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Meghalaya Livelihood Improvement
through Forest Enhancement



Meghalaya Basin
Development Authority



Japan International
Cooperation Agency

No. MBDA/JICA/2022/1036/ 898

Dated: Shillong, the 25th Jan, 2023

From
The Additional Project Director
MegLIFE, MBDA, Shillong

To
The Block Project Managers
MegLIFE, MBDA

Subject: Guidelines for Construction of Community Halls under MegLIFE Project Villages

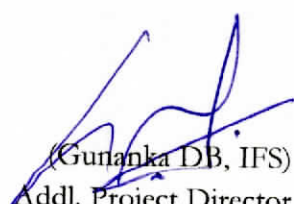
The MegLIFE Project has target for implementing entry point activities in every project village as an essential part of community mobilization process to get more and more participation from the community for successful implementation of MegLIFE Project activities at village level.

2. In this context, after taking the choice of VPIC members 370 MegLIFE project villages have been selected for construction of Community Halls under EPA component of the MegLIFE Project. Accordingly, funds against construction of community hall have already been placed with the VPIC accounts of all the concerned 370 MegLIFE project villages.

3. Guidelines related to the process of implementation, signing the agreement for acquisition of land for construction, environmental and social safeguard screening process and model design and estimate are enclosed herewith at Annexure-1 for reference and necessary action.


4. Uniform display boards (design as shared by SPMU) are required to be placed in all construction sites.

Encl: As Stated


(Gunanka DB, IFS)
Addl. Project Director
MegLIFE, MBDA, Shillong

Copy to:

1. The Project Director, MegLIFE, MBDA, Main Secretariate Building, Shillong-for favour of kind information
2. The District Project Managers, MegLIFE, MBDA-for necessary action


Addl. Project Director
MegLIFE, MBDA, Shillong

Annexure-1

Constrecution of Community Hall under Entry Point Activity of MegLIFE Project



Background-

Experience of Externally Aided Projects based on participatory approach shown that impact of activities implemented under the projects are greater when community plays active role. Entry Point Activities (EPAs) are essential parts of community mobilization process to get more and more participation from the community. The project for Community Based Forest Management and Livelihoods Improvement in Meghalaya (MegLIFE) will be implemented in Project Villages for next 7 years in phase-wise manner. It is difficult for implementing agency to get full participation of the villagers for such a long period without providing immediate benefits to the participating villages.

Objective of Entry Point Activities (EPAs):-

- ❖ To mobilize community for effective and participatory project implementation.
- ❖ To gain confidence of community.
- ❖ To endow tangible assets to target community.
- ❖ To provide short-term financial benefits and incentives to the community in the form of wages.

Based on these principles, communities were sensitized for 'need assessment' and 'prioritization' of EPAs in all Project Villages.

Shortlisting of potential EPAs-

- ❖ List of potential EPAs was prepared with community consultation based on the problems and needs of the villages were identified during 'Focus Group Discussion' (FGD).
- ❖ Community members have also identified the possible locations for prioritized activities.

Out of 450 Group-I Project Villages, 300 villages demanded for 'Community Hall'. Based on the demands received from community, the Project has decided to construct Community Hall in these villages under EPA component of the MegLIFE Project in this Financial Year i.e. 2022-23.

Village Community Hall -as EPA:

Village Community Hall is the common public place in the village, which can be an important hub in the village that gives residents an opportunity to provide venue to socialise, learn and access various public services. The idea of such community space was envisioned to provide a place for the community to interact and exchange knowledge, ideas and provide them with a venue for carrying out project activities like trainings, meetings, microplanning. Besides these, the community hall can also be used Office of the Village Project Implementation Committee (VPIC), and also as a processing centre for livelihood activities especially as processing and storage space etc. The Community Hall will be equipped with toilets for gents and ladies with and also 'rainwater harvesting structure'. The hall can also be utilized for organizing medical camps and other community events etc. that cater to the socio-economic development and overall wellbeing of the community.

Investment for Construction of Community Hall in the Project Village:

In the MegLIFE Project, Rs. 13,38,983/- (Rupees Thirteen Lakhs Thirty-Eight Thousand Nine Hundred Eighty-Three only) was budgeted. Besides, the Govt. of Meghalaya has approved an additional fund of Rs 10 lakhs per village for EPA. Therefore, the total fund available for EPAs is Rs. 23,38,983/- (Rupees Twenty-Three Lakhs Thirty-Eight Thousand Nine Hundred Eighty-Three only) per village.

