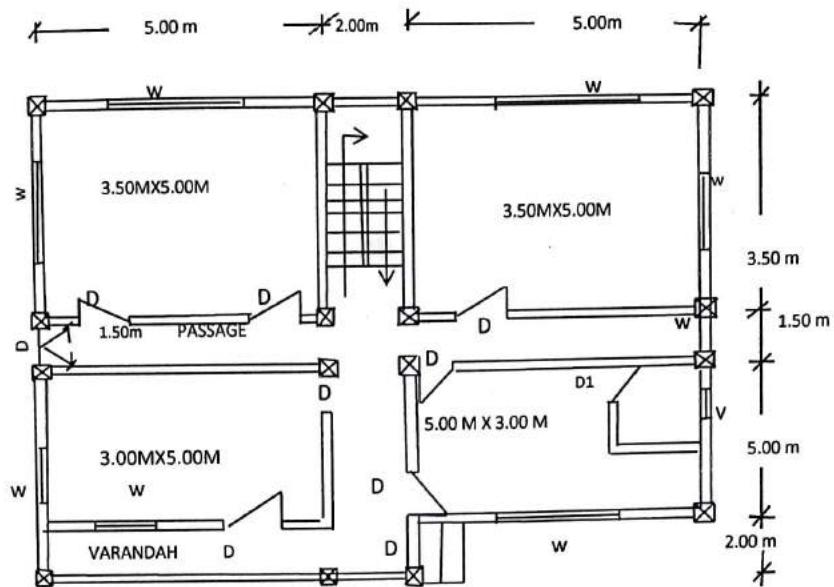
Prepared By

JUNIOR ENGINEER, P.W.D.
BUILDING DIV. CH. TURA

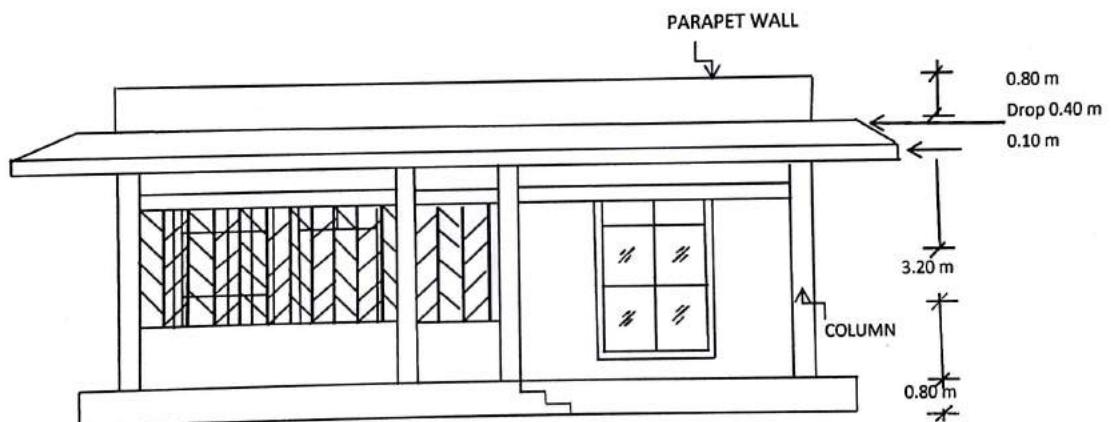
COUNTERSIGNED

Executive Engineer P.W.D.
Tura Building Division, Tura

CONSTRUCTION OF SUB-BEAT FOREST OFFICE CUM QUARTER



PLAN
(Not To Scale)

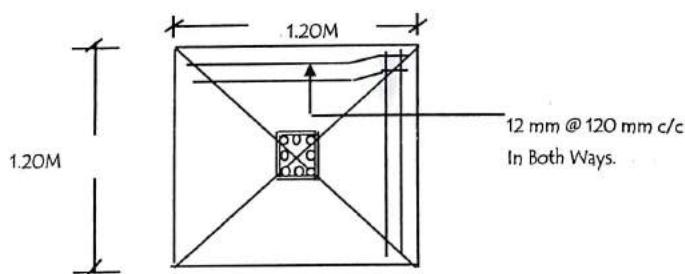
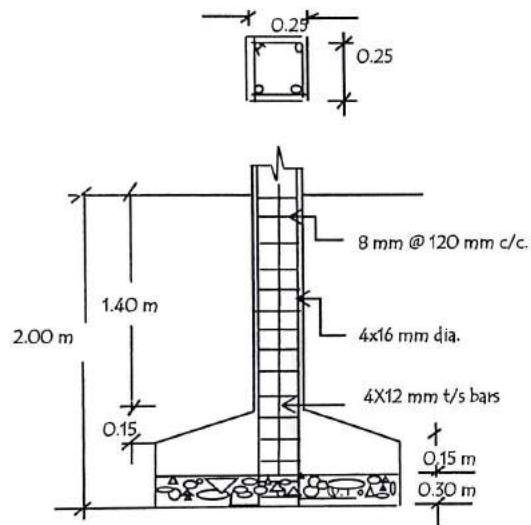
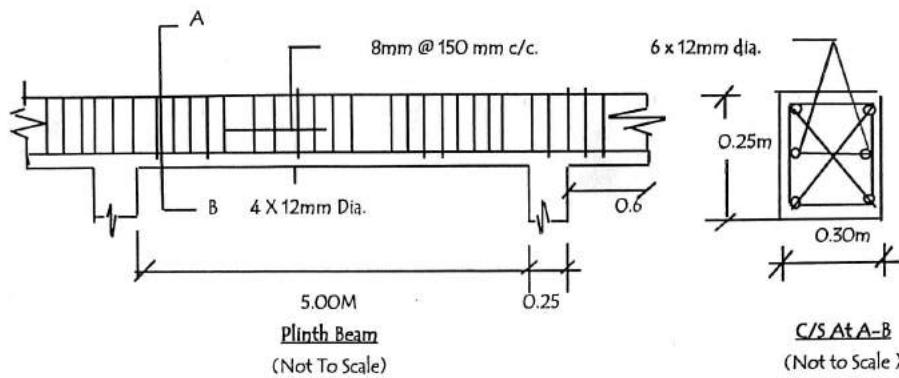


FRONT ELEVATION

Traced by

COUNTERSIGNED
Executive Engineer P.W.D.
Tura Building Division, Tura

Details Of Reinforcement



Traced by

COUNTERSIGNED
Designed by
Executive Engineer P.V.D.
Tura Building Division, Tura

ESTIMATE

~~Detailed Estimate For The Construction Of Sub-Beat Forest Office Cum Quarter At Range H.B., Baghmara~~
 (Rate quoted as per MPWD schedule of Rate for Building Work for the year 2015-16 for Khasi Hills, Jaintia Hills and Garo Hills.)

1/1.1 Earth work in excavation upto a depth of 2 m below the existing ground level for foundation trenches of foundations, footings of column, walls etc. complete as directed.

(a) Ordinary Soil.

In Foundation

In P/walls:

8

3

In steps:

16	x	1.20	x	1.20	x	2.00	=	46.08	m^3
2	x	5.00	x	0.35	x	0.50	=	1.75	m^3
8	x	5.00	x	0.35	x	0.50	=	7.00	m^3
3	x	3.50	x	0.35	x	0.50	=	1.84	m^3
1	x	2.00	x	0.80	x	0.40	=	0.64	m^3
Total								57.31	m^3

@ Rs.179.00 per m^3

Rs.10,258.04

2/2.1 Plain concrete work with coarse aggregate of sizes 13 mm to 32 mm in foundation bed for footing, steps, walls, brick work etc. complete as directed.

(b) In prop. 1:4:8

In Footing

In Foundation

In P/walls:

8

4

In Steps:

16	x	0.90	x	0.90	x	0.10	=	1.30	m^3
16	x	1.20	x	1.20	x	0.10	=	2.30	m^3
2	x	5.00	x	0.25	x	0.10	=	0.25	m^3
8	x	5.00	x	0.35	x	0.50	=	7.00	m^3
4	x	3.50	x	0.35	x	0.50	=	2.45	m^3
1	x	2.00	x	0.80	x	0.10	=	0.16	m^3
Total								13.46	m^3

@ Rs.5,900.00 per m^3

Rs.79,414.00

3/2.5.1 In foundation & sub-structure including footings, columns with base, tie & plinth beam etc. not less than 100 mm thick upto plinth level.

(a) M15 OR PROP. 1:2:4 (For non structural work)

In Footing

16

16

In col. stem:

In Tie Beam:

8

4

16	x	0.90	x	0.90	x	0.20	=	2.59	m^3
16	x	(0.90 + 0.20) / 2	x		x	0.20	=	1.76	m^3
16	x	0.25	x	0.25	x	3.10	=	3.10	m^3
2	x	5.00	x	0.25	x	0.25	=	0.63	m^3
8	x	5.00	x	0.25	x	0.25	=	2.50	m^3
4	x	3.50	x	0.25	x	0.25	=	0.88	m^3
Total								11.45	m^3

@ Rs.7,795.00 per m^3

Rs.89,268.34

4/2.5.3 In columns, pillars, posts, struts, suspended floors, roof, landings etc above plinth upto 1st floor level (without using admixture, plasticiser)

(a) M15 OR PROP. 1:2:4 (For non-structural work)

In Column:

2

In Lintels

8

4

16	x	0.25	x	0.25	x	3.10	=	3.10	m^3
2	x	5.00	x	0.15	x	0.15	=	0.23	m^3
8	x	5.00	x	0.15	x	0.15	=	0.90	m^3
4	x	3.50	x	0.15	x	0.15	=	0.32	m^3
Total								4.54	m^3

@ Rs.7,977.00 per m^3

Rs.36,215.58

5/2.8 Supplying fitting & fixing in position reinforcement bars upto 1st floor level etc. complete

(a) From primary sources like TATA/SAIL/ESSAIR/JINDAL/SHYAM/RINL

(i) TMT corrosion resist steel (CRS) reinforcement bar

In Footing:

16	x	22	x	2.00	x	0.8900	=	626.56	Kgs
16	x	4	x	2.00	x	1.5800	=	202.24	Kgs
16	x	32	x	0.64	x	0.3950	=	129.43	Kgs
16	x	4	x	3.10	x	1.5800	=	313.47	Kgs
Total								1162.73	Kgs

In Plinth Beam:

2	x	4	x	4.00	x	0.8900	=	28.48	Kgs
8	x	5	x	5.00	x	0.8900	=	178.00	Kgs
4	x	2	x	3.00	x	0.8900	=	21.36	Kgs
2	x	29	x	4.00	x	0.3950	=	91.64	Kgs
Total								1162.73	Kgs

Stirrups:

8	x	24	x	5.00	x	0.3950	=	379.20	Kgs
4	x	21	x	3.00	x	0.3950	=	99.54	Kgs
2	x	22	x	3.50	x	0.3950	=	60.83	Kgs

Roof Slab @ 300mm C/c & 150 mm C/c

1	x	8	x	28	x	4.00	x	0.6200	=	555.52	Kgs
1	x	8	x	14	x	4.00	x	0.8900	=	398.72	Kgs
1	x	3	x	35	x	6.50	x	0.6200	=	423.15	Kgs
1	x	3	x	14	x	3.00	x	0.8900	=	112.14	Kgs
1	x	4	x	7	x	2.50	x	0.6200	=	43.40	Kgs
1	x	4	x	26	x	1.00	x	0.8900	=	92.56	Kgs
1	x	2	x	4	x	7	x	0.6200	=	30.75	Kgs
1	x	2	x	33	x	2.00	x	0.6200	=	81.84	Kgs
									Total	3868.84	Kgs
									Say	38.69	Qntls.
									=	3.87	Qntls.
									=	42.56	Qntls.

Add 10% extra for wastage and overlapping

@ Rs.9,618.00 per Qntl.

Rs.409,315.53

6/2.10 Providing foam work of ordinary timber planking of trenches not less than 25 mm & removal of the same for concrete members etc. including centering & shuttering & propping as directed

(b) In Footing	16	x	2.00	x	1.00	x	0.25	=	8.00	m ²
(c) In Plinth beams	2	x	5.00	x	0.25	x	0.25	=	0.63	m ²
	8	x	5.00	x	0.25	x	0.25	=	2.50	m ²
	4	x	3.50	x	0.25	x	0.25	=	0.88	m ²
(d) In Lintels	5	x	4.00	x	0.25	x	0.25	=	1.25	m ²
	4	x	4.00	x	0.25	x	0.25	=	1.00	m ²
	4	x	4.00	x	0.25	x	0.25	=	1.00	m ²
	3	x	4.00	x	0.25	x	0.25	=	0.75	m ²
								Total	16.00	m ²

@ Rs.432.00 per m²

Rs.6,912.00

7/3.1 (a) Cement concrete work in topping 1:1:2 on R.C.C. floor, tread & rise of steps finish with a floating coat of neat cement etc. complete as directed

In steps :	2	x	2.00	x	0.80	=	3.20	m ²
In Floor:	2	x	5.00	x	3.50	=	35.00	m ²
	2	x	5.00	x	3.00	=	30.00	m ²
	1	x	2.00	x	7.00	=	14.00	m ²
	1	x	2.00	x	12.00	=	24.00	m ²
	1	x	1.50	x	12.00	=	18.00	m ²
						Total	124.20	m ²

@ Rs.325.00 per m²

Rs.40,365.00

8/3.4 Providing CC floor 65 mm thick consisting of 50 mm under layer cement concrete in prop 1:3:6 etc. complete as directed

In Floor of rooms:	2	x	5.00	x	3.50	=	35.00	m ²
	2	x	5.00	x	3.00	=	30.00	m ²
	1	x	2.00	x	7.00	=	14.00	m ²
	1	x	2.00	x	12.00	=	24.00	m ²
	1	x	1.50	x	12.00	=	18.00	m ²
						Total	121.00	m ²

@ Rs.710.00 per m²

Rs.85,910.00

9/4.1 Providing brick soling in foundation & under floor with stone/best quality etc. complete

(c.) Stone soling of thickness 100 mm

In Floor	1	x	5.00	x	3.50	=	17.50	m ²
	2	x	5.00	x	3.00	=	30.00	m ²
	1	x	2.00	x	7.00	=	14.00	m ²
	1	x	2.00	x	12.00	=	24.00	m ²
	1	x	1.50	x	12.00	=	18.00	m ²
						Total	103.50	m ²

@ Rs.391.00 per m²

Rs.40,468.50

10/4.4 Brick work in cement mortar with 1st class brick including racking out joints & curing complete etc. as directed

(d) In prop. 1:6 (1 cement:6 sand)

In Plinth wall:

2	x	5.00	x	0.25	x	0.80	=	2.00	m ³
8	x	5.00	x	0.25	x	0.80	=	8.00	m ²
4	x	3.50	x	0.25	x	0.80	=	2.80	m ²
1	x	3.00	x	0.25	x	0.80	=	0.60	m ²
							Total	13.40	m ³

@ Rs.4,983.00 per m³

Rs.66,772.20

11/4.4 Brick work in cement mortar with 1st class brick including racking out joints & curing complete in super structure above plinth level upto 1st floor level etc as directed

In prop. 1:4 (1 cement:4 sand)

In Walls:

2	x	3.50	x	5.00	x	3.10	=	108.50	m ³
2	x	(1.60)	+	0.90)/2	x	3.10	=	7.70	m ²
2	x	5.00	x	3.00	x	3.10	=	93.00	m ²
2	x	(1.60)	+	0.90)/2	x	3.10	=	7.70	m ²
							Total	216.90	m ³

Deduct Openings(-)

Doors:	D	8	x	0.90	x	2.10	=	15.12	m ³
	D1	1	x	0.60	x	2.10	=	1.26	m ³
Windows/Ventilation	W	7	x	1.00	x	1.40	=	9.80	m ²
Ventilation	V2	1	x	0.50	x	0.30	=	0.15	m ²
							Total	26.33	m ³

Deduct for openings:-

= (216.900 - 26.33) 190.57 m³

Rs.1,559,815.45

@ Rs.8,185.00 per m³

12/14.2 Providing fitting and fixing M.S Grill of required pattern for windows/crestory windows/opening/railing with M.S flats at required spacing in frame all round, square or round M.S bars with round headed bolts and nuts or screws.

(b) Ornamental Grill

(i) Fixed to wooden frames

W	7	x	1.00	x	1.00	x	1.40	x	4.90	=	48.02	kg	
V2	1	x	0.50	x	0.50	x	0.30	x	4.90	=	0.37	kg	
Varandah	1	x	2.00	x	7.00	x	1.40	x	4.90	=	96.04	kg	
										Total	=	144.43	kg

@ Rs.176.00 per kg

Rs.25,419.24

13/5.1 10 mm thick cement plaster in single coat on pair side of brick/concrete walls for interior plastering upto 1st floor level etc. complete

(b) In cement mortar 1:4

i. Interior walls:

2	x	5.00	x	3.50	x	3.10	=	108.50	m ²
2	x	5.00	x	3.00	x	3.10	=	93.00	m ²
1	x	2.00	x	12.00	x	3.10	=	74.40	m ²
1	x	2.00	x	7.00	x	3.10	=	43.40	m ²
1	x	1.50	x	12.00	x	3.10	=	55.80	m ²
2	x	2.00	x	(1.60 x 0.90)/2			=	2.88	m ²
							Total	377.98	m ²

Deduct Openings(-)

Doors:	D	8	x	0.90	x	2.10	=	15.12	m ³
	D1	1	x	0.60	x	2.10	=	1.26	m ³
Windows/Ventilation	W	7	x	1.00	x	1.40	=	9.80	m ²
Ventilation	V2	1	x	0.50	x	0.30	=	0.15	m ²
							Total	26.33	m ³

Deduct for openings:-

= (377.98 - 26.33) 351.65 m²

Rs.68,923.40

@ Rs.196.00 per m²

14/8.1 Providing dressed wood work in post, walls, battens, post plate etc. including supplying fitting & fixing with spikes, nails, bolts etc. complete as directed.

(b).With 1st class local timber(poorna/hallock/gamari etc)

i. Doors:

D	8	x	2.3	x	0.10	x	0.08	=	0.15	m ²
D1	1	x	2.3	x	0.10	x	0.08	=	0.02	m ²

@ Rs.116,372 per m³

Total 0.17 m³

Rs.19,271.20

15/11.1 Providing and fixing steel windows ventilators openable of standard rolled steel section as per I.S code joints mitred & welded with 15 mmx3mmx100mm etc. complete....

Windows & Ventilations	W	8	x	1.00	x	1.40	=	11.20 m ²
Ventilation	V2	1	x	0.50	x	0.30	=	0.15 m ²
								11.35 m ²

@ Rs.3,443 per m³

Rs.39,078.05

16/15.4 White washing with lime on wall surfaces (two coats) to give an even shades including thoroughly brooming etc. complete

In walls	2	x	12.00	x	3.10	=	74.40 m ²
	1	x	12.00	x	3.10	=	37.20 m ²
	1	x	10.00	x	3.10	=	31.00 m ²
In ceiling	2	x	5.00	x	3.50	=	35.00 m ²
	2	x	5.00	x	3.00	=	30.00 m ²
	1	x	2.00	x	12.00	=	24.00 m ²
	1	x	2.00	x	7.00	=	14.00 m ²
	1	x	1.50	x	12.00	=	18.00 m ²
						Total	263.60 m ²

Deduction For Openings (-)

Doors:	D	8	x	0.90	x	2.10	=	15.12 m ³
	D1	1	x	0.60	x	2.10	=	1.26 m ³
Windows/Ventilation	W	7	x	1.00	x	1.40	=	9.80 m ³
Ventilation	V2	1	x	0.50	x	0.30	=	0.15 m ²
						Total	26.33 m ³	

Deduct for openings:- = (263.60 - 26.33) 237.27 m³

Rs.7,592.64

@ Rs.32 per m²

17/15.69 Painting two coats (excluding priming coat) on new steel and other metal surface with enamel paint of approved brand etc. complete.