Proposed Implementation Process:

1) Land identification and acquisition:

The Executive Committee of the VPIC will jointly survey the earmarked site (A community owned site or a site allocated by private individuals for community use with proper legal documentation) with BPMU team to identify location and take GPS coordinates of the place. A Memorandum of Agreement (MoA) will be signed between the VPIC and the owner of land in case of Private/Clan land. In case of community land, 'No Objection Certificate' will be taken from the village Sardar/ Nokma.

2) Design/Specification:

SPMU shall provide the technical approved plan, design and the technical specifications of the community halls.

3) Implementation Agency for Construction:

VPIC will be the implementation agency for construction of community hall in the respective project village.

4) Implementing Officer (IO) and technical supervision: The concerned BPM may be designated as IO and the technical supervision should be the responsibility of the Field Engineer of the concerned DPMU.

5) Labour:

The construction would require skilled and unskilled labour. It is envisaged that the VPIC would be responsible for bringing in mason for construction and all skilled labour. The community could contribute in-'kind' by providing unskilled labour which will be included in the overall labour cost at market prices under the head "community participation" for some percentage as decided by community. Rest of the unskilled labour will be from the villagers under other schemes such as MGNREGA.

6) Materials

The cost of construction material such as cement, sand, gravel, bricks, steel, etc., can be accounted for as per purchase according to estimate. Nearby IVCS may be approached for supply of materials.

7) Plan for execution

VPIC Executive Committee will prepare a plan for execution of construction work of community hall.

The plan will consist of

- ❖ Designated members responsible for item-wise construction work
- ❖ Cost estimates of each item (both material and labour)
- ❖ Details of mason hired for construction and basis of selection (Suitably qualified and experienced mason should be identified and be entrusted the job of construction. MGNREGA masons if available may be hired)
- ❖ Details of materials to be purchased along with quality checking mechanism (Quality Checked certificate to be obtained from Field Engineer of the DPMU)

- ❖ Total no. of Labour (skilled and unskilled required) to be mentioned
- ❖ Villagers' contribution in terms of cash or Kind (labour/material) to be mentioned
- ❖ Total Estimated time for construction
- ❖ Supervision mechanism
- ❖ Measurement Book (MB) shall be recorded by the Field Engineer.

8) Release of Funds:

SPMU shall release funds to the DPMU based on the expenditure sanctions and administrative approvals issued by SPMU. The DPMUs shall release funds to the VPIC- Project Village Development Account.

9) Withdrawal of funds for construction activity:

Executive Committee of the VPIC will convene a meeting before each and every withdrawal of funds against community hall construction and also record the minutes/resolution depicting purpose of withdrawal and responsibilities given to each member on expenditure of the fund withdrawn.

10) Community Contribution:

VPIC members will be contributing either in cash or in kind like supplying materials for construction, giving some percentage of labour, providing equipment like chair, table, solar lighting, water filter, almirah for Community Hall.

11) Execution of work:

Based on the execution plan VPIC Executive Committee will execute the construction of community hall. Village Community Facilitator will be responsible for maintaining records viz. muster roll, payment voucher, material purchased register etc. wherever the VCF is not properly literate, the Chairman, EC shall assign the work to either the Member Secretary or other members of the EC.

A record of muster rolls as per the format prescribed by SPMU shall necessarily be maintained and strictly monitored.

12) Work site management and attendance

- ❖ No person below the age of 18 should be permitted to work on any MegLIFE construction works.
- ❖ Worker's attendance and the wages paid will be shown against each name with the signature/ thumb impression of the worker
- ❖ Any person desirous of seeing the current muster roll will be provided access to it at the worksite during working hours on all working days.
- ❖ the workers engaged will be selected from among the villagers themselves. Not less than five workers on a weekly rotational basis should be designated to verify and certify all the bills/vouchers of the worksite, at least once a week.
- ❖ A copy of the sanctioned estimate and the work order must be available for public inspection at the worksite.
- ❖ Attendance should be captured by VCF only in the muster roll signed and authorized by the VPIC Chairperson.

13) Worksite Facilities

- ❖ Worksite facilities (Medical aid, drinking water and shade) will be provided at the worksite.
- ❖ The first aid box will be replenished as and when required and will not have medicines that have expired.

- ❖ In case the number of children below the age of six years accompanying the women working at any site are five or more, one of such women workers will be made to depute to look after such children. She will be paid wages equal to the prevalent wage rate paid to the unskilled worker. The expenditure will be separately recorded.
- ❖ All expenditure on worksite facilities shall be booked as part of administrative expenditure

14) Measurement of works, checking and calculation of wages:

- ❖ All measurements of work done shall be recorded in the measurement book (MB) duly authorized and issued by DPMU and maintained by Field Engineer.
- ❖ Weekly measurement of works will be undertaken by Field Engineer. H/She will ensure that all measurements are taken within 3 days after close of weekly muster. The MB should be recorded as per the standard proforma of the MB.
- ❖ All measurements will be captured task-wise so that nothing remains invisible and underpaid.