(a) surface over 100 mm in width or girth

(a) With high gloss paint.

i. Two coat (new work):

Doors:	D	8	x	0.90	x	2.10	=	15.12 m ³
	D1	1	x	0.60	x	2.10	=	1.26 m ³
Windows/Ventilation	W	7	x	1.00	x	1.40	=	9.80 m ³
Ventilation	V2	1	x	0.40	x	0.20	=	0.08 m ²
						Total	26.18 m ³	

@ Rs.151 per m²

Rs.3,953.18

18/19.4 Providing CC/Brick/Stone open surface drain with 15 mm thick cement plastering in prop. 1:3 finish with a floating coat of cement slurry as directed with necessary shuttering for sides and earthwork in excavation of foundation trenches and refilling the sides after completion of work etc. as specified.

(a) With cement concrete (1:3:6) having 100 mm thick sides and 100 mm thick bed laid over brick flat soiling.

(i) 300mm wide and average 150mm deep

1	x	56.00	=	56.00 Rm
			Total	= 56.00 Rm

Rs.75,040.00

@ Rs.1,340 per R.m.

2663992.35

Rs.2,638,573.12

Add 4% for Carrying Charge

106559.69

Rs.105,542.92

Add 7% for electrification & Water Pipe Fittings 186479.46

Rs.184,700.12

Grand Total

Rs.2,928,816.16

Say Rs.2,928,800.00
Fifty Seven 29,57,031.50

(Rupees Twenty Nine Lakhs Twenty Eight Thousand Eight Hundred) Only

Say 29,57,000.00

Checked by

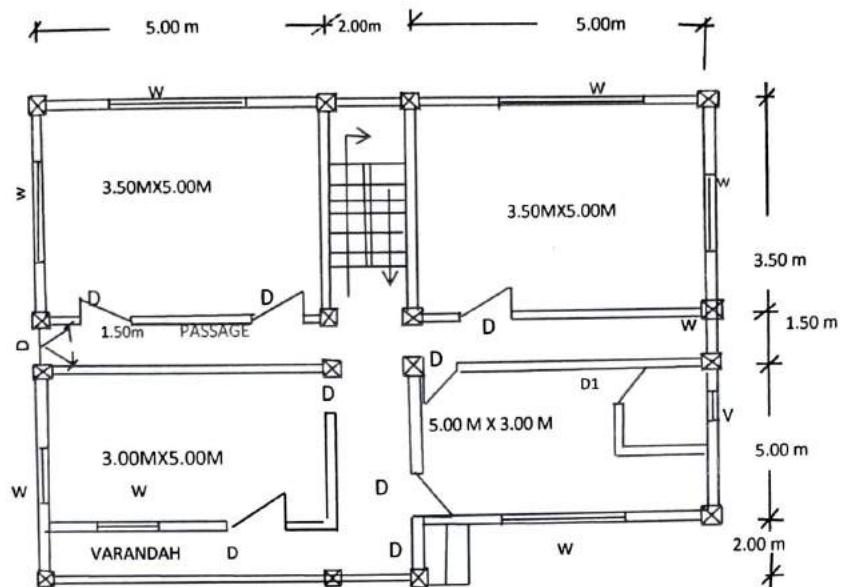
JUNIOR ENGINEER, P.W.D.
BUILDING DIVISION, TURA.

Prepared By

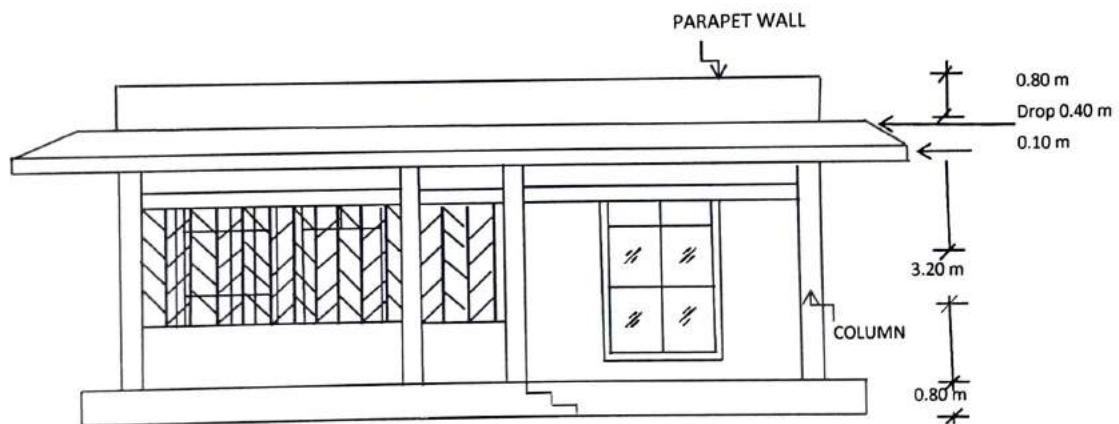
COUNTERSIGNED

Executive Engineer P.W.D.
Tura Building Division, Tura

CONSTRUCTION OF SUB-BEAT FOREST OFFICE CUM QUARTER



PLAN
(Not To Scale)

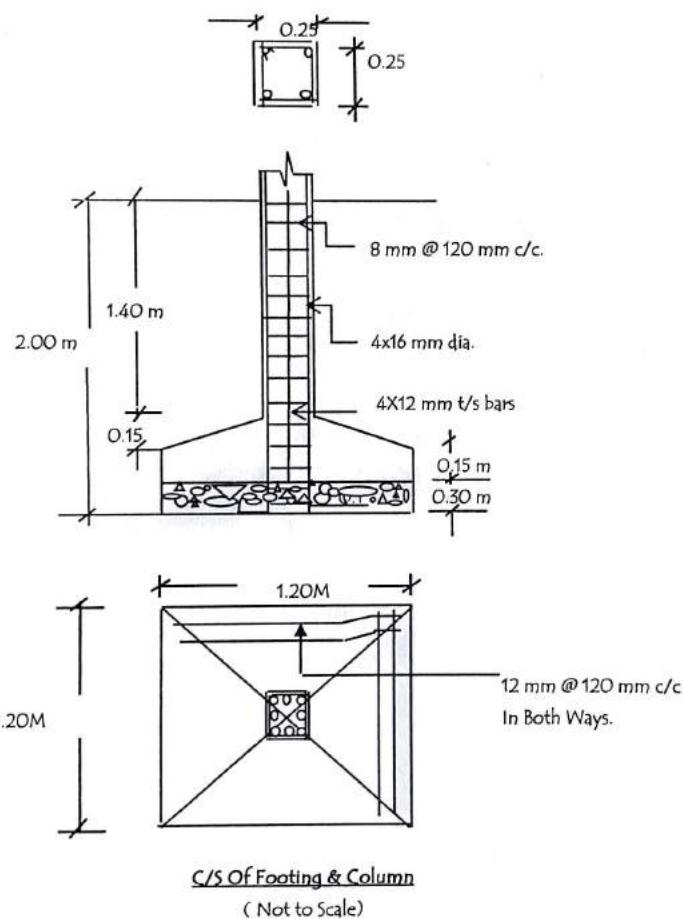
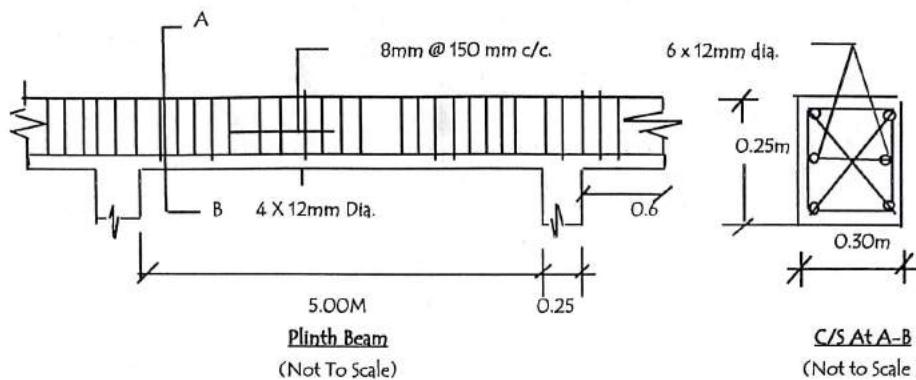


FRONT ELEVATION

Traced by

COUNTERSIGNED
Executive Engineer P.N.D.
Tura Building Division, Tura

Details Of Reinforcement



Traced by

COUNTERSIGNED

 Executive Engineer P.V.D.
 Tura Building Division, Tura

ESTIMATE

Detailed Estimate For The Construction Of Sub-Beat Forest Office Cum Quarter At Bilkora, Baghmara
(Rate quoted as per MPWD schedule of Rate for Building Work for the year 2015-16 for Khasi Hills, Jaintia Hills and Garo Hills.)

1/1.1 Earth work in excavation upto a depth of 2 m below the existing ground level for foundation trenches of foundations, footings of column, walls etc. complete as directed.

(a) Ordinary Soil.

In Foundation

In P/walls:

8

3

In steps:

16	x	1.20	x	1.20	x	2.00	=	46.08	m ³
2	x	5.00	x	0.35	x	0.50	=	1.75	m ³
8	x	5.00	x	0.35	x	0.50	=	7.00	m ³
3	x	3.50	x	0.35	x	0.50	=	1.84	m ³
1	x	2.00	x	0.80	x	0.40	=	0.64	m ³
<u>Total</u>							<u>57.31</u>	<u>m³</u>	

@ Rs.179.00 per m³

Rs.10,258.04

2/2.1 Plain concrete work with coarse aggregate of sizes 13 mm to 32 mm in foundation bed for footing, steps, walls, brick work etc. complete as directed.

(b) In prop. 1:4:8

In Footing

In Foundation

In P/walls:

8

4

In Steps:

16	x	0.90	x	0.90	x	0.10	=	1.30	m ³
16	x	1.20	x	1.20	x	0.10	=	2.30	m ³
16	x	5.00	x	0.25	x	0.10	=	0.25	m ³
2	x	5.00	x	0.35	x	0.50	=	7.00	m ³
8	x	3.50	x	0.35	x	0.50	=	2.45	m ³
4	x	2.00	x	0.80	x	0.10	=	0.16	m ³
<u>Total</u>							<u>13.46</u>	<u>m³</u>	

@ Rs.5,900.00 per m³

Rs.79,414.00

3/2.5.1 In foundation & sub-structure including footings, columns with base, tie & plinth beam etc. not less than 100 mm thick upto plinth level.

(a) M15 OR PROP. 1:2:4 (For non structural work)

In Footing

16

In col. stem:

In Tie Beam:

16	x	0.90	x	0.90	x	0.20	=	2.59	m ³
16	x	(0.90 + 0.20) / 2	x		x	0.20	=	1.76	m ³
16	x	0.25	x	0.25	x	3.10	=	3.10	m ³
2	x	5.00	x	0.25	x	0.25	=	0.63	m ³
8	x	5.00	x	0.25	x	0.25	=	2.50	m ³
4	x	3.50	x	0.25	x	0.25	=	0.88	m ³
<u>Total</u>							<u>11.45</u>	<u>m³</u>	

@ Rs.7,795.00 per m³

Rs.89,268.34

4/2.5.3 In columns, pillars, posts, struts, suspended floors, roof, landings etc above plinth upto 1st floor level (without using admixture, plasticiser)

(a) M15 OR PROP. 1:2:4 (For non-structural work)

In Column:

2

In Lintels

8

4

16	x	0.25	x	0.25	x	3.10	=	3.10	m ³
2	x	5.00	x	0.15	x	0.15	=	0.23	m ³
8	x	5.00	x	0.15	x	0.15	=	0.90	m ³
4	x	3.50	x	0.15	x	0.15	=	0.32	m ³
<u>Total</u>							<u>4.54</u>	<u>m³</u>	

@ Rs.7,977.00 per m³

Rs.36,215.58

5/2.8 Supplying fitting & fixing in position reinforcement bars upto 1st floor level etc. complete

(a) From primary sources like TATA/SAIL/ESSAIR/JINDAL/SHYAM/RINL

(i) TMTcorrosion resist steel (CRS) reinforcement bar

In Footing:

16	x	22	x	2.00	x	0.8900	=	626.56	Kgs
----	---	----	---	------	---	--------	---	--------	-----

Column from footing upto PL

16	x	4	x	2.00	x	1.5800	=	202.24	Kgs
----	---	---	---	------	---	--------	---	--------	-----

Stirrups

16	x	32	x	0.64	x	0.3950	=	129.43	Kgs
----	---	----	---	------	---	--------	---	--------	-----

Column from PL to First floor level

16	x	4	x	3.10	x	1.5800	=	313.47	Kgs
----	---	---	---	------	---	--------	---	--------	-----

In Plinth Beam:

2	x	4	x	4.00	x	0.8900	=	28.48	Kgs
---	---	---	---	------	---	--------	---	-------	-----

8	x	5	x	5.00	x	0.8900	=	178.00	Kgs
---	---	---	---	------	---	--------	---	--------	-----

4	x	2	x	3.00	x	0.8900	=	21.36	Kgs
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Stirrups

2	x	29	x	4.00	x	0.3950	=	91.64	Kgs
---	---	----	---	------	---	--------	---	-------	-----

8	x	24	x	5.00	x	0.3950	=	379.20	Kgs
4	x	21	x	3.00	x	0.3950	=	99.54	Kgs
2	x	22	x	3.50	x	0.3950	=	60.83	Kgs

Roof Slab @ 300mm C/c & 150 mm C/c

1	x	8	x	28	x	4.00	x	0.6200	=	555.52	Kgs
1	x	8	x	14	x	4.00	x	0.8900	=	398.72	Kgs
1	x	3	x	35	x	6.50	x	0.6200	=	423.15	Kgs
1	x	3	x	14	x	3.00	x	0.8900	=	112.14	Kgs
1	x	4	x	7	x	2.50	x	0.6200	=	43.40	Kgs
1	x	4	x	26	x	1.00	x	0.8900	=	92.56	Kgs
1	x	2	x	4	x	6.20	x	0.6200	=	30.75	Kgs
1	x	2	x	33	x	2.00	x	0.6200	=	81.84	Kgs
<u>Total</u>										3868.84	Kgs
<u>Say</u>										38.69	Qntls.
<u>=</u>										3.87	Qntls.
<u>=</u>										42.56	Qntls.

Add 10% extra for wastage and overlapping

Rs.409,315.53

@ Rs.9,618.00 per Qntl.

6/2.10 Providing foam work of ordinary timber planking of trenches not less than 25 mm & removal of the same for concrete members etc. including centering & shuttering & propping as directed

(b) In Footing	16	x	2.00	x	1.00	x	0.25	=	8.00	m ²	
(c) In Plinth beams	2	x	5.00	x	0.25	x	0.25	=	0.63	m ²	
	8	x	5.00	x	0.25	x	0.25	=	2.50	m ²	
	4	x	3.50	x	0.25	x	0.25	=	0.88	m ²	
(d) In Lintels	5	x	4.00	x	0.25	x	0.25	=	1.25	m ²	
	4	x	4.00	x	0.25	x	0.25	=	1.00	m ²	
	4	x	4.00	x	0.25	x	0.25	=	1.00	m ²	
	3	x	4.00	x	0.25	x	0.25	=	0.75	m ²	
<u>Total</u>										16.00	m ²

Rs.6,912.00

@ Rs.432.00 per m²

7/3.1 (a) Cement concrete work in topping 1:1:2 on R.C.C. floor ,tread & rise of steps finish with a floating coat of neat cement etc. complete as directed

In steps:	2	x	2.00	x	0.80		=	3.20	m ²		
In Floor:	2	x	5.00	x	3.50		=	35.00	m ²		
	2	x	5.00	x	3.00		=	30.00	m ²		
	1	x	2.00	x	7.00		=	14.00	m ²		
	1	x	2.00	x	12.00		=	24.00	m ²		
	1	x	1.50	x	12.00		=	18.00	m ²		
<u>Total</u>										124.20	m ²

Rs.40,365.00

@ Rs.325.00 per m²

8/3.4 Providing CC floor 65 mm thick consisting of 50 mm under layer cement concrete in prop 1:3:6 etc. complete as directed

In Floor of rooms:	2	x	5.00	x	3.50		=	35.00	m ²		
	2	x	5.00	x	3.00		=	30.00	m ²		
	1	x	2.00	x	7.00		=	14.00	m ²		
	1	x	2.00	x	12.00		=	24.00	m ²		
	1	x	1.50	x	12.00		=	18.00	m ²		
<u>Total</u>										121.00	m ²

Rs.85,910.00

@ Rs.710.00 per m²

9/4.1 Providing brick soling in foundation & under floor with stone/best quality etc. complete

(c.) Stone soling of thickness 100 mm

In Floor	1	x	5.00	x	3.50		=	17.50	m ²		
	2	x	5.00	x	3.00		=	30.00	m ²		
	1	x	2.00	x	7.00		=	14.00	m ²		
	1	x	2.00	x	12.00		=	24.00	m ²		
	1	x	1.50	x	12.00		=	18.00	m ²		
<u>Total</u>										103.50	m ²

Rs.40,468.50

@ Rs.391.00 per m²

10/4.4 Brick work in cement mortar with 1st class brick including racking out joints & curing complete etc. as directed

(d) In prop. 1:6 (1 cement:6 sand)

In Plinth wall:

2	x	5.00	x	0.25	x	0.80	=	2.00	m ³
8	x	5.00	x	0.25	x	0.80	=	8.00	m ²
4	x	3.50	x	0.25	x	0.80	=	2.80	m ²
1	x	3.00	x	0.25	x	0.80	=	0.60	m ²
							Total	13.40	m ³

Rs.66,772.20

@ Rs.4,983.00 per m³

11/4.4 Brick work in cement mortar with 1st class brick including racking out joints & curing complete in super structure above plinth level upto 1st floor level etc as directed

In prop. 1:4 (1 cement:4 sand)

In Walls:

2	x	3.50	x	5.00	x	3.10	=	108.50	m ³
2	x	(1.60)	+	(0.90)/2	x	3.10	=	7.70	m ³
2	x	5.00	x	3.00	x	3.10	=	93.00	m ³
2	x	(1.60)	+	(0.90)/2	x	3.10	=	7.70	m ³
							Total	216.90	m ³

Deduct Openings(-)

Doors:

D	8	x	0.90	x	2.10	=	15.12	m ³	
D1	1	x	0.60	x	2.10	=	1.26	m ³	
Windows/Ventilation	W	7	x	1.00	x	1.40	=	9.80	m ³
Ventilation	V2	1	x	0.50	x	0.30	=	0.15	m ²
							Total	26.33	m ³

Deduct for openings:-

@ Rs.8,185.00 per m³

190.57 m³

Rs.1,559,815.45

12/14.2 Providing fitting and fixing M.S Grill of required pattern for windows/leroys windows/opening/railing with M.S flats at required spacing in frame all round, square or round M.S bars with round headed bolts and nuts or screws.