Activity components:

- i) Activity (ii) Length (iii) Width (iv) Height. Thereafter the quantities will be calculated. (v) Unit cost i.e Total cost (vi) Labour component

Material component

- i) Name of the Material (ii) Quantity (iii) Unit price (iv) Total
- ❖ Appropriate check measurement norms will be adopted by DPM to ensure creation of quality assets. DPM will ensure check measurement after the work is completed
- ❖ Wages to be paid to the workers shall be calculated on the basis of work out-turn per day as per the prevailing MGNREGA wage rate.
- ❖ Online payment through banking system could also be done through NEFT. The accounts of labourers should be done on the basis of muster roll of the week.

15) Supervision

Day to day to supervision will be done by person (s) given the responsibility by Executive Committee of VPIC. Field engineer will inspect weekly once during the construction and while recording of MB including final inspection at the end of construction to ensure compliance to the design and specification provided. He will also report to the project authority on any issue such as delay or non-utilization of the funds etc.

16) Transparency:

- ❖ Photo documentation will be made at three stages- before/during /after the construction. It would also be mandatory to include the details of the construction site in terms of latitude and longitude.
- ❖ Display Board showing Project Name, Logo, Estimated Cost & Expenditure, Implementing Agency, year of execution, latitude & longitude, no. of person days generated, no. of people benefitted shall also be displayed at worksite. The design already given by SPMU to be adopted in this case.

17) Completion Report

Completion Report will be placed in the file pertaining to the work in the VPIC. This would serve as a record of verification of completion of work. This report will contain completion certificate issued by the Field Engineer and also should be jointly verified by BPM. An 'Utilization Certificate' of fund withdrawn against community hall construction activity duly signed by both the joint signatories of the VPIC Village Project Development Account shall be submitted to the SPMU.

The construction and operationalization will be completed within **6 months** after release of funds.

Operation & Maintenance:

A formal O&M arrangement will be made in which the interest of the people is sustained. VPIC can hire a cleaner for O&M. In cases where the village has SHGs, the job of everyday maintenance can also be assigned to them at a nominal cost. This would not only act as a revenue generating source for the SHG but will also ensure that the community's resources are retained within the community. Such arrangements are called community contracting; Costs for O&M (for daily O&M as well as for repair and maintenance) can be worked out and divided among the community members using the facility. This ensures that the complex is maintained properly.

The outer walls of the community hall will be used as transparency board of the VPIC.

Capacity Building:

Training on estimation and site specific design verification will be provided by SPMU to the Field Engineers of DPMU for effective implementation of the community hall construction work.

Training to the members (including at least 50% women) of the VPIC on operation and maintenance of assets will be provided under Capacity Building component of the Project. The MegLIFE project will organize training & awareness programs on maintenance of assets created under the Project at the block level. The training will include both class room and onsite training.

Monitoring & Evaluation (M&E):

Monitoring Indicators

While the final indicators to be used for monitoring the EPA component would be established through participatory process involving the communities at the commencement of Programme Implementation, an indicative list of indicators is provided below:

Performance indicators:

- No. of EPAs implemented by type
- No. of EPAs directly implemented by community
- No. of households benefited.
- Community contribution as % of total cost (where appropriate).
- Ability of community to collect community contributions (voluntary labour, material etc.) for maintenance.

MEMORANDUM OF AGREEMENT

Between

The _____ VPIC,

_____ (Address of the VPIC)

And

Mr. / Ms. _____

This AGREEMENT made on the _____ day of _____ between the Village Project Implementation Committee (VPIC) represented by (Name of the President/Secretary) _____ (Full Address of the VPIC – Phone number), a village-based community organisation established under the Project for Community Based Forest Management & Livelihoods Improvement in Meghalaya (MegLIFE) and Mr./Ms. _____ (Name of Landowner), Son/Daughter/ of (Full Address with phone number) _____ for utilising his/her _____ ha of private land/Clan Land in accordance with the Micro Plan that will be used for _____ (specify purpose) for a period of _____ (years) or for perpetual use (Please specify).

WHEREAS the VPIC has been established for the purpose of implementing and executing the activities and programs of the MegLIFE with the aim to strengthen participatory natural resource management in the _____ village, _____ block, _____ district in state of Meghalaya.

WHEREAS, landowner may include clans, *nokmas*, *dolois*, *rangbahshnongs*, *sordars*, *syiems* or individual landowners and should ensure that the land is free from any disputes or otherwise.

WHEREAS, wherever land is mentioned in this agreement it should necessarily include or mean forests, agricultural land, barren or waste lands, Jhum lands, water bodies such as springs, ponds, lakes, streams etc.