(b) Ornamental Grill

(i) Fixed to wooden frames

W	7	x	1.00	x	1.00	x	1.40	x	4.90	=	48.02	kg	
V2	1	x	0.50	x	0.50	x	0.30	x	4.90	=	0.37	kg	
Varandah	1	x	2.00	x	7.00	x	1.40	x	4.90	=	96.04	kg	
										Total	=	144.43	kg

Rs.25,419.24

@ Rs.176.00 per kg

13/5.1 10 mm thick cement plaster in single coat on pair side of brick/concrete walls for interior plastering upto 1st floor level etc. complete

(b) In cement mortar 1:4

i. Interior walls:

2	x	5.00	x	3.50	x	3.10	=	108.50	m ²
2	x	5.00	x	3.00	x	3.10	=	93.00	m ²
1	x	2.00	x	12.00	x	3.10	=	74.40	m ²
1	x	2.00	x	7.00	x	3.10	=	43.40	m ²
1	x	1.50	x	12.00	x	3.10	=	55.80	m ²
2	x	2.00	x	(1.60 x 0.90)/2	x		=	2.88	m ²
							Total	377.98	m ²

Deduct Openings(-)

Doors:

D	8	x	0.90	x	2.10	=	15.12	m ³	
D1	1	x	0.60	x	2.10	=	1.26	m ³	
Windows/Ventilation	W	7	x	1.00	x	1.40	=	9.80	m ³
Ventilation	V2	1	x	0.50	x	0.30	=	0.15	m ²
							Total	26.33	m ³

351.65 m³

Rs.68,923.40

Deduct for openings:-

@ Rs.196.00 per m²

14/8.1 Providing dressed wood work in post, walls, battens, post plate etc. including supplying fitting & fixing with spikes, nails, bolts etc. complete as directed,

(b) With 1st class local timber (pooma/hallock/gamari etc.)

i. Doors:

D	8	x	2.3	x	0.10	x	0.08	=	0.15	m ³
D1	1	x	2.3	x	0.10	x	0.08	=	0.02	m ³

Total 0.17 m³

@ Rs.116,372 per m³

Rs.19,271.20

15/11.1 Providing and fixing steel windows ventilators openable of standard rolled steel section as per I.S. code joints mitred & welded with 15 mm x 3 mm x 100 mm etc. complete....

Windows & Ventilations	W	8	x	1.00	x	1.40	=	11.20 m ²
Ventilation	V2	1	x	0.50	x	0.30	=	0.15 m ²
							=	11.35 m ²

@ Rs.3,443 per m²

Rs.39,078.05

16/15.4 White washing with lime on wall surfaces (two coats) to give an even shades including thoroughly brooming etc. complete

In walls	2	x	12.00	x	3.10	=	74.40 m ²
	1	x	12.00	x	3.10	=	37.20 m ²
	1	x	10.00	x	3.10	=	31.00 m ²
In ceiling	2	x	5.00	x	3.50	=	35.00 m ²
	2	x	5.00	x	3.00	=	30.00 m ²
	1	x	2.00	x	12.00	=	24.00 m ²
	1	x	2.00	x	7.00	=	14.00 m ²
	1	x	1.50	x	12.00	=	18.00 m ²
						Total	263.60 m ²

Deduction For Openings (-)

Doors:	D	8	x	0.90	x	2.10	=	15.12 m ³
	D1	1	x	0.60	x	2.10	=	1.26 m ³
Windows/Ventilation	W	7	x	1.00	x	1.40	=	9.80 m ³
Ventilation	V2	1	x	0.50	x	0.30	=	0.15 m ²

Total 26.33 m³

Deduct for openings:- = (263.60 - 26.33) 237.27 m³

Rs.7,592.64

@ Rs.32 per m²

17/15.69 Painting two coats (excluding priming coat) on new steel and other metal surface with enamel paint of approved brand etc. complete.

(a) surface over 100 mm in width or girth

(a) With high gloss paint.

I. Two coat (new work):

Doors:	D	8	x	0.90	x	2.10	=	15.12 m ³
	D1	1	x	0.60	x	2.10	=	1.26 m ³
Windows/Ventilation	W	7	x	1.00	x	1.40	=	9.80 m ³
Ventilation	V2	1	x	0.40	x	0.20	=	0.08 m ²

Total 26.18 m³

Rs.3,953.18

@ Rs.151 per m²

18/19.4 Providing CC/Brick/Stone open surface drain with 15 mm thick cement plastering in prop. 1:3 finish with a floating coat of cement slurry as directed with necessary shuttering for sides and earthwork in excavation of foundation trenches and refilling the sides after completion of work etc. as specified.

(a) With cement concrete (1:3:6) having 100 mm thick sides and 100 mm thick bed laid over brick flat soiling.

(i) 300mm wide and average 150mm deep

1	x	56.00	=	56.00 Rm
			Total	= 56.00 Rm

@ Rs.1,340 per R.m.

Rs.75,040.00

2663992.35 Rs.2,638,573.12

106559.69 Rs.105,542.92

Add 4% for Carrying Charge

Add 7% for electrification & Water Pipe Fittings 186479.46 Rs.184,700.12

Grand Total Rs.2,928,816.16

Rs.2,957,031.50

Say Rs.2,928,800.00

Fifty Seven Lakh Twenty Eight Thousand Eight Hundred) Only

(Rupees Twenty Nine Lakh Twenty Eight Thousand Eight Hundred) Only

Checked by

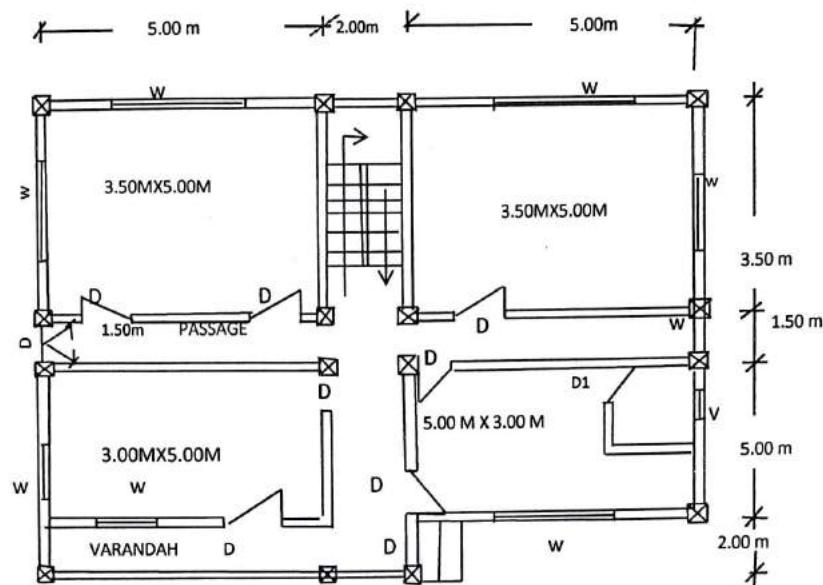
Prepared By

JUNIOR ENGINEER, P.W.D.
BUILDING DIVISION, TURA

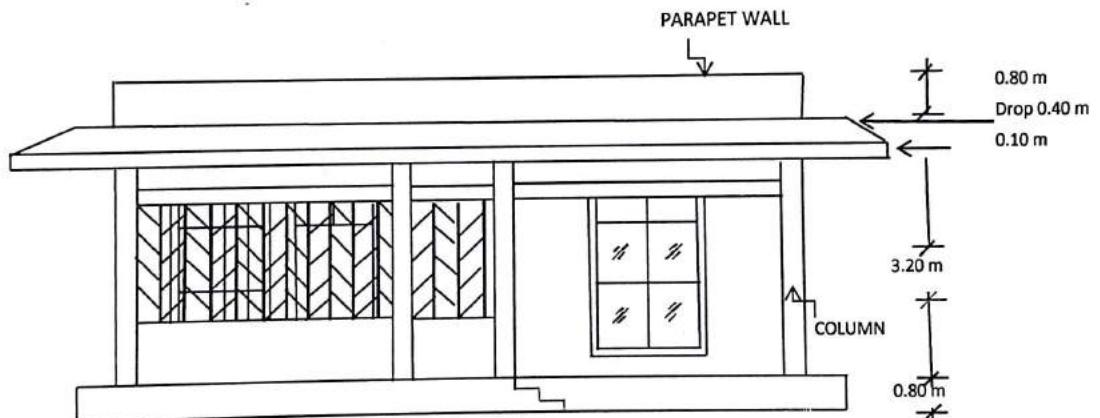
COUNTERSIGNED

Executive Engineer P.W.D.
Tura Building Division, Tura

CONSTRUCTION OF SUB-BEAT FOREST OFFICE CUM QUARTER



PLAN
(Not To Scale)

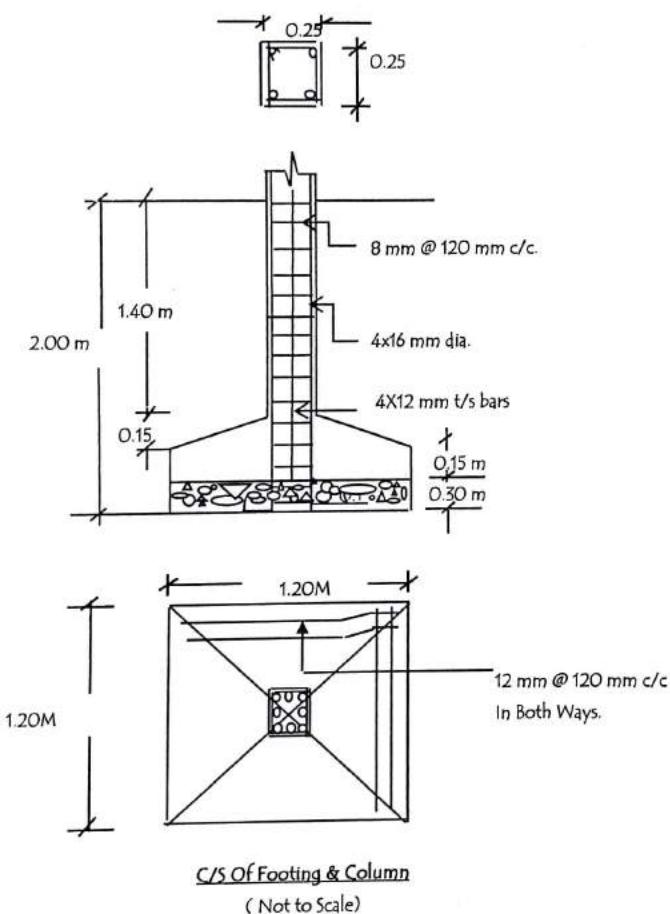
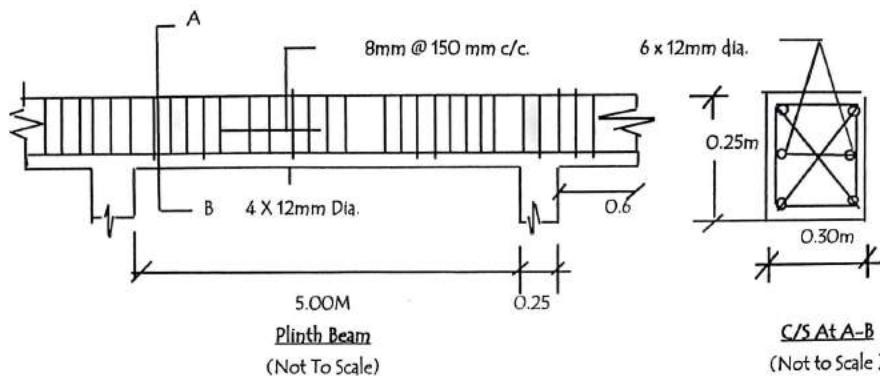


FRONT ELEVATION

Traced by

COUNTER SIGNED
Executive Engineer P.W.D.
Tura Building Division, Tura

Details Of Reinforcement



Traced by

CONTRACTOR'S SIGNATURE

Executive Engineer P.W.D.
Tura Building Division, Tura

ESTIMATE

Detailed Estimate For The Construction Of Sub-Beat Forest Office Cum Quarter At Meata, Baghmara
(Rate quoted as per MPWD schedule of Rate for Building Work for the year 2015-16 for Khasi Hills, Jaintia Hills and Garo Hills.)

1/1.1 Earth work in excavation upto a depth of 2 m below the existing ground level for foundation trenches of foundations, footings of column, walls etc. complete as directed.

(a) Ordinary Soil.

In Foundation	16	x	1.20	x	1.20	x	2.00	=	46.08	m ³
In P/walls:	2	x	5.00	x	0.35	x	0.50	=	1.75	m ³
	8	x	5.00	x	0.35	x	0.50	=	7.00	m ³
	3	x	3.50	x	0.35	x	0.50	=	1.84	m ³
In steps:	1	x	2.00	x	0.80	x	0.40	=	0.64	m ³
								Total	57.31	m ³

@ Rs.179.00 per m³

Rs.10,258.04

2/2.1 Plain concrete work with coarse aggregate of sizes 13 mm to 32 mm in foundation bed for footing, steps, walls, brick work etc. complete as directed.

(b) In prop. 1:4:8

In Footing	16	x	0.90	x	0.90	x	0.10	=	1.30	m ³
In Foundation	16	x	1.20	x	1.20	x	0.10	=	2.30	m ³
In P/walls:	2	x	5.00	x	0.25	x	0.10	=	0.25	m ³
	8	x	5.00	x	0.35	x	0.50	=	7.00	m ³
	4	x	3.50	x	0.35	x	0.50	=	2.45	m ³
In Steps:	1	x	2.00	x	0.80	x	0.10	=	0.16	m ³
								Total	13.46	m ³

@ Rs.5,900.00 per m³

Rs.79,414.00

3/2.5.1 In foundation & sub-structure including footings, columns with base, tie & plinth beam etc. not less than 100 mm thick upto plinth level.

(a) M15 OR PROP. 1:2:4 (For non structural work)

In Footing	16	x	0.90	x	0.90	x	0.20	=	2.59	m ³
	16	x	(0.90 + 0.20) / 2	x		x	0.20	=	1.76	m ³
In col. stem:	16	x	0.25	x	0.25	x	3.10	=	3.10	m ³
In Tie Beam:	2	x	5.00	x	0.25	x	0.25	=	0.63	m ³
	8	x	5.00	x	0.25	x	0.25	=	2.50	m ³
	4	x	3.50	x	0.25	x	0.25	=	0.88	m ³
								Total	11.45	m ³

@ Rs.7,795.00 per m³

Rs.89,268.34

4/2.5.3 In columns, pillars, posts, struts, suspended floors, roof, landings etc above plinth upto 1st floor level (without using admixture, plasticiser)

(a) M15 OR PROP. 1:2:4 (For non-structural work)

In Column:	16	x	0.25	x	0.25	x	3.10	=	3.10	m ³
In Lintels	2	x	5.00	x	0.15	x	0.15	=	0.23	m ³
	8	x	5.00	x	0.15	x	0.15	=	0.90	m ³
	4	x	3.50	x	0.15	x	0.15	=	0.32	m ³
								Total	4.54	m ³

@ Rs.7,977.00 per m³

Rs.36,215.58

5/2.8 Supplying fitting & fixing in position reinforcement bars upto 1st floor level etc. complete

(a) From primary sources like TATA/SAIL/ESSAIR/JINDAL/SHYAM/RINL

(i) TMT corrosion resist steel (CRS) reinforcement bar

In Footing:

Column from footing upto PL	16	x	22	x	2.00	x	0.8900	=	626.56	Kgs
Stirrups	16	x	4	x	2.00	x	1.5800	=	202.24	Kgs
Column from PL to First floor level	16	x	32	x	0.64	x	0.3950	=	129.43	Kgs
In Plinth Beam:	16	x	4	x	3.10	x	1.5800	=	313.47	Kgs
	2	x	4	x	4.00	x	0.8900	=	28.48	Kgs
	8	x	5	x	5.00	x	0.8900	=	178.00	Kgs
	4	x	2	x	3.00	x	0.8900	=	21.36	Kgs
Stirrups	2	x	29	x	4.00	x	0.3950	=	91.64	Kgs

8	x	24	x	5.00	x	0.3950	=	379.20	Kgs
4	x	21	x	3.00	x	0.3950	=	99.54	Kgs
2	x	22	x	3.50	x	0.3950	=	60.83	Kgs

Roof Slab @ 300mm C/c & 150 mm C/c

1	x	8	x	28	x	4.00	x	0.6200	=	555.52	Kgs
1	x	8	x	14	x	4.00	x	0.8900	=	398.72	Kgs
1	x	3	x	35	x	6.50	x	0.6200	=	423.15	Kgs
1	x	3	x	14	x	3.00	x	0.8900	=	112.14	Kgs
1	x	4	x	7	x	2.50	x	0.6200	=	43.40	Kgs
1	x	4	x	26	x	1.00	x	0.8900	=	92.56	Kgs
1	x	2	x	4	x	6.20	x	0.6200	=	30.75	Kgs
1	x	2	x	33	x	2.00	x	0.6200	=	81.84	Kgs
									Total	3868.84	Kgs
									Say	38.69	Qntls.
									=	3.87	Qntls.
									=	42.56	Qntls.

Add 10% extra for wastage and overlapping

Rs.409,315.53

@ Rs.9,618.00 per Qntl.

6/2.10 Providing foam work of ordinary timber planking of trenches not less than 25 mm & removal of the same for concrete members etc. including centering & shuttering & propping as directed

(b) In Footing

(c) In Plinth beams

(d) In Lintels

16	x	2.00	x	1.00	x	0.25	=	8.00	m ²
2	x	5.00	x	0.25	x	0.25	=	0.63	m ²
8	x	5.00	x	0.25	x	0.25	=	2.50	m ²
4	x	3.50	x	0.25	x	0.25	=	0.88	m ²
5	x	4.00	x	0.25	x	0.25	=	1.25	m ²
4	x	4.00	x	0.25	x	0.25	=	1.00	m ²
4	x	4.00	x	0.25	x	0.25	=	1.00	m ²
3	x	4.00	x	0.25	x	0.25	=	0.75	m ²
							Total	16.00	m ²

Rs.6,912.00

@ Rs.432.00 per m²

7/3.1 (a) Cement concrete work in topping 1:1:2 on R.C.C. floor, tread & rise of steps finish with a floating coat of neat cement etc. complete as directed

In steps :

In Floor:

2	x	2.00	x	0.80		=	3.20	m ²
2	x	5.00	x	3.50		=	35.00	m ²
2	x	5.00	x	3.00		=	30.00	m ²
1	x	2.00	x	7.00		=	14.00	m ²
1	x	2.00	x	12.00		=	24.00	m ²
1	x	1.50	x	12.00		=	18.00	m ²
						Total	124.20	m ²

Rs.40,365.00

@ Rs.325.00 per m²

8/3.4 Providing CC floor 65 mm thick consisting of 50 mm under layer cement concrete in prop 1:3:6 etc. complete as directed

In Floor of rooms:

2	x	5.00	x	3.50		=	35.00	m ²
2	x	5.00	x	3.00		=	30.00	m ²
1	x	2.00	x	7.00		=	14.00	m ²
1	x	2.00	x	12.00		=	24.00	m ²
1	x	1.50	x	12.00		=	18.00	m ²
						Total	121.00	m ²

Rs.85,910.00

@ Rs.710.00 per m²

9/4.1 Providing brick soling in foundation & under floor with stone/best quality etc. complete

(c.) Stone soling of thickness 100 mm

In Floor

1	x	5.00	x	3.50		=	17.50	m ²
2	x	5.00	x	3.00		=	30.00	m ²
1	x	2.00	x	7.00		=	14.00	m ²
1	x	2.00	x	12.00		=	24.00	m ²
1	x	1.50	x	12.00		=	18.00	m ²
						Total	103.50	m ²

Rs.40,468.50

@ Rs.391.00 per m²

10/4.4 Brick work in cement mortar with 1st class brick including racking out joints & curing complete etc. as directed

(d) In prop. 1:6 (1 cement:6 sand)

In Plinth wall:

2	x	5.00	x	0.25	x	0.80	=	2.00	m ³
8	x	5.00	x	0.25	x	0.80	=	8.00	m ²
4	x	3.50	x	0.25	x	0.80	=	2.80	m ²
1	x	3.00	x	0.25	x	0.80	=	0.60	m ²
							Total	13.40	m ³

Rs.66,772.20

@ Rs.4,983.00 per m³

11/4.4 Brick work in cement mortar with 1st class brick including racking out joints & curing complete in super structure above plinth level upto 1st floor level etc as directed

In prop. 1:4 (1 cement:4 sand)

In Walls:

2	x	3.50	x	5.00	x	3.10	=	108.50	m ³
2	x	(1.60)	+	(0.90)/2	x	3.10	=	7.70	m ³
2	x	5.00	x	3.00	x	3.10	=	93.00	m ³
2	x	(1.60)	+	(0.90)/2	x	3.10	=	7.70	m ³
							Total	216.90	m ³

Deduct Openings(-)

Doors:	D	8	x	0.90	x	2.10	=	15.12	m ³
	D1	1	x	0.60	x	2.10	=	1.26	m ³
Windows/Ventilation	W	7	x	1.00	x	1.40	=	9.80	m ³
Ventilation	V2	1	x	0.50	x	0.30	=	0.15	m ²
							Total	26.33	m ³

Deduct for openings:-

= (216.900 - 26.33)

190.57 m³

Rs.1,559,815.45

@ Rs.8,185.00 per m³

12/14.2 Providing fitting and fixing M.S Grill of required pattern for windows/leroys windows/opening/railing with M.S flats at required spacing in frame all round, square or round M.S bars with round headed bolts and nuts or screws.

(b) Ornamental Grill

(i) Fixed to wooden frames

W	7	x	1.00	x	1.00	x	1.40	x	4.90	=	48.02	kg	
V2	1	x	0.50	x	0.50	x	0.30	x	4.90	=	0.37	kg	
Varandah	1	x	2.00	x	7.00	x	1.40	x	4.90	=	96.04	kg	
										Total	=	144.43	kg

Rs.25,419.24

@ Rs.176.00 per kg

13/5.1 10 mm thick cement plaster in single coat on pair side of brick/concrete walls for interior plastering upto 1st floor level etc. complete

(b) In cement mortar 1:4

i. Interior walls:

2	x	5.00	x	3.50	x	3.10	=	108.50	m ²
2	x	5.00	x	3.00	x	3.10	=	93.00	m ²
1	x	2.00	x	12.00	x	3.10	=	74.40	m ²
1	x	2.00	x	7.00	x	3.10	=	43.40	m ²
1	x	1.50	x	12.00	x	3.10	=	55.80	m ²
2	x	2.00	x	(1.60 x 0.90)/2			=	2.88	m ²
							Total	377.98	m ²

Deduct Openings(-)

Doors:	D	8	x	0.90	x	2.10	=	15.12	m ³
	D1	1	x	0.60	x	2.10	=	1.26	m ³
Windows/Ventilation	W	7	x	1.00	x	1.40	=	9.80	m ³
Ventilation	V2	1	x	0.50	x	0.30	=	0.15	m ²
							Total	26.33	m ³

351.65 m³

Rs.68,923.40

Deduct for openings:-

@ Rs.196.00 per m²

14/8.1 Providing dressed wood work in post, walls, battens, post plate etc. including supplying fitting & fixing with spikes, nails, bolts etc. complete as directed.

(b).With 1st class local timber(poorna/hallock/gamari etc)

i. Doors:

D	8	x	2.3	x	0.10	x	0.08	=	0.15	m ³
D1	1	x	2.3	x	0.10	x	0.08	=	0.02	m ³

Total 0.17 m³

Rs.19,271.20

@ Rs.116,372 per m³

15/11.1 Providing and fixing steel windows ventilators openable of standard rolled steel section as per I.S code joints mitred & welded with 15 mmx3mmx100mm etc. complete....

Windows & Ventilations	W	8	x	1.00	x	1.40	=	11.20 m ²
Ventilation	V2	1	x	0.50	x	0.30	=	0.15 m ²
								<u>11.35 m²</u>

@ Rs.3,443 per m³

Rs.39,078.05

16/15.4 White washing with lime on wall surfaces (two coats) to give an even shades including thoroughly brooming etc. complete

In walls	2	x	12.00	x	3.10	=	74.40 m ²
	1	x	12.00	x	3.10	=	37.20 m ²
	1	x	10.00	x	3.10	=	31.00 m ²
In ceiling	2	x	5.00	x	3.50	=	35.00 m ²
	2	x	5.00	x	3.00	=	30.00 m ²
	1	x	2.00	x	12.00	=	24.00 m ²
	1	x	2.00	x	7.00	=	14.00 m ²
	1	x	1.50	x	12.00	=	18.00 m ²
						Total	263.60 m ²

Deduction For Openings (-)

Doors:	D	8	x	0.90	x	2.10	=	15.12 m ²
	D1	1	x	0.60	x	2.10	=	1.26 m ²
Windows/Ventilation	W	7	x	1.00	x	1.40	=	9.80 m ²
Ventilation	V2	1	x	0.50	x	0.30	=	0.15 m ²
						Total	26.33 m ²	

Deduct for openings:- = (263.60 - 26.33)

237.27 m²

Rs.7,592.64

@ Rs.32 per m²

17/15.69 Painting two coats (excluding priming coat) on new steel and other metal surface with enamel paint of approved brand etc. complete.

(a) surface over 100 mm in width or girth

(a) With high gloss paint.

I. Two coat (new work):

Doors:	D	8	x	0.90	x	2.10	=	15.12 m ²
	D1	1	x	0.60	x	2.10	=	1.26 m ²
Windows/Ventilation	W	7	x	1.00	x	1.40	=	9.80 m ²
Ventilation	V2	1	x	0.40	x	0.20	=	0.08 m ²
						Total	26.18 m ²	

@ Rs.151 per m²

Rs.3,953.18

18/19.4 Providing CC/Brick/Stone open surface drain with 15 mm thick cement plastering in prop. 1:3 finish with a floating coat of cement slurry as directed with necessary shuttering for sides and earthwork in excavation of foundation trenches and refilling the sides after completion of work etc. as specified.

(a) With cement concrete (1:3:6) having 100 mm thick sides and 100 mm thick bed laid over brick flat soiling.

(i) 300mm wide and average 150mm deep

1	x	56.00	=	56.00 Rm
			Total	= 56.00 Rm

Rs.75,040.00

@ Rs.1,340 per R.m.

2663992.85 Rs.2,658,573.12

Add 4% for Carrying Charge

106559.69 Rs.105,542.92

Add 7% for electrification & Water Pipe Fittings 182479.46 Rs.184,700.12

Grand Total Rs.2,928,816.16

Rs. 29,57,031.50

Rs.2,928,800.00

29,57,000.00

Fifty Seven (Rupees Twenty Nine Lakhs Twenty Eight Thousand Eight Hundred) Only

Checked by

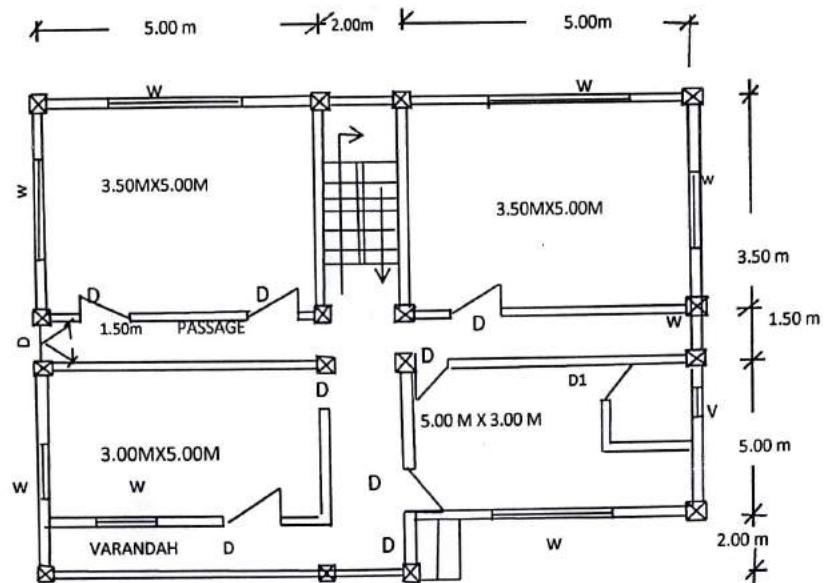
Prepared By

JUNIOR ENGINEER, P.W.D.
BUILDING DIVISION, TURA

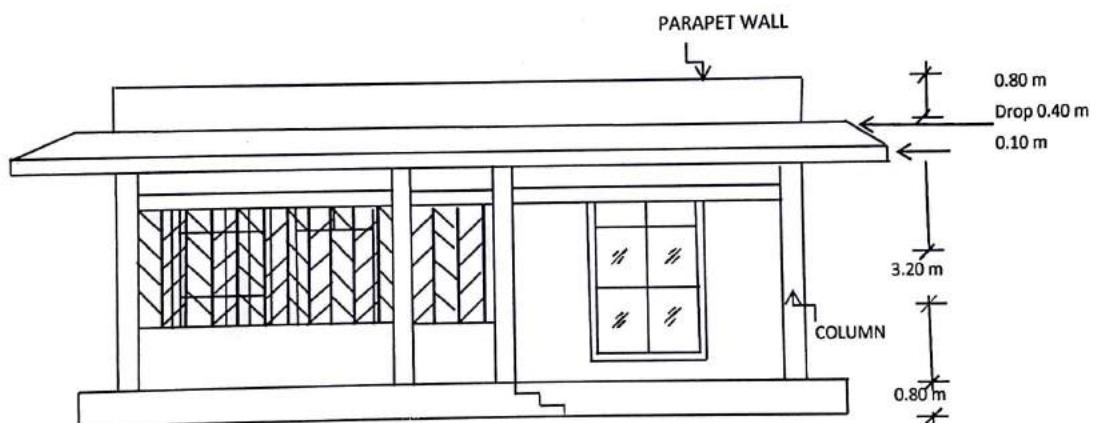
COUNTERSIGNED BY

Executive Engineer P.W.D.
Tura Building Division, Tura

CONSTRUCTION OF SUB-BEAT FOREST OFFICE CUM QUARTER



PLAN
(Not To Scale)

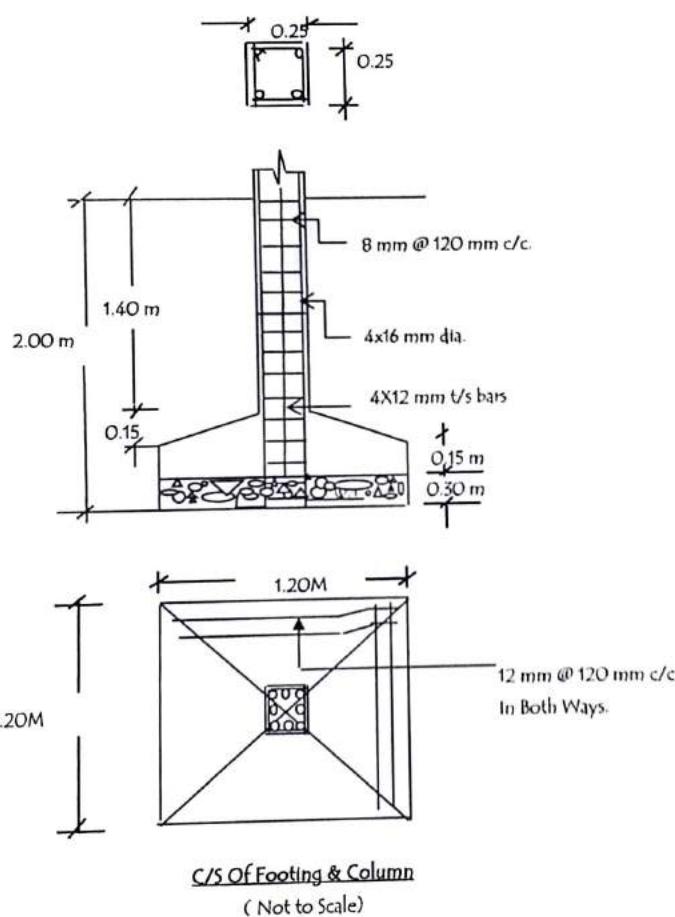
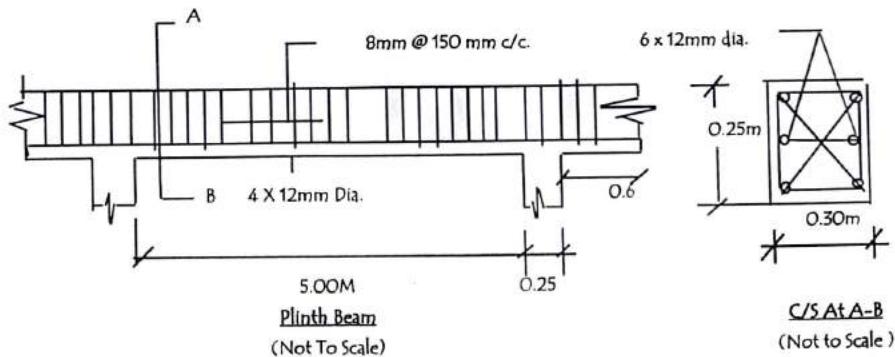


FRONT ELEVATION

Traced by

COUNTERSIGNED
Counter signed by
Executive Engineer P.N.D.
Tura Building Division, Tura

Details Of Reinforcement



Traced by

COUNTERSIGNED

Executive Engineer P.N.D.
Tura Building Division, Tura

ESTIMATE

Detailed Estimate For The Construction Of Sub-Beat Forest Office Cum Quarter At Bawaniipus, Baghmara

(Rate quoted as per MPWD schedule of Rate for Building Work for the year 2015-16 for Khasi Hills, Jaintia Hills and Garo Hills.)

1/1.1 Earth work in excavation upto a depth of 2 m below the existing ground level for foundation trenches of foundations, footings of column, walls etc. complete as directed.

(a) Ordinary Soil.

In Foundation	16	x	1.20	x	1.20	x	2.00	=	46.08	m ³
In P/walls:	2	x	5.00	x	0.35	x	0.50	=	1.75	m ³
	8	x	5.00	x	0.35	x	0.50	=	7.00	m ³
	3	x	3.50	x	0.35	x	0.50	=	1.84	m ³
In steps:	1	x	2.00	x	0.80	x	0.40	=	0.64	m ³
								Total	57.31	m ³

@ Rs.179.00 per m³

Rs.10,258.04

2/2.1 Plain concrete work with coarse aggregate of sizes 13 mm to 32 mm in foundation bed for footing, steps, walls, brick work etc. complete as directed.

(b) In prop. 1:4:8

In Footing	16	x	0.90	x	0.90	x	0.10	=	1.30	m ³
In Foundation	16	x	1.20	x	1.20	x	0.10	=	2.30	m ³
In P/walls:	2	x	5.00	x	0.25	x	0.10	=	0.25	m ³
	8	x	5.00	x	0.35	x	0.50	=	7.00	m ³
	4	x	3.50	x	0.35	x	0.50	=	2.45	m ³
In Steps:	1	x	2.00	x	0.80	x	0.10	=	0.16	m ³
								Total	13.46	m ³

@ Rs.5,900.00 per m³

Rs.79,414.00

3/2.5.1 In foundation & sub-structure including footings, columns with base, tie & plinth beam etc. not less than 100 mm thick upto plinth level.

(a) M15 OR PROP. 1:2:4 (For non structural work)

In Footing	16	x	0.90	x	0.90	x	0.20	=	2.59	m ³
	16	x	(0.90 + 0.20) / 2	x		x	0.20	=	1.76	m ³
In col. stem:	16	x	0.25	x	0.25	x	3.10	=	3.10	m ³
In Tie Beam:	2	x	5.00	x	0.25	x	0.25	=	0.63	m ³
	8	x	5.00	x	0.25	x	0.25	=	2.50	m ³
	4	x	3.50	x	0.25	x	0.25	=	0.88	m ³
								Total	11.45	m ³

@ Rs.7,795.00 per m³

Rs.89,268.34

4/2.5.3 In columns, pillars, posts, struts, suspended floors, roof, landings etc above plinth upto 1st floor level (without using admixture, plasticiser)

(a) M15 OR PROP. 1:2:4 (For non-structural work)

In Column:	16	x	0.25	x	0.25	x	3.10	=	3.10	m ³
In Lintels	2	x	5.00	x	0.15	x	0.15	=	0.23	m ³
	8	x	5.00	x	0.15	x	0.15	=	0.90	m ³
	4	x	3.50	x	0.15	x	0.15	=	0.32	m ³
								Total	4.54	m ³

@ Rs.7,977.00 per m³

Rs.36,215.58

5/2.8 Supplying fitting & fixing in position reinforcement bars upto 1st floor level etc. complete

(a) From primary sources like TATA/SAIL/ESSAIR/JINDAL/SHYAM/RINL

(i) TMT corrosion resist steel (CRS) reinforcement bar

In Footing:	16	x	22	x	2.00	x	0.8900	=	626.56	Kgs
Column from footing upto PL	16	x	4	x	2.00	x	1.5800	=	202.24	Kgs
Stirrups	16	x	32	x	0.64	x	0.3950	=	129.43	Kgs
Column from PL to First floor level	16	x	4	x	3.10	x	1.5800	=	313.47	Kgs
In Plinth Beam:										
	2	x	4	x	4.00	x	0.8900	=	28.48	Kgs
	8	x	5	x	5.00	x	0.8900	=	178.00	Kgs
	4	x	2	x	3.00	x	0.8900	=	21.36	Kgs
Stirrups	2	x	29	x	4.00	x	0.3950	=	91.64	Kgs

215155.96

8	x	24	x	5.00	x	0.3950	=	379.20	Kgs
4	x	21	x	3.00	x	0.3950	=	99.54	Kgs
2	x	22	x	3.50	x	0.3950	=	60.83	Kgs

Roof Slab @ 300mm C/c & 150 mm C/c

1	x	8	x	28	x	4.00	x	0.6200	=	555.52	Kgs
1	x	8	x	14	x	4.00	x	0.8900	=	398.72	Kgs
1	x	3	x	35	x	6.50	x	0.6200	=	423.15	Kgs
1	x	3	x	14	x	3.00	x	0.8900	=	112.14	Kgs
1	x	4	x	7	x	2.50	x	0.6200	=	43.40	Kgs
1	x	4	x	26	x	1.00	x	0.8900	=	92.56	Kgs
1	x	2	x	4	x	7	x	0.6200	=	30.75	Kgs
1	x	2	x	33	x	2.00	x	0.6200	=	81.84	Kgs
										Total	3868.84 Kgs
										Say	38.69 Qntls.
										=	3.87 Qntls.
										=	42.56 Qntls.

Add 10% extra for wastage and overlapping

@ Rs.9,618.00 per Qntl.