WHEREAS, the VPIC should in principle utilise the land for NRM activities that is included in the Micro Plan which is prepared through a participatory process and approved by the GB, VPIC, durbar/XX/XX and DPMU..... Under no circumstances should the said land be acquired through coercion, force, blackmail or any unfair practices.

There should be free, prior and informed consent on utilization of the land for the purposes for which it is required

and included in the Micro plan.

AND WHEREAS both the parties, after negotiations and discussions, mutually agreed to undertake and discharge the following responsibilities, obligations and duties necessary for the smooth and successful implementation of the project and as per the detailed terms and conditions laid down hereinafter.

A. VPIC agrees to discharge the following duties and responsibilities:

1. To abide by the terms and conditions as agreed with the landowner and endorsed by _____ (name of Dorbar/Village Institution).for using the land for the purpose and for the period of time agreed upon.
2. To implement the agreed benefit sharing mechanism with regard to the benefits that are likely to be accrued from the land as a result of the interventions included in the Micro Plan, endorsed by the _____ (name of Dorbar/Village Institution) and for the period agreed upon with the landowner.
3. The VPIC to utilize the land for the purposes agreed upon in the Micro Plan and endorsed by the GB, VPIC, Durbar/XXX/XX and DPMU and will not divert for any other purposes.
4. VPIC to engage with landowner to participate in the activities to be carried out on the land being used for implementation of MegLIFE NRM activities.
5. The VPIC shall ensure that the activities to be implement on the land are agreed upon during planning stage of the Micro Plan that is endorsed by _____ (name of Dorbar/Village Institution).
6. The VPIC should not utilise the land for any religious or political purposes or other activities that is not included in the Micro Plan.
7. The VPIC should ensure maintenance of the land.
8. Agree on modalities with the landowner for maintenance and access to benefits from the land by the community benefitting after the expiry of the agreed time period.
9. The VPIC shall be liable for the damages of the land resulting from any negligence except from damages occurring due to act of God, such as earthquakes, landslides, etc.

B. The Landowner agrees to discharge the following duties and responsibilities:

10. The land is free from encumbrances. The landowners have given the land to the VPIC, with the understanding that it has been discussed and concurred with the family members, clans, *dorbar shnongs, hima, nokmas*, etc.
11. The landowner, under no circumstances shall reclaim back the land within the agreement period unless the VPIC violates the terms and conditions as specified in the section "A" above.
12. The landowner submits copies of the records to ascertain the ownership status of the land.

13. The landowner shall have the right to enter the land to inspect and make observations, but he/she/they should be accompanied by selected members of the VPIC.
14. The landowner shall have no right to do any land development activities on the land during the agreement period, without the prior consent of the VPIC.

C. Validity of the Memorandum of Agreement

15. This MoA is valid as per the period specified above, from the date of signature by both the parties.
16. The VPIC and the Landowner agree that all disputes relating to the scope, extent of interpretation and meaning of the agreement and any other dispute arising thereof shall be decided by mutual discussions. All unsettled issues shall be referred to the DPM of _____ (name of DPMU) who shall be the final arbitrator and whose decision on the matter shall be final and binding on both the parties.

In witness thereof the aforesaid parties herein put their signature and seals on the day, month and year first written above.

Signature and Seal of the First Party or authorised person thereof

Signature and Seal of the Second Party or authorised person thereof

Represented by (Please Write Name below)

Represented by (Please Write Name below)

In the presence of witness

In the presence of witness

1. _____

1. _____

2. _____

2. _____

Date:

Date:

(Attach Photograph of main signatories)

Screening of Environmental and Social Management System Framework for Construction of Community Hall

	Questions to be considered	Yes/No?	Is this likely to result in a significant effect? Yes/No/? Why?
1.	Will construction activity of the Project involves actions which will cause physical changes in the locality (topography, land use, changes in water bodies, etc.)?		
2.	Will Construction activity of the Project use natural resources such as land, water, materials or energy, especially any resources which are non-renewable or in short supply?		
3.	Will the Construction activity of the Project involve use, storage, transport, handling or production of substances or materials which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health?		
4.	Will the Construction activity of the Project produce solid wastes during construction, operation, or decommissioning?		
5.	Will the Construction activity of the Project release pollutants or any hazardous, toxic or noxious substances to air?		
6.	Will the Construction activity of the Project cause noise and vibration or release of light, heat energy or electromagnetic radiation?		
7.	Will the Construction activity of the Project lead to risks of contamination of land or water from releases of pollutants onto the ground or into surface waters, groundwater, coastal waters or the sea?		
8.	Will there be any risk of accidents during the Construction activity of the Project which could affect human health or the environment?		
9.	Are there any areas on or around the location which is natural habitat of any rare/ endangered/ threatened floral or faunal species which could be affected by the construction activity of the Project?		
10.	If yes what mitigation measures taken for that?		
11.	Are there any areas on or around the location which are protected under Wildlife Conservation Act which could be affected by the construction activity of the Project activity?		
12.	Are there any other areas on or around the location which are important or sensitive for reasons of their ecology e.g. wetlands, or other water bodies, mountains, forests which could be affected by the construction activity of the Project?		
13.	Does the construction activity of the Project activity leads to disturbance in the normal life, ethnicity, culture of the local people? If so what mitigation measures are taken?		
14.	Does the construction activity of the Project activity require relocation of human habitat? If so, what measures taken for their rehabilitation?		