Rs.409,315.53

6/2.10 Providing foam work of ordinary timber planking of trenches not less than 25 mm & removal of the same for concrete members etc. including centering & shuttering & propping as directed

(b) In Footing	16	x	2.00	x	1.00	x	0.25	=	8.00	m ²	
(c) In Plinth beams	2	x	5.00	x	0.25	x	0.25	=	0.63	m ²	
	8	x	5.00	x	0.25	x	0.25	=	2.50	m ²	
	4	x	3.50	x	0.25	x	0.25	=	0.88	m ²	
(d) In Lintels	5	x	4.00	x	0.25	x	0.25	=	1.25	m ²	
	4	x	4.00	x	0.25	x	0.25	=	1.00	m ²	
	4	x	4.00	x	0.25	x	0.25	=	1.00	m ²	
	3	x	4.00	x	0.25	x	0.25	=	0.75	m ²	
										Total	16.00 m ²

@ Rs.432.00 per m²

Rs.6,912.00

7/3.1 (a) Cement concrete work in topping 1:1:2 on R.C.C. floor ,tread & rise of steps finish with a floating coat of neat cement etc. complete as directed

In steps :	2	x	2.00	x	0.80		=	3.20	m ²		
In Floor:	2	x	5.00	x	3.50		=	35.00	m ²		
	2	x	5.00	x	3.00		=	30.00	m ²		
	1	x	2.00	x	7.00		=	14.00	m ²		
	1	x	2.00	x	12.00		=	24.00	m ²		
	1	x	1.50	x	12.00		=	18.00	m ²		
										Total	124.20 m ²

@ Rs.325.00 per m²

Rs.40,365.00

8/3.4 Providing CC floor 65 mm thick consisting of 50 mm under layer cement concrete in prop 1:3:6 etc. complete as directed

In Floor of rooms:	2	x	5.00	x	3.50		=	35.00	m ²
	2	x	5.00	x	3.00		=	30.00	m ²
	1	x	2.00	x	7.00		=	14.00	m ²
	1	x	2.00	x	12.00		=	24.00	m ²
	1	x	1.50	x	12.00		=	18.00	m ²

@ Rs.710.00 per m²

Rs.85,910.00

9/4.1 Providing brick soling in foundation & under floor with stone/best quality etc. complete

(c) Stone soling of thickness 100 mm

In Floor	1	x	5.00	x	3.50		=	17.50	m ²
	2	x	5.00	x	3.00		=	30.00	m ²
	1	x	2.00	x	7.00		=	14.00	m ²
	1	x	2.00	x	12.00		=	24.00	m ²
	1	x	1.50	x	12.00		=	18.00	m ²

Total 103.50 m²

@ Rs.391.00 per m²

Rs.40,468.50

10/4.4 Brick work in cement mortar with 1st class brick including racking out joints & curing complete etc. as directed

(d) In prop. 1:6 (1 cement:6 sand)

In Plinth wall:

2	x	5.00	x	0.25	x	0.80	=	2.00	m ³
8	x	5.00	x	0.25	x	0.80	=	8.00	m ²
4	x	3.50	x	0.25	x	0.80	=	2.80	m ²
1	x	3.00	x	0.25	x	0.80	=	0.60	m ²

Total 13.40 m³

@ Rs.4,983.00 per m³

Rs.66,772.20

11/4.4 Brick work in cement mortar with 1st class brick including racking out joints & curing complete in super structure above plinth level upto 1st floor level etc as directed

In prop. 1:4 (1 cement:4 sand)

In Walls:

2	x	3.50	x	5.00	x	3.10	=	108.50	m ³
2	x	(1.60)	+	0.90)/2	x	3.10	=	7.70	m ³
2	x	5.00	x	3.00	x	3.10	=	93.00	m ³
2	x	(1.60)	+	0.90)/2	x	3.10	=	7.70	m ³

216.90 m³

Deduct Openings(-)

Doors:	D	8	x	0.90	x	2.10	=	15.12	m ³
	D1	1	x	0.60	x	2.10	=	1.26	m ³
Windows/Ventilation	W	7	x	1.00	x	1.40	=	9.80	m ³
Ventilation	V2	1	x	0.50	x	0.30	=	0.15	m ²

Total 26.33 m³

190.57 m³

Rs.1,559,815.45

Deduct for openings:- = (216.900 - 26.33)

@ Rs.8,185.00 per m³

12/14.2 Providing fitting and fixing M.S Grill of required pattern for windows/leroys windows/opening/railing with M.S flats at required spacing in frame all round, square or round M.S bars with round headed bolts and nuts or screws.

(b) Ornamental Grill

(i) Fixed to wooden frames

W	7	x	1.00	x	1.00	x	1.40	x	4.90	=	48.02	kg
V2	1	x	0.50	x	0.50	x	0.30	x	4.90	=	0.37	kg
Varandah	1	x	2.00	x	7.00	x	1.40	x	4.90	=	96.04	kg

Total = 144.43 kg

@ Rs.176.00 per kg

Rs.25,419.24

13/5.1 10 mm thick cement plaster in single coat on pair side of brick/concrete walls for interior plastering upto 1st floor level etc. complete

(b) In cement mortar 1:4

I. Interior walls:

2	x	5.00	x	3.50	x	3.10	=	108.50	m ²
2	x	5.00	x	3.00	x	3.10	=	93.00	m ²
1	x	2.00	x	12.00	x	3.10	=	74.40	m ²
1	x	2.00	x	7.00	x	3.10	=	43.40	m ²
1	x	1.50	x	12.00	x	3.10	=	55.80	m ²
2	x	2.00	x	(1.60 x 0.90)/2	x		=	2.88	m ²

377.98 m²

Deduct Openings(-)

Doors:	D	8	x	0.90	x	2.10	=	15.12	m ³
	D1	1	x	0.60	x	2.10	=	1.26	m ³
Windows/Ventilation	W	7	x	1.00	x	1.40	=	9.80	m ³
Ventilation	V2	1	x	0.50	x	0.30	=	0.15	m ²

Total 26.33 m³

351.65 m³

Rs.68,923.40

Deduct for openings:- = (377.98 - 26.33)

@ Rs.196.00 per m²

2519057.23

14/8.1 Providing dressed wood work in post,walls,battens,post plate etc. including supplying fitting & fixing with spikes,nails, bolts etc. complete as directed,

(b).With 1st class local timber(pooma/hallock/gamari etc)

I. Doors:

D	8	x	2.3	x	0.10	x	0.08	=	0.15	m ³
D1	1	x	2.3	x	0.10	x	0.08	=	0.02	m ³

@ Rs.116,372 per m³

Total 0.17 m³

Rs.19,271.20

15/11.1 Providing and fixing steel windows ventilators openable of standard rolled steel section as per I.S code joints mitred & welded with 15 mm x 3 mm x 100 mm etc. complete....

Windows & Ventilations	W	8	x	1.00	x	1.40	=	11.20 m ²
Ventilation	V2	1	x	0.50	x	0.30	=	0.15 m ²
								<u>11.35 m²</u>

@ Rs.3,443 per m³

Rs.39,078.05

16/15.4 White washing with lime on wall surfaces (two coats) to give an even shades including thoroughly brooming etc. complete

In walls	2	x	12.00	x	3.10	=	74.40 m ²
	1	x	12.00	x	3.10	=	37.20 m ²
	1	x	10.00	x	3.10	=	31.00 m ²
In ceiling	2	x	5.00	x	3.50	=	35.00 m ²
	2	x	5.00	x	3.00	=	30.00 m ²
	1	x	2.00	x	12.00	=	24.00 m ²
	1	x	2.00	x	7.00	=	14.00 m ²
	1	x	1.50	x	12.00	=	18.00 m ²
						Total	263.60 m ²

Deduction For Openings (-)

Doors:	D	8	x	0.90	x	2.10	=	15.12 m ³
	D1	1	x	0.60	x	2.10	=	1.26 m ³
Windows/Ventilation	W	7	x	1.00	x	1.40	=	9.80 m ³
Ventilation	V2	1	x	0.50	x	0.30	=	0.15 m ²
						Total	26.33 m ³	

Deduct for openings:- = (263.60 - 26.33) 237.27 m³

Rs.7,592.64

17/15.69 Painting two coats (excluding priming coat) on new steel and other metal surface with enamel paint of approved brand etc. complete.

(a) surface over 100 mm in width or girth

(a) With high gloss paint.

I. Two coat (new work):

Doors:	D	8	x	0.90	x	2.10	=	15.12 m ³
	D1	1	x	0.60	x	2.10	=	1.26 m ³
Windows/Ventilation	W	7	x	1.00	x	1.40	=	9.80 m ³
Ventilation	V2	1	x	0.40	x	0.20	=	0.08 m ²
						Total	26.18 m ³	

@ Rs.151 per m²

Rs.3,953.18

18/19.4 Providing CC/Brick/Stone open surface drain with 15 mm thick cement plastering in prop. 1:3 finish with a floating coat of cement slurry as directed with necessary shuttering for sides and earthwork in excavation of foundation trenches and refilling the sides after completion of work etc. as specified.

(a) With cement concrete (1:3:6) having 100 mm thick sides and 100 mm thick bed laid over brick flat soiling.

(i) 300mm wide and average 150mm deep

1	x	56.00	=	56.00 Rm
			Total	= 56.00 Rm

@ Rs.1,340 per R.m.

Rs.75,040.00

Rs. 2663992.35 - Rs.2,638,573.12

106559.69 Rs.105,542.92

Add 4% for Carrying Charge

Add 7% for electrification & Water Pipe Fittings 186479.46 Rs.184,700.12

Grand Total

Rs.2,928,816.16

Rs. 29,57,031.50

Say

Rs.2,928,800.00

Rs.29,57,000.00

(Rupees Twenty-Nine Lakhs Twenty-Eight Thousand-Eight Hundred) Only

Twenty nine lakh Fifty seven thousand

Checked by

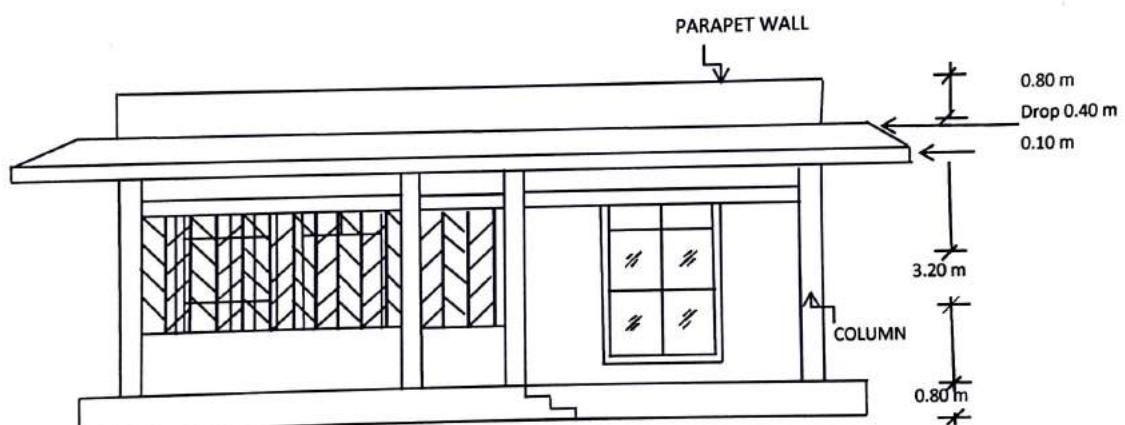
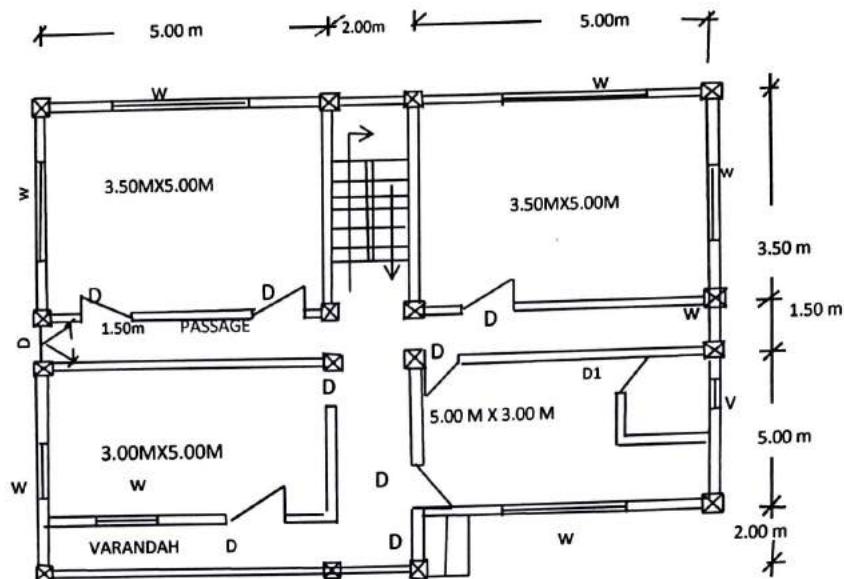
Prepared By

JUNIOR ENGINEER, P.W.D.
BUILDING DIVISION, TURA

COUNTERSIGNED

Executive Engineer P.W.D.
Tura Building Division, Tura

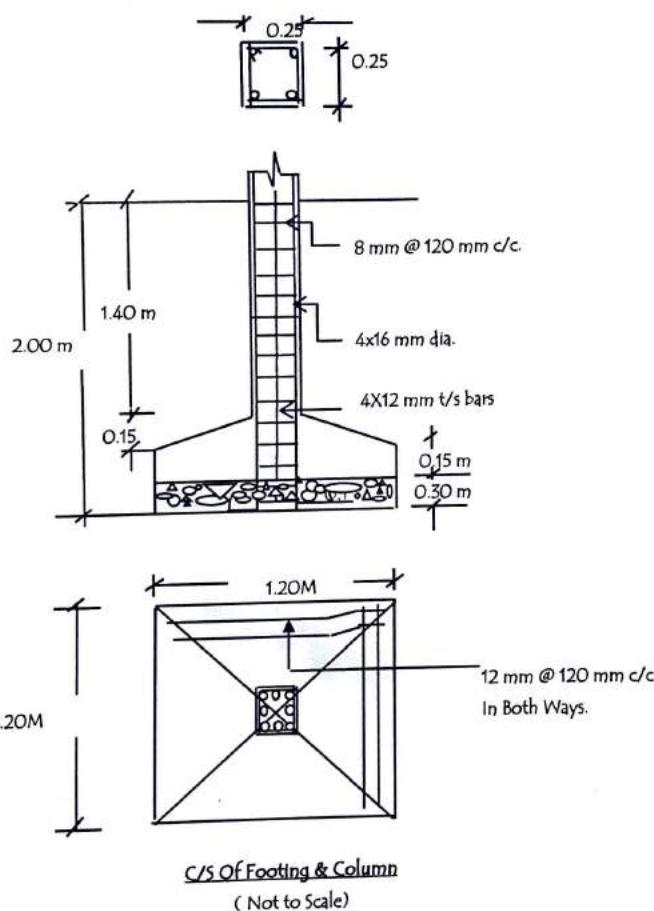
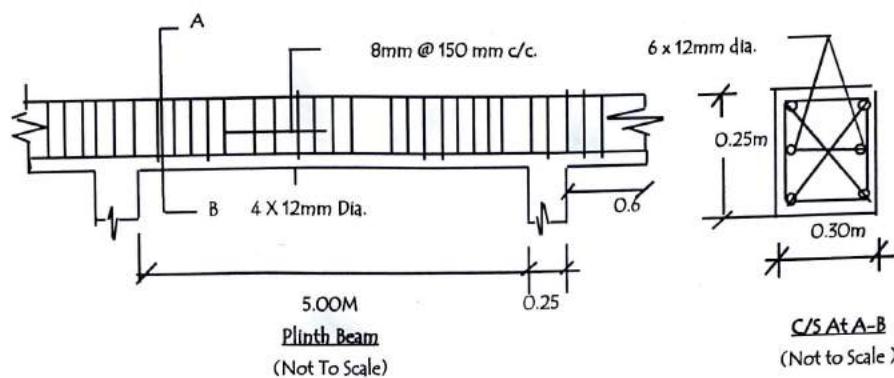
CONSTRUCTION OF SUB-BEAT FOREST OFFICE CUM QUARTER



Traced by

COUNTERSIGNED
Countersigned by
Executive Engineer P.W.D.
Tura Building Division, Tura

Details Of Reinforcement



Traced by

COUNTERSIGNED
Executive Engineer P.V.D.
Tura Building Division, Tura

ESTIMATE

Detailed Estimate For The Construction Of Sub-Beat Forest Office Cum Quarter At Masifhat, Baghmara
(Rate quoted as per MPWD schedule of Rate for Building Work for the year 2015-16 for Khasi Hills, Jaintia Hills and Garo Hills.)

1/1.1 Earth work in excavation upto a depth of 2 m below the existing ground level for foundation trenches of foundations, footings of column, walls etc. complete as directed.

(a) Ordinary Soil.

In Foundation	16	x	1.20	x	1.20	x	2.00	=	46.08	m ³
In P/walls:	2	x	5.00	x	0.35	x	0.50	=	1.75	m ³
	8	x	5.00	x	0.35	x	0.50	=	7.00	m ³
	3	x	3.50	x	0.35	x	0.50	=	1.84	m ³
In steps:	1	x	2.00	x	0.80	x	0.40	=	0.64	m ³
								Total	57.31	m ³

@ Rs.179.00 per m³

Rs.10,258.04

2/2.1 Plain concrete work with coarse aggregate of sizes 13 mm to 32 mm in foundation bed for footing, steps, walls, brick work etc. complete as directed.

(b) In prop. 1:4:8

In Footing	16	x	0.90	x	0.90	x	0.10	=	1.30	m ³
In Foundation	16	x	1.20	x	1.20	x	0.10	=	2.30	m ³
In P/walls:	2	x	5.00	x	0.25	x	0.10	=	0.25	m ³
	8	x	5.00	x	0.35	x	0.50	=	7.00	m ³
	4	x	3.50	x	0.35	x	0.50	=	2.45	m ³
In Steps:	1	x	2.00	x	0.80	x	0.10	=	0.16	m ³
								Total	13.46	m ³

@ Rs.5,900.00 per m³

Rs.79,414.00

3/2.5.1 In foundation & sub-structure including footings, columns with base, tie & plinth beam etc. not less than 100 mm thick upto plinth level.

(a) M15 OR PROP. 1:2:4 (For non structural work)

In Footing	16	x	0.90	x	0.90	x	0.20	=	2.59	m ³
	16	x	(0.90 + 0.20) / 2			x	0.20	=	1.76	m ³
In col. stem:	16	x	0.25	x	0.25	x	3.10	=	3.10	m ³
In Tie Beam:	2	x	5.00	x	0.25	x	0.25	=	0.63	m ³
	8	x	5.00	x	0.25	x	0.25	=	2.50	m ³
	4	x	3.50	x	0.25	x	0.25	=	0.88	m ³
								Total	11.45	m ³

@ Rs.7,795.00 per m³

Rs.89,268.34

4/2.5.3 In columns, pillars, posts, struts, suspended floors, roof, landings etc above plinth upto 1st floor level (without using admixture, plasticiser)

(a) M15 OR PROP. 1:2:4 (For non-structural work)

In Column:	16	x	0.25	x	0.25	x	3.10	=	3.10	m ³
In Lintels	2	x	5.00	x	0.15	x	0.15	=	0.23	m ³
	8	x	5.00	x	0.15	x	0.15	=	0.90	m ³
	4	x	3.50	x	0.15	x	0.15	=	0.32	m ³
								Total	4.54	m ³

@ Rs.7,977.00 per m³

Rs.36,215.58

5/2.8 Supplying fitting & fixing in position reinforcement bars upto 1st floor level etc. complete

(a) From primary sources like TATA/SAIL/ESSAIR/JINDAL/SHYAM/RINL

(i) TMT corrosion resist steel (CRS) reinforcement bar

In Footing:	16	x	22	x	2.00	x	0.8900	=	626.56	Kgs
Column from footing upto PL	16	x	4	x	2.00	x	1.5800	=	202.24	Kgs
Stirrups	16	x	32	x	0.64	x	0.3950	=	129.43	Kgs
Column from PL to First floor level	16	x	4	x	3.10	x	1.5800	=	313.47	Kgs
In Plinth Beam:	2	x	4	x	4.00	x	0.8900	=	28.48	Kgs
	8	x	5	x	5.00	x	0.8900	=	178.00	Kgs
	4	x	2	x	3.00	x	0.8900	=	21.36	Kgs
Stirrups	2	x	29	x	4.00	x	0.3950	=	91.64	Kgs

8	x	24	x	5.00	x	0.3950	=	379.20	Kgs
4	x	21	x	3.00	x	0.3950	=	99.54	Kgs
2	x	22	x	3.50	x	0.3950	=	60.83	Kgs

Roof Slab @ 300mm C/c & 150 mm C/c

1	x	8	x	28	x	4.00	x	0.6200	=	555.52	Kgs
1	x	8	x	14	x	4.00	x	0.8900	=	398.72	Kgs
1	x	3	x	35	x	6.50	x	0.6200	=	423.15	Kgs
1	x	3	x	14	x	3.00	x	0.8900	=	112.14	Kgs
1	x	4	x	7	x	2.50	x	0.6200	=	43.40	Kgs
1	x	4	x	26	x	1.00	x	0.8900	=	92.56	Kgs
1	x	2	x	4	x	7	x	0.6200	=	30.75	Kgs
1	x	2	x	33	x	2.00	x	0.6200	=	81.84	Kgs
									Total	3868.84	Kgs
									Say	38.69	Qntls.
									=	3.87	Qntls.
									=	42.56	Qntls.