15.	Is the construction activity of the Project location susceptible to earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions e.g. temperature inversions, fogs, severe winds, which could cause the construction activity of the Project to present environmental problems?		
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Screening Result- A/B/C

Category-A- works with complicated or unprecedented impacts that are difficult to assess, or construction activity of the Projects with a wide range of impacts or irreversible impacts, are also classified as Category A.

Category-B- Proposed construction activity of the Projects are classified as Category B if their potential adverse impacts on the environment and society are less adverse than those of Category A construction activity of the Projects.

e.g.

- Development of infrastructure or building where endangered species listed in Wildlife Act (1972) or their habitat are existed
- Building more than 20,000 square meters.
- Small-scale involuntary resettlement and land acquisition (more than 1 person)
- Other activities which fall into Category B in EIA Notification (2006)

Category-C- Proposed construction activity of the Projects are classified as Category C if they are likely to have minimal or little adverse impact on the environment and society.”

NOTE :-

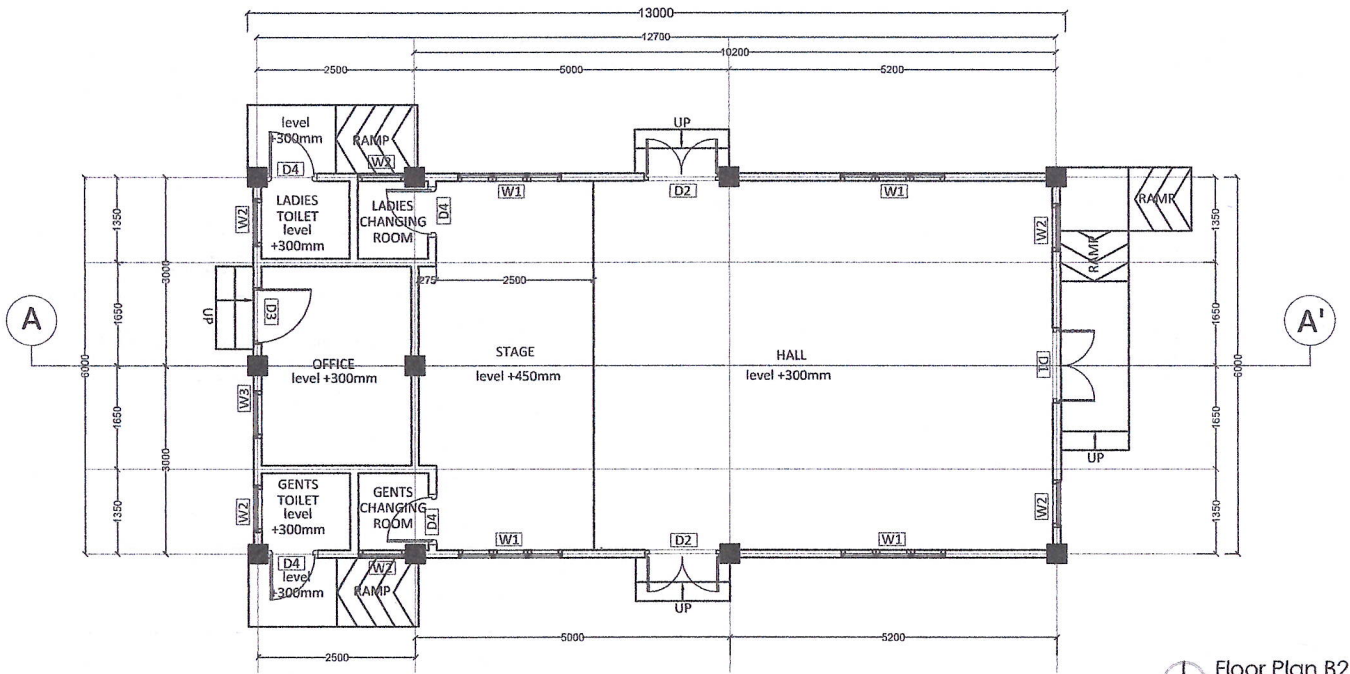
SL NO		TOTAL AMOUNT INCLUSIVE OF 12% GST	12% GST	TOTAL AMOUNT AFTER DEDUCTING 12%	6% GST	TOTAL GST
1	PROPOSED COMMUNITY HALL CONCEPT FOR B2	₹ 7,00,000.00	₹ 84,000.00	₹ 6,16,000.00	₹ 36,960.00	₹ 1,20,960.00
2	PROPOSED COMMUNITY HALL CONCEPT FOR E2	₹ 7,04,000.00	₹ 84,480.00	₹ 6,19,520.00	₹ 37,171.20	₹ 1,21,651.20

Oparch
Civil Engineer.

CONCEPT B2



Front Facade of Community Hall



Floor Plan B2
Scale NTS

Concept B2 Room Dimensions & Area

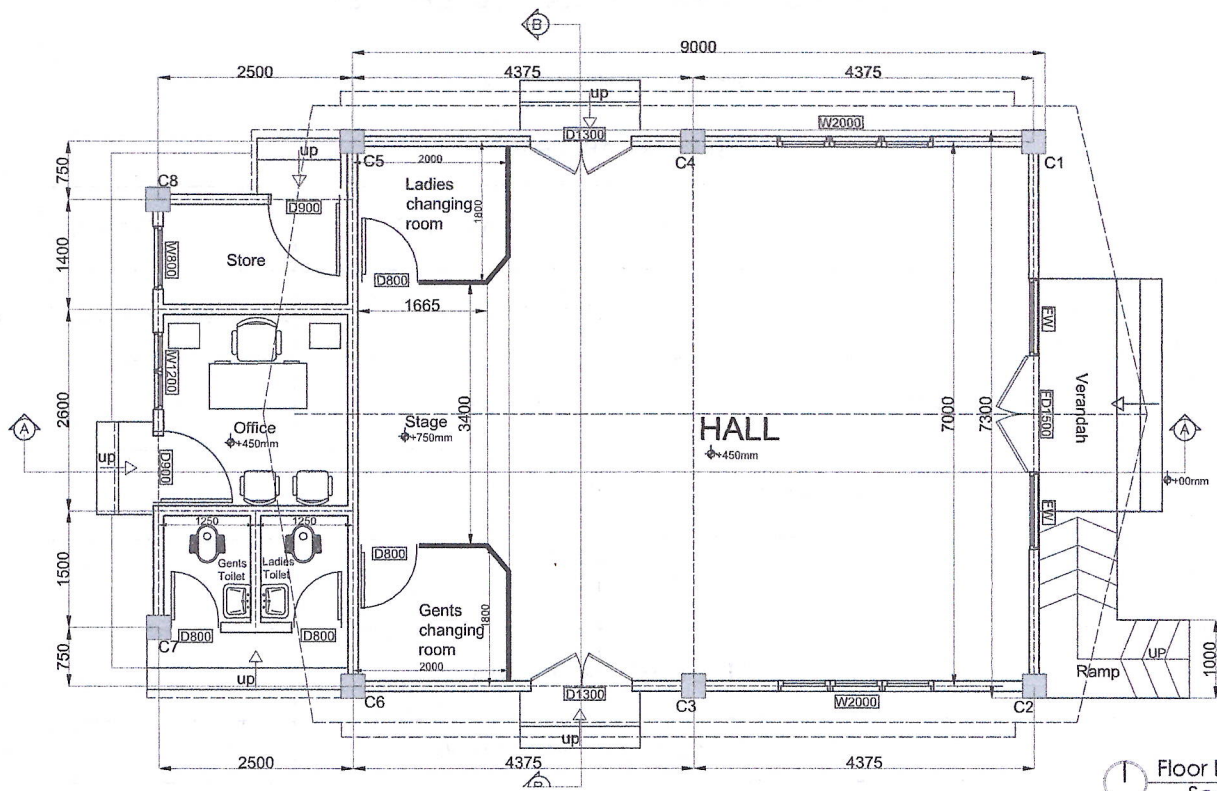
Sl. no.	NAME	DIMENSIONS	AREA
1.	HALL	6mX10.2m 19.6ftX33.4ft	61.2sqm or 658.73sqft
2.	CHANGING ROOMS	(1.47mX1.37m)x2 (4.8ftX4.5ft)x2	(2.04sqm or 21.95sqft)X2
3.	OFFICE	2.62mX3.42m 8.6ftX11.2ft	8.96sqm or 96.4sqft
4.	TOILET	(1.63mX1.47m)x2 (5.3ftX4.8ft)x2	(2.40sqm or 25.83sqft) X2
	TOTAL		81.9 sqm or 881.5sqft