Add 10% extra for wastage and overlapping

Rs.409,315.53

@ Rs.9,618.00 per Qntl.

6/2.10 Providing foam work of ordinary timber planking of trenches not less than 25 mm & removal of the same for concrete members etc. including centering & shuttering & propping as directed

(b) In Footing	16	x	2.00	x	1.00	x	0.25	=	8.00	m ²
(c) In Plinth beams	2	x	5.00	x	0.25	x	0.25	=	0.63	m ²
	8	x	5.00	x	0.25	x	0.25	=	2.50	m ²
	4	x	3.50	x	0.25	x	0.25	=	0.88	m ²
(d) In Lintels	5	x	4.00	x	0.25	x	0.25	=	1.25	m ²
	4	x	4.00	x	0.25	x	0.25	=	1.00	m ²
	4	x	4.00	x	0.25	x	0.25	=	1.00	m ²
	3	x	4.00	x	0.25	x	0.25	=	0.75	m ²
								Total	16.00	m ²

Rs.6,912.00

@ Rs.432.00 per m²

7/3.1 (a) Cement concrete work in topping 1:1:2 on R.C.C. floor, tread & rise of steps finish with a floating coat of neat cement etc. complete as directed

complete as directed										
In steps :	2	x	2.00	x	0.80			=	3.20	m ²
In Floor:	2	x	5.00	x	3.50			=	35.00	m ²
	2	x	5.00	x	3.00			=	30.00	m ²
	1	x	2.00	x	7.00			=	14.00	m ²
	1	x	2.00	x	12.00			=	24.00	m ²
	1	x	1.50	x	12.00			=	18.00	m ²
								Total	124.20	m ²

Rs.40,365.00

@ Rs.325.00 per m²

8/3.4 Providing CC floor 65 mm thick consisting of 50 mm under layer cement concrete in prop 1:3:6 etc. complete as directed

In Floor of rooms:	2	x	5.00	x	3.50			=	35.00	m ²
	2	x	5.00	x	3.00			=	30.00	m ²
	1	x	2.00	x	7.00			=	14.00	m ²
	1	x	2.00	x	12.00			=	24.00	m ²
	1	x	1.50	x	12.00			=	18.00	m ²
								Total	121.00	m ²

Rs.85,910.00

@ Rs.710.00 per m²

9/4.1 Providing brick soling in foundation & under floor with stone/best quality etc. complete

(c.) Stone soling of thickness 100 mm

In Floor	1	x	5.00	x	3.50			=	17.50	m ²
	2	x	5.00	x	3.00			=	30.00	m ²
	1	x	2.00	x	7.00			=	14.00	m ²
	1	x	2.00	x	12.00			=	24.00	m ²
	1	x	1.50	x	12.00			=	18.00	m ²
								Total	103.50	m ²

Rs.40,468.50

@ Rs.391.00 per m²

10/4.4 Brick work in cement mortar with 1st class brick including racking out joints & curing complete etc. as directed

(d) In prop. 1:6 (1 cement:6 sand)

In Plinth wall:

2	x	5.00	x	0.25	x	0.80	=	2.00	m ³
8	x	5.00	x	0.25	x	0.80	=	8.00	m ²
4	x	3.50	x	0.25	x	0.80	=	2.80	m ²
1	x	3.00	x	0.25	x	0.80	=	0.60	m ²

Total 13.40 m³

Rs.66,772.20

@ Rs.4,983.00 per m³

11/4.4 Brick work in cement mortar with 1st class brick including racking out joints & curing complete in super structure above plinth level upto 1st floor level etc as directed

(In prop. 1:4 (1 cement:4 sand))

In Walls:

2	x	3.50	x	5.00	x	3.10	=	108.50	m ³
2	x	(1.60	+	0.90)/2	x	3.10	=	7.70	m ³
2	x	5.00	x	3.00	x	3.10	=	93.00	m ³
2	x	(1.60	+	0.90)/2	x	3.10	=	7.70	m ³

216.90 m³

Deduct Openings(-)

Doors:

D	8	x	0.90	x	2.10		=	15.12	m ³
D1	1	x	0.60	x	2.10		=	1.26	m ³

Windows/Ventilation

W	7	x	1.00	x	1.40		=	9.80	m ³
V2	1	x	0.50	x	0.30		=	0.15	m ²

Ventilation

V2	1	x	0.50	x	0.30		=	0.15	m ²
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Total 26.33 m³190.57 m³

Deduct for openings:-

= (216.900 - 26.33)

Rs.1,559,815.45

@ Rs.8,185.00 per m³

12/14.2 Providing fitting and fixing M.S Grill of required pattern for windows/clarostory windows/opening/railing with M.S flats at required spacing in frame all round, square or round M.S bars with round headed bolts and nuts or screws.

(b) Ornamental Grill

(i) Fixed to wooden frames

W	7	x	1.00	x	1.00	x	1.40	x	4.90	=	48.02	kg
V2	1	x	0.50	x	0.50	x	0.30	x	4.90	=	0.37	kg
Varandah	1	x	2.00	x	7.00	x	1.40	x	4.90	=	96.04	kg

Total = 144.43 kg

Rs.25,419.24

@ Rs.176.00 per kg

13/5.1 10 mm thick cement plaster in single coat on pair side of brick/concrete walls for interior plastering upto 1st floor level etc. complete

(b) In cement mortar 1:4

I. Interior walls:

2	x	5.00	x	3.50	x	3.10	=	108.50	m ²
2	x	5.00	x	3.00	x	3.10	=	93.00	m ²
1	x	2.00	x	12.00	x	3.10	=	74.40	m ²
1	x	2.00	x	7.00	x	3.10	=	43.40	m ²
1	x	1.50	x	12.00	x	3.10	=	55.80	m ²
2	x	2.00	x	(1.60 x 0.90)/2			=	2.88	m ²

377.98 m²

Deduct Openings(-)

Doors:

D	8	x	0.90	x	2.10		=	15.12	m ³
D1	1	x	0.60	x	2.10		=	1.26	m ³

Windows/Ventilation

W	7	x	1.00	x	1.40		=	9.80	m ³
V2	1	x	0.50	x	0.30		=	0.15	m ²

Total 26.33 m³

Deduct for openings:-

= (377.98 - 26.33)

351.65 m³

Rs.68,923.40

@ Rs.196.00 per m²

14/8.1 Providing dressed wood work in post,walls,battens,post plate etc. including supplying fitting & fixing with spikes,nails, bolts etc. complete as directed,

(b).With 1st class local timber(pooma/hallock/gamari etc)

I. Doors:

D	8	x	2.3	x	0.10	x	0.08	=	0.15	m ³
D1	1	x	2.3	x	0.10	x	0.08	=	0.02	m ³

Total 0.17 m³

Rs.19,271.20

@ Rs.116,372 per m³

15/11.1 Providing and fixing steel windows ventilators openable of standard rolled steel section as per I.S code joints mitred & welded with 15 mmx3mmx100mm etc. complete....

Windows & Ventilations	W	8	x	1.00	x	1.40	=	11.20	m ²
Ventilation	V2	1	x	0.50	x	0.30	=	0.15	m ²
								11.35	m ²

Rs.39,078.05

@ Rs.3,443 per m³

16/15.4 White washing with lime on wall surfaces (two coats) to give an even shades including thoroughly brooming etc. complete

In walls	2	x	12.00	x	3.10	=	74.40	m ²
	1	x	12.00	x	3.10	=	37.20	m ²
	1	x	10.00	x	3.10	=	31.00	m ²
In ceiling	2	x	5.00	x	3.50	=	35.00	m ²
	2	x	5.00	x	3.00	=	30.00	m ²
	1	x	2.00	x	12.00	=	24.00	m ²
	1	x	2.00	x	7.00	=	14.00	m ²
	1	x	1.50	x	12.00	=	18.00	m ²
						Total	263.60	m ²

Deduction For Openings (-)

Doors:	D	8	x	0.90	x	2.10	=	15.12	m ³
	D1	1	x	0.60	x	2.10	=	1.26	m ³
Windows/Ventilation	W	7	x	1.00	x	1.40	=	9.80	m ³
Ventilation	V2	1	x	0.50	x	0.30	=	0.15	m ²
						Total	26.33	m ³	

Deduct for openings:- = (263.60 - 26.33) 237.27 m³

Rs.7,592.64

@ Rs.32 per m²

17/15.69 Painting two coats (excluding priming coat) on new steel and other metal surface with enamel paint of approved brand etc. complete.

(a) surface over 100 mm in width or girth

(a) With high gloss paint.

I. Two coat (new work):

Doors:	D	8	x	0.90	x	2.10	=	15.12	m ³
	D1	1	x	0.60	x	2.10	=	1.26	m ³
Windows/Ventilation	W	7	x	1.00	x	1.40	=	9.80	m ³
Ventilation	V2	1	x	0.40	x	0.20	=	0.08	m ²
						Total	26.18	m ³	

@ Rs.151 per m²

Rs.3,953.18

18/19.4 Providing CC/Brick/Stone open surface drain with 15 mm thick cement plastering in prop. 1:3 finish with a floating coat of cement slurry as directed with necessary shuttering for sides and earthwork in excavation of foundation trenches and refilling the sides after completion of work etc. as specified.

(a) With cement concrete (1:3:6) having 100 mm thick sides and 100 mm thick bed laid over brick flat soiling.

(i) 300mm wide and average 150mm deep

1	x	56.00	=	56.00	Rm
			Total	=	56.00 Rm

Rs.75,040.00

@ Rs.1,340 per R.m.

Rs. 2663992.36

Rs.2,630,573.42

Add 4 % for Carrying Charge Rs. 106559.69

Rs.105,542.92

Add 7% for electrification & Water Pipe Fittings 186479.46

Rs.184,700.12

Grand Total

Rs.2,928,816.16

Say

Rs.2,928,800.00

Rs. 29,53,600.10

(Rupees Twenty Nine Lakhs Twenty-Eight Thousand Eight Hundred) Only

Fifty seven thousand

Checked by

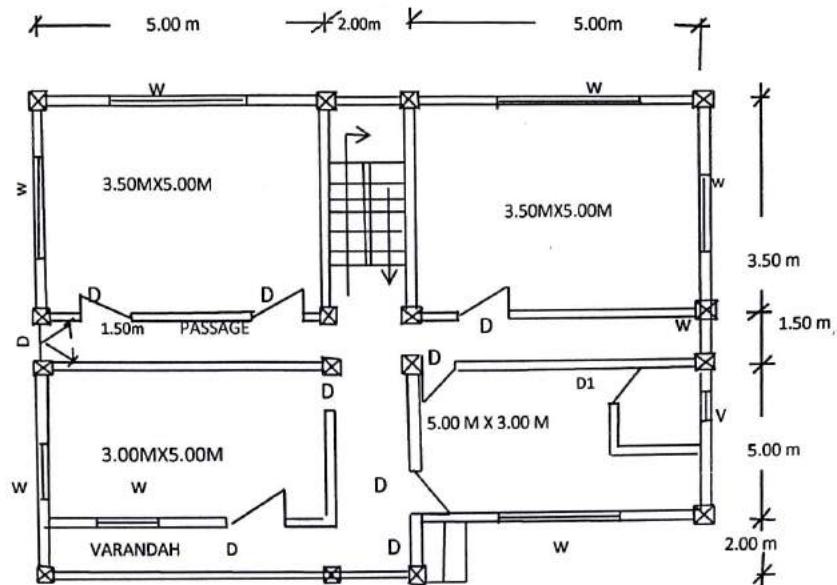
Prepared By

JUNIOR ENGINEER, P.W.D.
BUILDING DIVISION, TURA.

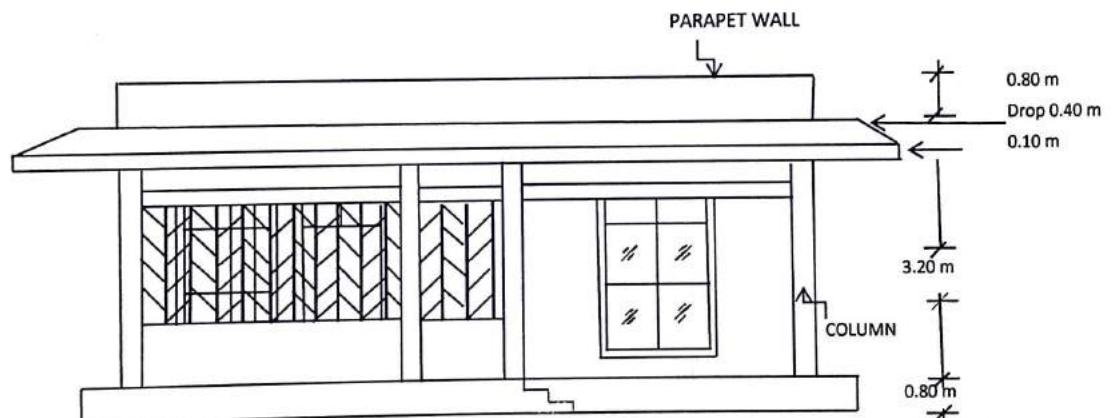
COUNTER SIGNED

Executive Engineer P.W.D.
Tura Building Division, Tura

CONSTRUCTION OF SUB-BEAT FOREST OFFICE CUM QUARTER



PLAN
(Not To Scale)

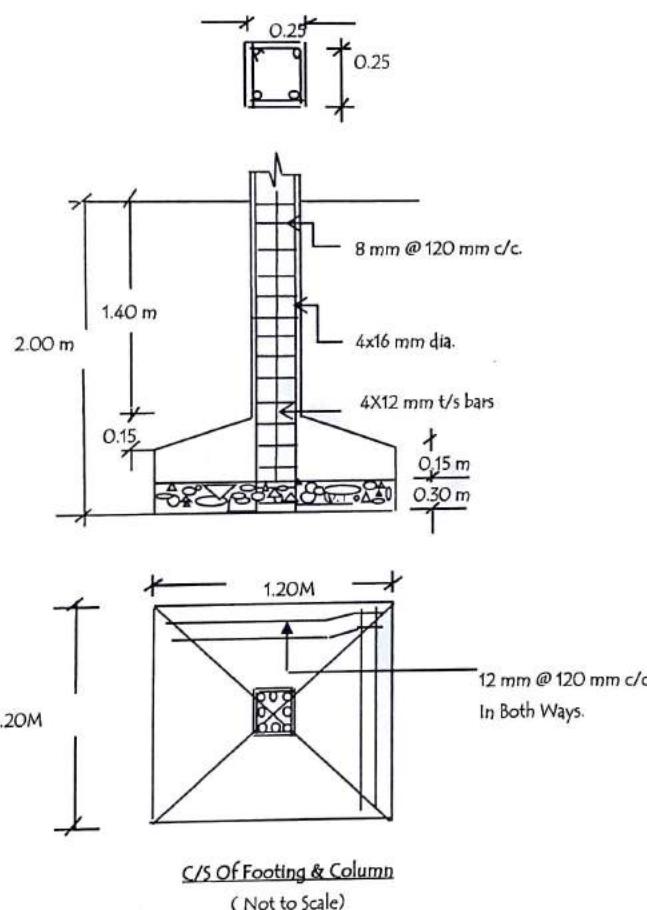
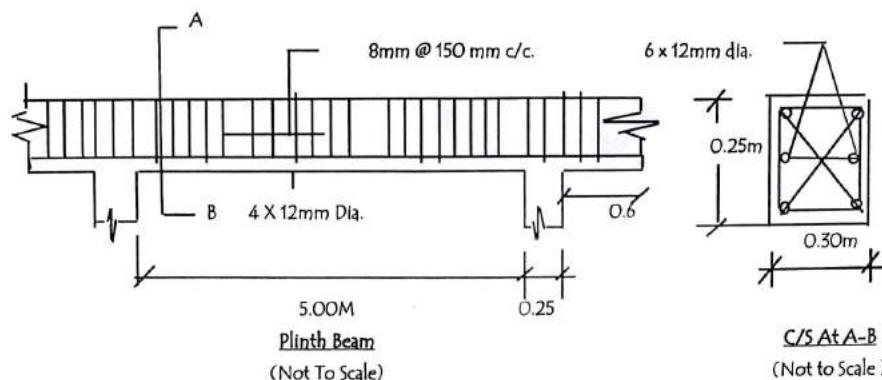


FRONT ELEVATION

Traced by

CO-INTER-SIGNED
Executive Engineer P.N.D.
Tura Building Division, Tura

Details Of Reinforcement



Traced by

COUNTERSIGNED

Executive Engineer P.V.D.
Tura Building Division, Tura

ESTIMATE

Detailed Estimate For The Construction Of Sub-Beat Forest Office Cum Quarter At Konangre, Baghmara
(Rate quoted as per MPWD schedule of Rate for Building Work for the year 2015-16 for Khasi Hills, Jaintia Hills and Garo Hills.)

1/1.1 Earth work in excavation upto a depth of 2 m below the existing ground level for foundation trenches of foundations, footings of column, walls etc. complete as directed.

(a) Ordinary Soil.

In Foundation

In P/walls:

8

3

In steps:

16	x	1.20	x	1.20	x	2.00	=	46.08	m ³
2	x	5.00	x	0.35	x	0.50	=	1.75	m ³
8	x	5.00	x	0.35	x	0.50	=	7.00	m ³
3	x	3.50	x	0.35	x	0.50	=	1.84	m ³
1	x	2.00	x	0.80	x	0.40	=	0.64	m ³
<u>Total</u>								57.31	m ³

@ Rs.179.00 per m³

Rs.10,258.04

2/2.1 Plain concrete work with coarse aggregate of sizes 13 mm to 32 mm in foundation bed for footing, steps, walls, brick work etc. complete as directed.

(b) In prop. 1:4:8

In Footing

In Foundation

In P/walls:

8

4

In Steps:

16	x	0.90	x	0.90	x	0.10	=	1.30	m ³
16	x	1.20	x	1.20	x	0.10	=	2.30	m ³
2	x	5.00	x	0.25	x	0.10	=	0.25	m ³
8	x	5.00	x	0.35	x	0.50	=	7.00	m ³
4	x	3.50	x	0.35	x	0.50	=	2.45	m ³
1	x	2.00	x	0.80	x	0.10	=	0.16	m ³
<u>Total</u>								13.46	m ³

@ Rs.5,900.00 per m³

Rs.79,414.00

3/2.5.1 In foundation & sub-structure including footings, columns with base, tie & plinth beam etc. not less than 100 mm thick upto plinth level.

(a) M15 OR PROP. 1:2:4 (For non structural work)

In Footing

16

In col. stem:

In Tie Beam:

8

4

16	x	0.90	x	0.90	x	0.20	=	2.59	m ³
16	x	(0.90 + 0.20) / 2	x		x	0.20	=	1.76	m ³
16	x	0.25	x	0.25	x	3.10	=	3.10	m ³
2	x	5.00	x	0.25	x	0.25	=	0.63	m ³
8	x	5.00	x	0.25	x	0.25	=	2.50	m ³
4	x	3.50	x	0.25	x	0.25	=	0.88	m ³
<u>Total</u>								11.45	m ³

@ Rs.7,795.00 per m³

Rs.89,268.34

4/2.5.3 In columns, pillars, posts, struts, suspended floors, roof, landings etc above plinth upto 1st floor level (without using admixture, plasticiser)

(a) M15 OR PROP. 1:2:4 (For non-structural work)

In Column:

2

In Lintels:

8

4

16	x	0.25	x	0.25	x	3.10	=	3.10	m ³
2	x	5.00	x	0.15	x	0.15	=	0.23	m ³
8	x	5.00	x	0.15	x	0.15	=	0.90	m ³
4	x	3.50	x	0.15	x	0.15	=	0.32	m ³
<u>Total</u>								4.54	m ³

Rs.36,215.58

@ Rs.7,977.00 per m³

5/2.8 Supplying fitting & fixing in position reinforcement bars upto 1st floor level etc. complete

(a) From primary sources like TATA/SAIL/ESSAIR/JINDAL/SHYAM/RINL

(i) TMT corrosion resist steel (CRS) reinforcement bar

In Footing:

16	x	22	x	2.00	x	0.8900	=	626.56	Kgs
16	x	4	x	2.00	x	1.5800	=	202.24	Kgs
16	x	32	x	0.64	x	0.3950	=	129.43	Kgs
16	x	4	x	3.10	x	1.5800	=	313.47	Kgs
<u>Total</u>									

Column from footing upto PL

16	x	4	x	2.00	x	1.5800	=	202.24	Kgs
16	x	32	x	0.64	x	0.3950	=	129.43	Kgs
16	x	4	x	3.10	x	1.5800	=	313.47	Kgs
<u>Total</u>									

Stirrups

16	x	4	x	3.10	x	1.5800	=	313.47	Kgs
2	x	4	x	4.00	x	0.8900	=	28.48	Kgs
8	x	5	x	5.00	x	0.8900	=	178.00	Kgs
4	x	2	x	3.00	x	0.8900	=	21.36	Kgs
2	x	29	x	4.00	x	0.3950	=	91.64	Kgs
<u>Total</u>									

Stirrups

8	x	24	x	5.00	x	0.3950	=	379.20	Kgs
4	x	21	x	3.00	x	0.3950	=	99.54	Kgs
2	x	22	x	3.50	x	0.3950	=	60.83	Kgs

Roof Slab @ 300mm C/c & 150 mm C/c

1	x	8	x	28	x	4.00	x	0.6200	=	555.52	Kgs
1	x	8	x	14	x	4.00	x	0.8900	=	398.72	Kgs
1	x	3	x	35	x	6.50	x	0.6200	=	423.15	Kgs
1	x	3	x	14	x	3.00	x	0.8900	=	112.14	Kgs
1	x	4	x	7	x	2.50	x	0.6200	=	43.40	Kgs
1	x	4	x	26	x	1.00	x	0.8900	=	92.56	Kgs
1	x	2	x	4	x	6.20	x	0.6200	=	30.75	Kgs
1	x	2	x	33	x	2.00	x	0.6200	=	81.84	Kgs
									Total	3868.84	Kgs
									Say	38.69	Qntls.
									=	3.87	Qntls.
									=	42.56	Qntls.

Add 10% extra for wastage and overlapping

@ Rs.9,618.00 per Qntl.

Rs.409,315.53

6/2.10 Providing foam work of ordinary timber planking of trenches not less than 25 mm & removal of the same for concrete members etc. including centering & shuttering & propping as directed

(b) In Footing	16	x	2.00	x	1.00	x	0.25	=	8.00	m ²
(c) In Plinth beams	2	x	5.00	x	0.25	x	0.25	=	0.63	m ²
	8	x	5.00	x	0.25	x	0.25	=	2.50	m ²
	4	x	3.50	x	0.25	x	0.25	=	0.88	m ²
(d) In Lintels	5	x	4.00	x	0.25	x	0.25	=	1.25	m ²
	4	x	4.00	x	0.25	x	0.25	=	1.00	m ²
	4	x	4.00	x	0.25	x	0.25	=	1.00	m ²
	3	x	4.00	x	0.25	x	0.25	=	0.75	m ²
								Total	16.00	m ²

@ Rs.432.00 per m²

Rs.6,912.00

7/3.1 (a) Cement concrete work in topping 1:1:2 on R.C.C. floor, tread & rise of steps finish with a floating coat of neat cement etc. complete as directed

In steps :	2	x	2.00	x	0.80	=	3.20	m ²
In Floor:	2	x	5.00	x	3.50	=	35.00	m ²
	2	x	5.00	x	3.00	=	30.00	m ²
	1	x	2.00	x	7.00	=	14.00	m ²
	1	x	2.00	x	12.00	=	24.00	m ²
	1	x	1.50	x	12.00	=	18.00	m ²
						Total	124.20	m ²

@ Rs.325.00 per m²

Rs.40,365.00

8/3.4 Providing CC floor 65 mm thick consisting of 50 mm under layer cement concrete in prop 1:3:6 etc. complete as directed
In Floor of rooms:

2	x	5.00	x	3.50	=	35.00	m ²
2	x	5.00	x	3.00	=	30.00	m ²
1	x	2.00	x	7.00	=	14.00	m ²
1	x	2.00	x	12.00	=	24.00	m ²
1	x	1.50	x	12.00	=	18.00	m ²
					Total	121.00	m ²

@ Rs.710.00 per m²

Rs.85,910.00

9/4.1 Providing brick soling in foundation & under floor with stone/best quality etc. complete

(c.) Stone soling of thickness 100 mm

In Floor	1	x	5.00	x	3.50	=	17.50	m ²
	2	x	5.00	x	3.00	=	30.00	m ²
	1	x	2.00	x	7.00	=	14.00	m ²
	1	x	2.00	x	12.00	=	24.00	m ²
	1	x	1.50	x	12.00	=	18.00	m ²
					Total	103.50	m ²	

Rs.40,468.50

@ Rs.391.00 per m²

10/4.4 Brick work in cement mortar with 1st class brick including racking out joints & curing complete etc. as directed

(d) In prop. 1:6 (1 cement:6 sand)

In Plinth wall:

2	x	5.00	x	0.25	x	0.80	=	2.00	m ³
8	x	5.00	x	0.25	x	0.80	=	8.00	m ²
4	x	3.50	x	0.25	x	0.80	=	2.80	m ²
1	x	3.00	x	0.25	x	0.80	=	0.60	m ²
							Total	13.40	m ³

Rs.66,772.20

@ Rs.4,983.00 per m²

11/4.4 Brick work in cement mortar with 1st class brick including racking out joints & curing complete in super structure above plinth level upto 1st floor level etc as directed

In prop. 1:4 (1 cement:4 sand)

In Walls:

2	x	3.50	x	5.00	x	3.10	=	108.50	m ³
2	x	(1.60)	+	0.90)/2	x	3.10	=	7.70	m ³
2	x	5.00	x	3.00	x	3.10	=	93.00	m ³
2	x	(1.60)	+	0.90)/2	x	3.10	=	7.70	m ³
							Total	216.90	m ³

Deduct Openings(-)

Doors:	D	8	x	0.90	x	2.10	=	15.12	m ³
	D1	1	x	0.60	x	2.10	=	1.26	m ³
Windows/Ventilation	W	7	x	1.00	x	1.40	=	9.80	m ³
Ventilation	V2	1	x	0.50	x	0.30	=	0.15	m ²
							Total	26.33	m ³

Deduct for openings:- = (216.900 - 26.33)

Rs.1,559,815.45

@ Rs.8,185.00 per m³

12/14.2 Providing fitting and fixing M.S Grill of required pattern for windows/leroistory windows/opening/railing with M.S flats at required spacing in frame all round, square or round M.S bars with round headed bolts and nuts or screws.

(b) Ornamental Grill

(i) Fixed to wooden frames

W	7	x	1.00	x	1.00	x	1.40	x	4.90	=	48.02	kg
V2	1	x	0.50	x	0.50	x	0.30	x	4.90	=	0.37	kg
Varandah	1	x	2.00	x	7.00	x	1.40	x	4.90	=	96.04	kg
									Total	=	144.43	kg

Rs.25,419.24

@ Rs.176.00 per kg

13/5.1 10 mm thick cement plaster in single coat on pair side of brick/concrete walls for interior plastering upto 1st floor level etc. complete

(b) In cement mortar 1:4

I. Interior walls:

2	x	5.00	x	3.50	x	3.10	=	108.50	m ²
2	x	5.00	x	3.00	x	3.10	=	93.00	m ²
1	x	2.00	x	12.00	x	3.10	=	74.40	m ²
1	x	2.00	x	7.00	x	3.10	=	43.40	m ²
1	x	1.50	x	12.00	x	3.10	=	55.80	m ²
2	x	2.00	x	(1.60 x 0.90)/2			=	2.88	m ²
							Total	377.98	m ²

Deduct Openings(-)

Doors:	D	8	x	0.90	x	2.10	=	15.12	m ³
	D1	1	x	0.60	x	2.10	=	1.26	m ³
Windows/Ventilation	W	7	x	1.00	x	1.40	=	9.80	m ³
Ventilation	V2	1	x	0.50	x	0.30	=	0.15	m ²
							Total	26.33	m ³

351.65 m³

Deduct for openings:- = (377.98 - 26.33)

Rs.68,923.40

@ Rs.196.00 per m²

14/8.1 Providing dressed wood work in post,walls,battens,post plate etc. including supplying fitting & fixing with spikes,nails, bolts etc. complete as directed.

(b).With 1st class local timber(poorna/hallock/gamari etc)

I. Doors:

D	8	x	2.3	x	0.10	x	0.08	=	0.15	m ³
D1	1	x	2.3	x	0.10	x	0.08	=	0.02	m ³

Total 0.17 m³

Rs.19,271.20

@ Rs.116,372 per m³

15/11.1 Providing and fixing steel windows ventilators openable of standard rolled steel section as per I.S. code joints mitred & welded with 15 mm x 3 mm x 100 mm etc. complete....

Windows & Ventilations	W	8	x	1.00	x	1.40	=	11.20 m ²
Ventilation	V2	1	x	0.50	x	0.30	=	0.15 m ²
								11.35 m ²

@ Rs.3,443 per m²

Rs.39,078.05

16/15.4 White washing with lime on wall surfaces (two coats) to give an even shades including thoroughly brooming etc. complete

In walls	2	x	12.00	x	3.10	=	74.40 m ²
	1	x	12.00	x	3.10	=	37.20 m ²
	1	x	10.00	x	3.10	=	31.00 m ²
In ceiling	2	x	5.00	x	3.50	=	35.00 m ²
	2	x	5.00	x	3.00	=	30.00 m ²
	1	x	2.00	x	12.00	=	24.00 m ²
	1	x	2.00	x	7.00	=	14.00 m ²
	1	x	1.50	x	12.00	=	18.00 m ²
						Total	263.60 m ²

Deduction For Openings (-)

Doors:	D	8	x	0.90	x	2.10	=	15.12 m ³
	D1	1	x	0.60	x	2.10	=	1.26 m ³
Windows/Ventilation	W	7	x	1.00	x	1.40	=	9.80 m ³
Ventilation	V2	1	x	0.50	x	0.30	=	0.15 m ²
						Total	26.33 m ³	

Deduct for openings:-

@ Rs.32 per m²

= (263.60 - 26.33)

237.27 m³

Rs.7,592.64

17/15.69 Painting two coats (excluding priming coat) on new steel and other metal surface with enamel paint of approved brand etc. complete.

(a) surface over 100 mm in width or girth

(a) With high gloss paint.

I. Two coat (new work):

Doors:	D	8	x	0.90	x	2.10	=	15.12 m ³
	D1	1	x	0.60	x	2.10	=	1.26 m ³
Windows/Ventilation	W	7	x	1.00	x	1.40	=	9.80 m ³
Ventilation	V2	1	x	0.40	x	0.20	=	0.08 m ²
						Total	26.18 m ³	

@ Rs.151 per m²

Rs.3,953.18

18/19.4 Providing CC/Brick/Stone open surface drain with 15 mm thick cement plastering in prop. 1:3 finish with a floating coat of cement slurry as directed with necessary shuttering for sides and earthwork in excavation of foundation trenches and refilling the sides after completion of work etc. as specified.

(a) With cement concrete (1:3:6) having 100 mm thick sides and 100 mm thick bed laid over brick flat soiling.

(i) 300mm wide and average 150mm deep

1	x	56.00	=	56.00 Rm
			Total	= 56.00 Rm

Rs.75,040.00

@ Rs.1,340 per R.m.

Rs.2663992.35

Rs.2,638,573.12

Add 4% for Carrying Charge

Rs.106559.69

Rs.105,542.92

Add 7% for electrification & Water Pipe Fittings

186479.46

Rs.184,700.12

Grand Total

Rs.2,928,816.16

Rs.2,957,031.50

Say

Rs.2,928,800.00
Rs.2,957,031.50

(Rupees Twenty-Nine Lakhs Twenty-Eight Thousand Eight Hundred) Only

Twenty nine lakh Fifty seven thousand

Checked by

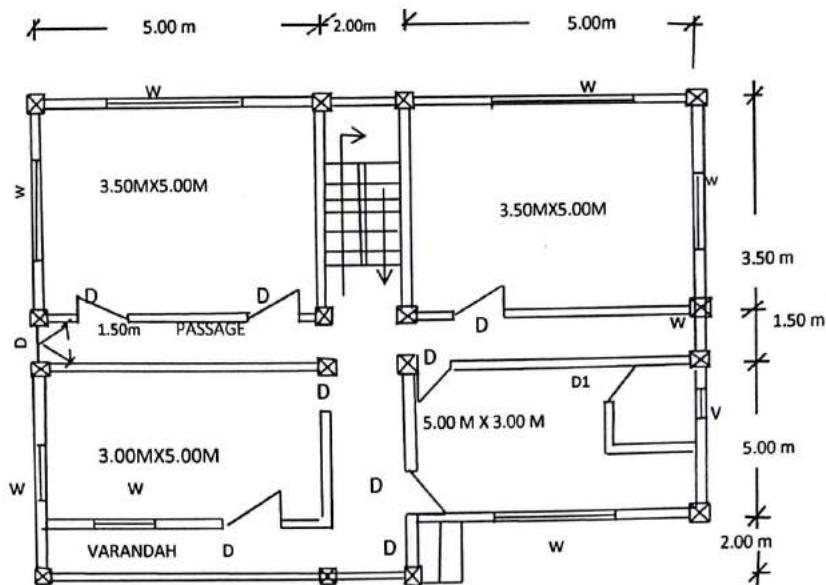
JUNIOR ENGINEER, G.W.D.
BUILDING DIVISION, TURA

Prepared By

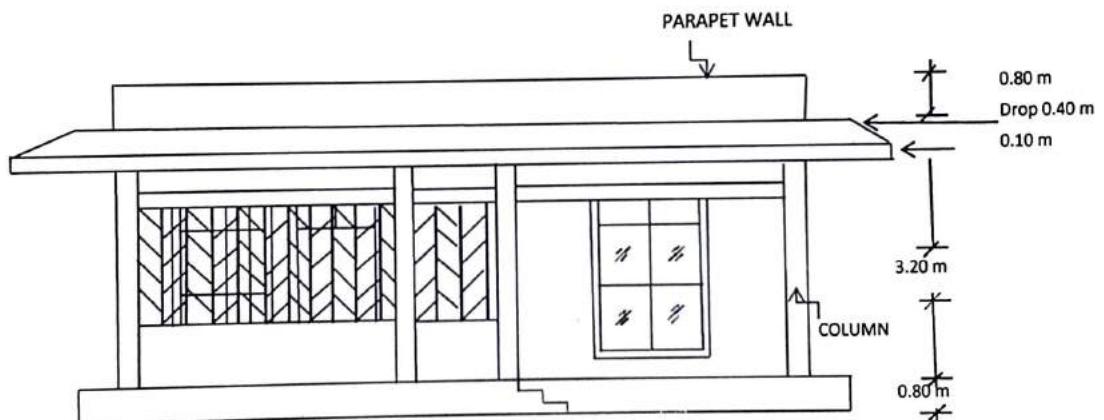
COUNTERSIGNED

Executive Engineer P.W.D.
Tura Building Division, Tura

CONSTRUCTION OF SUB-BEAT FOREST OFFICE CUM QUARTER



PLAN
(Not To Scale)

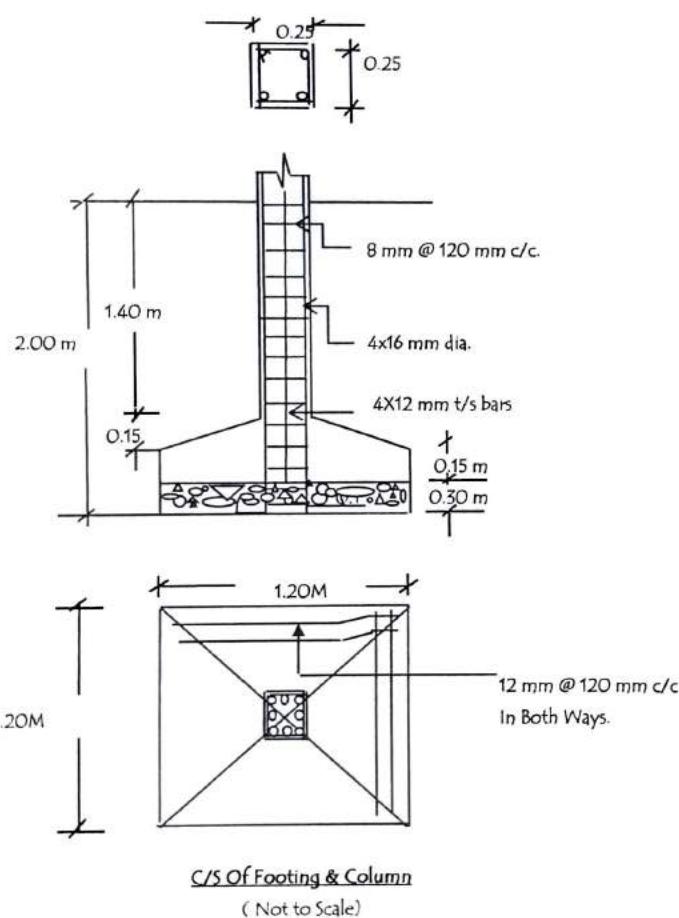
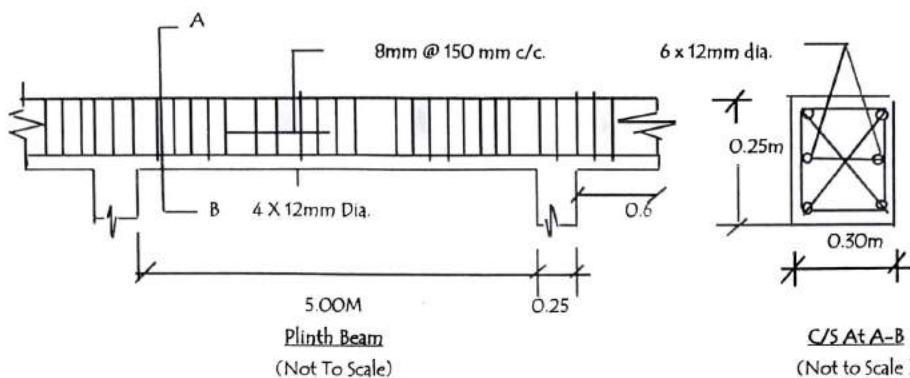


FRONT ELEVATION

Traced by

COUNTER SIGNED
Executive Engineer P.V.D.
Tura Building Division, Tura

Details Of Reinforcement



Traced by

COUNTERSIGNED

Executive Engineer P.W.D.
Tura Building Division, Tura

The Detailed Estimate for Compensatory Afforestation (as per the norms for undertaking compensatory afforestation schemes) in lieu of "Up-gradation to 2 Lane of State Highway (SH-04) stretch from Panda to Baghmara (from existing Km 119.800 to km 139.000) (Design Length=17.085 km) = 27.606 ha under SARDP-NE Phase in the State of Meghalaya"

The total area of plantation: 55.212 Ha

Location: Compartment No. 8(35Ha) and Compartment 7B= 20.212Ha at Saipung Reserved Forest of East Jaintia Hills District

Current Wage rate: Rs. 338.00 (Current Wage Rate (where z is notified wage rate by labour department on the date of payment by User Agency): Rs z

COST ABSTRACT FOR COMPENSATORY SCHEMES

SL. No.	Item of work	Amount	Remarks
1	Cost of expenditure for raising of plantation and maintenance for 10 years	4,78,47,132	Detailed estimate enclosed as Annexure- A
2	Erecting a watch tower for monitoring of plantation	5,00,000	
3	Purchase of Vehicle(Bolero pickup) for Transportation of Seedlings	10,00,000	
4	Construction of Camp hut cum store room for keeping Tools, Equipments and other materials	3,00,000	
	Total	4,96,47,132	

(Rupees Four Crore Ninety Six Lakh Forty Seven Thousand One Hundred Thirty Two) only

Justification for Purchase of Vehicle: Since the proposed area is located at remote area inside the reserve forest, the proposed vehicle is very much required for mobility of manpower involved in creation and maintenance of the plantation besides transportation of seeds, seedlings, FYM tools and implements used in plantation works.