CONCEPT E2



Jwatbor Cajee & Associates
 ARCHITECTS, ENGINEERS, DESIGNERS
 PROJECT MANAGEMENT & TURNKEY SOLUTIONS

Side Profile of Community Hall



Floor Plan E2
 Scale NTS

Concept E2 Room Dimensions & Area

NAME	DIMENSION	AREA
Hall (including changing rooms)	9m x 7.3m (30ft x 24ft)	65.7sq.m 720sq.ft
Toilets (ladies and gents)	2.65m x 1.65m (8.7ft x 5.4ft)	4.4sq.m 46.98sq.ft
Office	2.65m x 2.6m (8.7ft x 8.5ft)	6.9sq.m 73.95sq.ft
Store room	2.65m x 1.55m (8.7ft x 5.1ft)	4.1sq.m 44.37sq.ft
TOTAL AREA		81.1sq.m 873sq.ft

TOTAL PLINTH AREA (Excluding verandah and steps)=81.1sq.m=873sq.ft

TOTAL AREA (Including verandah, ramp and steps)= 94.6sq.m=1018sq.ft

NAME OF WORK: PROPOSED COMMUNITY HALL CONCEPT -B2

Rate as per the Meghalaya P.W.D (Building) S.O.R for 2021-2022

Sl.No	Particulars	Nos	L	B	D	Qty	unit	Rate	Amount	
1/2.1 (a)	Earthwork in excavation by manual means up to a depth of 2m below the existing ground level for foundation trenches of foundations, footings of column/ walls, retaining walls, septic tank etc. including bailing out water where necessary and removal of surplus earth with all lead and lifts as directed and specified for the following classification of soils.	FOOTINGS								
		F1								
		10	1.30	1.30	2.20	37.18	cum			
						0.00				
		PLINTH BEAM								
		PB								
		3	2.50	0.40	0.60	1.80	cum			
		2	5.00	0.40	0.60	2.40	cum			
		2	5.20	0.40	0.60	2.50	cum			
		4	3.00	0.40	0.60	2.88	cum			
		PB1								
		1	6.00	0.40	0.60	1.44	cum			
						Total	48.20	cum	₹ 213	₹ 10,265.75
2/12.5 (b.i)	Providing soling with stone/ best quality picked jhama brick, sand packed and laid to level and in panel after preparing the subgrade as directed including all labour and materials and if necessary dewatering, complete.	Isolated Footings								
		F1								
		10	1.30	1.30	1.00	16.90	sqm			
						Total	16.90	sqm	₹ 415	₹ 7,013.50
3/5.1 (b)	Plain cement concrete works in foundation bed for footing steps, walls, brick works etc below plinth level as directed and specified including dewatering if necessary, and curing complete (shuttering where necessary shall be measured and paid separately).	Isolated Footings								
		F1								
		10	1.30	1.30	0.10	1.69	cum			
						Total	1.69	cum	₹ 7,601	₹ 12,845.69
		FOOTINGS								
		F1								
		10mmΦ :								
		10	10	1.20	0.620	71.42	kg			
		10	10	1.20	0.620	71.42	kg			
		COLUMNS								
		20mmΦ :								
		10	4	6.15	2.470	607.62	kg			
						0.00				

4/6.11 (b)

Supplying, fitting and fixing in position reinforcement bars up to 1st floor level, conforming to relevant I.S. Code for R.C.C. work/RB walling including straightening, cleaning, cutting and bending to proper shapes and length as per details, supplying and binding with 20G annealed black wire and placing in position with proper blocks, supports, chairs, spacers etc. complete. (Rates inclusive of all wastage, lappage, hooks, chairs, anchorage etc. and no measurement for the same is required)

10	4	8.15	1.520	389.68	kg		
				0.00			
10	56	1.40	0.395	306.92	kg		
10	56	1.00	0.395	219.23	kg		
PLINTH BEAM							
PB: L = 2.50m							
16mmΦ :							
3	4	2.50	1.580	47.40	kg		
				0.00			
3	2	2.50	0.890	13.35	kg		
				0.00			
3	20	1.20	0.395	28.77	kg		
PB: L = 5.00m							
16mmΦ :							
2	4	5.00	1.580	63.20	kg		
				0.00			
2	2	5.00	0.890	17.80	kg		
				0.00			
2	39	1.20	0.395	37.41	kg		
PB: L = 5.20m							
16mmΦ :							
2	4	5.20	1.580	65.73	kg		
				0.00			
2	2	5.20	0.890	18.51	kg		
				0.00			
2	41	1.20	0.395	38.87	kg		
PB: L = 3.00m							
16mmΦ :							
4	4	3.00	1.580	75.84	kg		
				0.00			
4	2	3.00	0.890	21.36	kg		
				0.00			
4	24	1.20	0.395	45.65	kg		
PB1: L = 6.00m							
16mmΦ :							
2	6	6.00	1.580	113.76	kg		
				0.00			
2	47	1.40	0.395	52.15	kg		
BEAM							
B1: L = 5.00m							
20mmΦ :							