Divisional Forest Officer,
Jaintia Hills Territorial Division, Jowai.

Detail Estimate for Compensatory Afforestation

Preliminary works:

Sl. No.	Item of works	Man days	Rate (in terms of z)	Amount
1	2	3	4	5
1	Survey and demarcation including fixing of boundary marks at strategic points	2.00	2.00	676
2	Jungle clearance, burning, land-preparation including staking, pit digging, hoeing, etc	24.00	24.00	8112
3	<u>Fencing</u>	64.00	64.00	21632
	With 3 strand barbed wire and wooden fencing posts including cost of staples, fixing, fitting, etc, complete			
4	Cost of collection of seeds	5.00	5.00	1690
5	Construction of camp hut and inspection paths	4.00	4.00	1352
6	Purchase of tools and plants	2.00	2.00	676
7	Supervisory staff to be engaged on casual basis from amongst the local people	12.00	12.00	4056
8	Raising of polypot nursery for 2 beds per hectare to cover for mortality rate of plants in the plantation site	61.00	61.00	20618
9	Provision for signboards, documentation, upkeep of records and other miscellaneous works	30.00	30.00	10140
	Sub Total in the Preliminary year	204.00	204.00	68952
10	Soil & Moisture conservation measures in the plantation area @ 15%	30.60	30.60	10342.8
11	Monitoring & Evaluation @ 2%	4.08	4.08	1379.04
12	Adding 15% contingency due to escalation cost and revision of wages rate etc.	35.80	35.80	12101.076
	Total in the preliminary year	274.48	274.48	92774.916

(Rupees Ninety Two Thousand Seven Hundred Seventy Four) only


 Divisional Forest Officer,
 Jaintia Hills Territorial Division, Jowai.

Creation and maintenance (1st Year)

Wage Rate is: Rs 1.12/-

Sl. No.	Item of works	Man days	Rate (in terms of z)	Amount
1	2	3	4	5
1	Planting of nursery seedlings including carriage from nursery centres to plantation sites and proper ramming after planting etc.	20.00	22.40	7571.2
2	Cost of manure and bio-fertilizer	40.00	44.80	15142.4
3	Mulching and 3 times weeding	50.00	56.00	18928
4	Fire protection during dry and windy season	10.00	11.20	3785.6
	(i) Wages of fire watchers from November of the creation year to April of the following year			0
	(ii) Fire line clearance including controlled burning from November in the creation year to April of the following year	10.00	11.20	3785.6
5	2 nd year maintenance of poly pot nursery	3.20	3.58	1211.392
6	Maintenance of camp hut, signboard, documentation, protection from grazing, upkeep of records and other miscellaneous works	30.00	33.60	11356.8
7	Supervision cost	12.00	13.44	4542.72
	Sub total	175.20	196.22	66323.712
8	Soil & Moisture conservation measures in the plantation area @ 15% of total cost of 1 st year creation	26.28	29.43	9948.5568
9	Monitoring & Evaluation @ 2%	3.50	3.92	1326.4742
10	Adding 8.5% being contingency due to escalation cost of materials etc. after ascertaining the rate of interest due to accrue from CA money to be deposited by User Agency.	17.42	19.51	6595.8932
	Total for 1st year creation and maintenance	222.41	249.10	84194.636

(Rupees Eighty Four Thousand One Hundred Ninety Four) only.



Divisional Forest Officer,
Jaintia Hills Territorial Division, Jowai.

Maintenance (2nd Year)

Wage Rate is ₹ 1.26/-

Sl. No.	Item of works	Man days	Rate (in terms of ₹)	Amount
1	2	3	4	5
1	Vacancy filling by one year old seedlings in mortality areas	5.00	6.30	2129.4
2	Climber cutting and weedings 3 times	45.00	56.70	19164.6
3	Fire Protection	10.00	12.60	4258.8
	(i) Wages of fire watchers			
	(ii) Fire line clearance including controlled burning	10.00	12.60	4258.8
4	Maintenance of camp hut, signboard, inspection paths, fencing, protection from grazing, documentation, upkeep of records and other miscellaneous works	30.00	37.80	12776.4
5	Supervision cost	12.00	15.12	5110.56
	Sub total	112.00	141.12	47698.56
6	Provision for soil & moisture conservation measures in the plantation area @ 15%	16.80	21.17	7154.784
7	Monitoring & Evaluation @ 2%	2.24	2.82	953.9712
8	Adding 8.5% being contingency due to escalation cost etc. after ascertaining the rate of interest due to accrue from CA money to be deposited by User Agency.	11.14	14.03	4743.6218
	Total in the 2nd year	142.18	179.14	60550.937

(Rupees Sixty Thousand Five Hundred Fifty) only.



Divisional Forest Officer,
Jaintia Hills Territorial Division, Jowai.

Maintenance (3rd Year)

Wage Rate is: 1.41z

Sl. No.	Item of works	Mandays	Rate (in terms of z)	Amount
1	2	3	4	5
1	Vacancy filling wherever necessary	4.00	5.64	1906.32
2	Climber cutting and weedings 3 times	45.00	63.45	21446.1
3	<u>Fire Protection</u>			
	(i) Wages of fire watchers	10.00	14.10	4765.8
	(ii) Fire line clearance including controlled burning	10.00	14.10	4765.8
4	Maintenance of camp hut, signboard, fencing, inspection paths, protection from grazing, documentation, upkeep of records and other miscellaneous works	30.00	42.30	14297.4
5	Supervision cost	12.00	16.92	5718.96
	Sub total	111.00	156.51	52900.38
6	Provision for soil & moisture conservation measures in the plantation area @ 15%	16.65	23.48	7935.057
7	Monitoring & Evaluation @ 2%	2.22	3.13	1058.0076
8	Adding 8.5% being contingency due to escalation cost etc. after ascertaining the rate of interest due to accrue from CA money to be deposited by User Agency.	11.04	15.56	5260.9428
	Total in the 3rd year	140.91	198.68	67154.387

(Rupees Sixty Seven Thousand One Hundred Fifty Four) only



Divisional Forest Officer,
Jaintia Hills Territorial Division, Jowai.

Maintenance (4th Year)

Wage Rate is: 1.58z

Sl. No.	Item of works	Mandays	Rate (in terms of z)	Amount
1	2	3	4	5
1	Vacancy filling wherever necessary	2.00	3.16	1068.08
2	Climber cutting and three-times weeding	45.00	71.10	24031.8
3	(i) Wages of fire watchers	10.00	15.80	5340.4
	(ii) Fireline clearance including controlled burning, etc	10.00	15.80	5340.4
4	Maintenance of camp hut, signboard, fencing, inspection paths, protection from grazing, documentation, upkeep of records and other miscellaneous works	30.00	47.40	16021.2
5	Supervision cost	12.00	18.96	6408.48
	Sub total	109.00	172.22	58210.36
6	Provision for soil & moisture conservation measures in the plantation area @ 15%	16.35	25.83	8731.554
7	Monitoring & Evaluation @ 2%	2.18	3.44	1164.2072
8	Adding 8.5% being contingency due to escalation cost etc. after ascertaining the rate of interest due to accrue from CA money to be deposited by User Agency.	10.84	17.13	5789.0203
	Total in the 4th year	138.37	218.62	73895.142

(Rupees Seventy Three Thousand Eight Hundred Ninety Five) only



Divisional Forest Officer,
Jaintia Hills Territorial Division, Jowai.

GOVERNMENT OF
DIVISIONAL FOREST OFFICE
HILLS DISTRICTS: JONY
Jowai, the 20th Nov.

Maintenance (5th Year)

Wage Rate is: 1.77z

Sl. No.	Item of works	Mandays	Rate (in terms of z)	Amount
1	2	3	4	5
1	Climber cutting including silvicultural works and two times weedings	30.00	53.10	17947.8
2	(i) Wages of fire watchers	10.00	17.70	5982.6
	(ii) Maintenance of fire line including controlled burning etc	10.00	17.70	5982.6
3	Maintenance of camp hut, signboard, fencing, inspection paths, protection from grazing, documentation, upkeep of records and other miscellaneous works	30.00	53.10	17947.8
4	Supervision cost	12.00	21.24	7179.12
	Sub total	92.00	162.84	55039.92
5	Provision for soil & moisture conservation measures in the plantation area @ 15%	13.80	24.43	8255.988
6	Monitoring & Evaluation @ 2%	1.84	3.26	1100.7984
7	Adding 8.5% being contingency due to escalation cost etc. after ascertaining the rate of interest due to accrue from CA money to be deposited by User Agency.	9.15	16.19	5473.72
	Total in the 5th year	116.79	206.72	69870.426

(Rupees Sixty Nine Thousand Eight Hundred Seventy) only

Divisional Forest Officer,
Jaintia Hills Territorial Division, Jowai.

Maintenance (6th Year)

Wage Rate is: 1.98z

Sl. No.	Item of works	Mandays	Rate (in terms of z)	Amount
1	2	3	4	5
1	Climber cutting including Silvicultural works	20.00	39.60	13384.8
2	(i) Wages of fire watchers	10.00	19.80	6692.4
	(ii) Maintenance of fire line including controlled burning etc	10.00	19.80	6692.4
3	Maintenance of camp hut, signboard, fencing, inspection paths, protection from grazing, documentation, upkeep of records and other miscellaneous works	30.00	59.40	20077.2
4	Supervision cost	12.00	23.76	2930.88
	<i>Sub total</i>	<i>82.00</i>	<i>162.36</i>	<i>54877.68</i>
5	Provision for soil & moisture conservation measures in the plantation area @ 15%	12.30	24.35	8231.652
6	Monitoring & Evaluation @ 2%	1.64	3.25	1097.5536
7	Adding 8.5% being contingency due to escalation cost etc. after ascertaining the rate of interest due to accrue from CA money to be deposited by User Agency.	8.15	16.15	5457.5853
	Total in the 6th year	104.09	206.11	69664.471

(Rupees Sixty Nine Thousand Six Hundred Sixty Four) only



Divisional Forest Officer,
Jaintia Hills Territorial Division, Jowai.

GOVERNMENT OF ASSAM
DIVISIONAL FOREST OFFICER
JAINTIA HILLS DISTRICT
Jowai, the 2nd day of January, 2010

Maintenance (7th Year)

Wage Rate is: 2.22z

Sl. No.	Item of works	Mandays	Rate (in terms of z)	Amount
1	2	3	4	5
1	Climber cutting including silvicultural works	16.00	35.52	12005.76
2	(i) Wages of fire watchers	10.00	22.20	7503.6
	(ii) Maintenance of fireline including controlled burning etc	10.00	22.20	7503.6
3	Maintenance of camp hut, signboard, fencing, inspection paths, protection from grazing, documentation, upkeep of records and other miscellaneous works	30.00	66.60	22510.8
4	Supervision cost	12.00	26.64	9004.32
	Sub total	78.00	173.16	58528.08
5	Provision for soil & moisture conservation measures in the plantation area @ 15%	11.70	25.97	8779.212
6	Monitoring & Evaluation @ 2%	1.56	3.46	1170.5616
7	Adding 8.5% being contingency due to escalation cost etc. after ascertaining the rate of interest due to accrue from CA money to be deposited by User Agency.	7.76	17.22	5820.6176
	Total in the 7th year	99.02	219.82	74298.471

(Rupees Seventy Four Thousand Two Hundred Ninety Eight) only

Divisional Forest Officer,
Jaintia Hills Territorial Division, Jowai.

Maintenance (8th Year)

Wage Rate is: 2.49z

Sl. No.	Item of works	Mandays	Rate (in terms of z)	Amount
1	2	3	4	5
1	Climber cutting including silvicultural works	14.00	34.86	11782.68
2	(i) Wages of fire watchers	10.00	24.90	8416.2
	(ii) Maintenance of fireline including controlled burning etc	10.00	24.90	8416.2
3	Maintenance of camp hut, signboard, fencing, inspection paths, protection from grazing, documentation, upkeep of records and other miscellaneous works	30.00	74.70	25248.6
4	Supervision cost	12.00	29.88	10099.44
	Sub total	76.00	189.24	63963.12
5	Provision for soil & moisture conservation measures in the plantation area @ 15%	11.40	28.39	9594.468
6	Monitoring & Evaluation @ 2%	1.52	3.78	1279.2624
7	Adding 8.5% being contingency due to escalation cost etc. after ascertaining the rate of interest due to accrue from CA money to be deposited by User Agency.	7.56	18.82	6361.1323
	Total in the 8th year	96.48	240.23	81197.983

(Rupees Eighty One Thousand One Hundred Ninety Seven) only



Divisional Forest Officer,
Jaintia Hills Territorial Division, Jowai.

Maintenance (9th Year)

Wage Rate is: 2.79z

Sl. No.	Item of works	Mandays	Rate (in terms of z)	Amount
1	2	3	4	5
1	Climber cutting including silvicultural works	12.00	33.48	11316.24
2	(i) Wages of fire watchers	10.00	27.90	9430.2
	(ii) Maintenance of fireline including controlled burning etc	10.00	27.90	9430.2
3	Maintenance of camp hut, signboard, fencing, inspection-paths, protection from grazing, documentation, upkeep of records and other miscellaneous works	30.00	83.70	28290.6
4	Supervision cost	12.00	33.48	11316.24
	Sub total	74.00	206.46	69783.48
5	Provision for soil & moisture conservation measures in the plantation area @ 15%	11.10	30.97	10457.522
6	Monitoring & Evaluation @ 2%	1.48	4.13	1395.6696
7	Adding 8.5% being contingency due to escalation cost etc. after ascertaining the rate of interest due to accrue from CA money to be deposited by User Agency.	7.36	20.53	6939.9671
	Total in the 9th year	93.94	262.09	88586.639

(Rupees Eighty Eight Thousand Five Hundred Eighty Six) only


Divisional Forest Officer,
Jaintia Hills Territorial Division, Jowai.

Maintenance (10th Year)

Wage Rate is: 3.12z

Sl. No.	Item of works	Mandays	Rate (in terms of z)	Amount
1	2	3	4	5
1	Climber cutting including silvicultural works	10.00	31.20	10545.6
2	(i) Wages of fire watchers	10.00	31.20	10545.6
	(ii) Maintenance of fireline including controlled burning etc	10.00	31.20	10545.6
3	Maintenance of camp hut, signboard, inspection paths, protection from grazing, documentation, upkeep of records and other miscellaneous works	30.00	93.60	31636.8
4	Supervision cost	12.00	37.44	12654.72
5	Misc. expenditure e.g. salvaging of fencing materials from the plantation center wherever fencing is no longer necessary	6.00	18.72	6327.36
	Sub total	78.00	243.36	82255.68
5	Provision for soil & moisture conservation measures in the plantation area @ 15%	11.70	36.50	12338.352
6	Monitoring & Evaluation @ 2%	1.56	4.87	1645.1136
7	Adding 8.5% being contingency due to escalation cost etc. after ascertaining the rate of interest due to accrue from CA money to be deposited by User Agency.	7.76	24.20	8180.3274
	Total in the 10th year	99.02	308.93	104419.47

(Rupees One Lakh Four Thousand Four Hundred Nineteen) only


Divisional Forest Officer,
Jaintia Hills Territorial Division, Jowai.

POST ABSTRACT FOR COMPENSATORY AFFORESTATION SCHEMES:

Sl. No.	Year	Man Days	Amount in terms of z (where z is notified wage rate on the date of payment by User Agency)	Total
1	2	3	4	5
1	Preliminary year	274.48	274.48	92774.916
2	First year creation & maintenance	222.41	249.10	84194.636
3	Second year maintenance	142.18	179.14	60550.937
4	Third year maintenance	140.91	198.68	67154.387
5	Fourth year maintenance	138.37	218.62	73895.142
6	Fifth year maintenance	116.79	206.72	69870.425
7	Sixth year maintenance	104.09	206.11	69664.471
8	Seventh year maintenance	99.02	219.82	74298.471
9	Eight year maintenance	96.48	240.23	81197.983
10	Ninth year maintenance	93.94	262.09	88586.639
11	Tenth year maintenance	99.02	308.93	104419.47
Grand total per hectare		1527.68	2563.93	866607.48

(Rupees Eight Lakh Sixty Six Thousand Six Hundred Seven) only

The cost for creation of plantation per Ha: Rs.866607.48

Total area of plantation: 55.212 Ha

Total cost for creation of Plantation 55.212 Ha: $866607.48 \times 55.512 = \text{Rs.} 4,78,47,132/-$

Purchase of Vehicle (Bolero Pickup) for Transportation of seedlings: 10,00,000/-

Erecting a Watch Tower for monitoring of plantation: 5,00,000/-

Construction of Camp hut cum store room for keeping Tools, Equipments and other materials:

3,00,000

Total Cost: $4,78,47,132 + 10,00,000 + 5,00,000 + 3,00,000 = 4,96,47,132/-$ (i.e. Four Crore Ninety Six Lakh Forty Seven Thousand One Hundred and Thirty Two) only.

Justification for Purchase of Vehicle: Since the proposed area is located at remote area inside the reserve forest, the proposed vehicle is very much required for mobility of manpower involved in creation and maintenance of the plantation besides transportation of seeds, seedlings, FYM tools and implements used in plantation works.


 Divisional Forest Officer,
 Jaintia Hills Territorial Division, Jowai.