6/6.1 (b)	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement. All work up to plinth level: (b) M20 or 1:1 1/2:3 (1 cement: 1.5 coarse sand: 3 graded stone aggregate 20 mm nominal size)	FOOTINGS							
		F1							
		Rectangular							
		10	1.20	1.20	0.25	3.60	cum		
		Trapezoidal							
			A1	A2	h			$(h/3)(A1+A2+SQRT(A1*A2))$	
		10	1.44	0.12	0.20	1.32167	cum		
		BASES OF COLUMNS							
		10	0.35	0.35	2.00	2.45	cum		
		PLINTH BEAM							
		PB							
		3	2.50	0.25	0.35	0.66	cum		
		2	5.00	0.25	0.35	0.88	cum		
		2	5.20	0.25	0.35	0.91	cum		
		4	3.00	0.25	0.35	1.05	cum		
PB1									
2	6.00	0.30	0.40	1.44	cum				
			Total	12.30	cum	₹ 9,336	₹ 1,14,860.03		
7/6.2 (b)	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, fillets, columns, pillars, posts and struts etc. above plinth level up to first floor level, excluding cost of centering, shuttering, finishing and reinforcement:	COLUMNS							
		10	0.35	0.35	3.00	3.68	cum		
					Total	3.68	cum	₹ 9,923	₹ 36,467.03
9/8.1	Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement: 6 coarse sand: 12 graded stone aggregate 20 mm nominal size) up to plinth level with:	PLINTH BEAM							
		PB							
		3	2.50	0.40	1.00	3.00	cum		
		2	5.00	0.40	1.00	4.00	cum		
		2	5.20	0.40	1.00	4.16	cum		
		4	3.00	0.40	1.00	4.80	cum		
		PB1							
		2	6.00	0.40	1.00	4.80	cum		
			Total	20.76	cum	₹ 6,098	₹ 1,26,594.48		
		Volume of excavation from item no. 1/2.1.(a)			48.20				
		Volume of Stone soling in foundation from item no. 2/12.5.b(i)			-1.69				

10/2.6 (a)	Earthwork in filling (excluding rock) in trenches, plinth, sides of foundation etc in layers not exceeding 20cm thick including breaking of clods, consolidating each layer by ramming and watering, lead up to 50m and lift up to 1.5m.	Volume of Pcc in foundation from item no. 3/5 1 b		-1.69			
		Volume of Concrete in foundation from item no. 6/6.1.b		-12.30			
		Volume of Stone Masonary in foundation from item no. 9/8.1		-20.76			
		Flooring					
		1	12.70	6.00	0.29	21.72	cum
					Total	33.47	cum ₹ 141 ₹ 4,719.28
							Total= ₹ 6,87,045.81
							Add 2% for Contigencies= ₹ 13,740.92
							Grand Total= ₹ 7,00,786.72
							Say= ₹ 7,00,000.00
(Rupees Seven Lakh Only)							
Note:As per the Meghalaya P.W.D (B) SOR 2021-2022 the effect of GST on work contract @ 12% has been incorporated in all items.							

A. Mawlong
 Er. A. Mawlong
 Asstt. Engineer
 Jwatbor Cajee & Associates
 Architects : Engineers : Designers
 Project Management & Turnkey Solutions


 Ar. Jwatbor S. Cajee
 CEO & Chief Architect
 Jwatbor Cajee & Associates
 Architects:Engineers:Designers
 Project Management & Turnkey Solutions

NOTE :-

SL NO		TOTAL AMOUNT INCLUSIVE OF 12% GST	12% GST	TOTAL AMOUNT AFTER DEDUCTING 12%	6% GST	TOTAL GST
1	PROPOSED COMMUNITY HALL CONCEPT FOR B2	₹ 7,00,000.00	₹ 84,000.00	₹ 6,16,000.00	₹ 36,960.00	₹ 1,20,960.00
2	PROPOSED COMMUNITY HALL CONCEPT FOR E2	₹ 7,04,000.00	₹ 84,480.00	₹ 6,19,520.00	₹ 37,171.20	₹ 1,21,651.20

Praveh
Civil Engineer.

NAME OF WORK: PROPOSED COMMUNITY HALL CONCEPT-E2.

Rate as per the Meghalaya P.W.D (Building) S.O.R for 2021-2022

Sl. No	Description of item	No.	L	B	D	Qty	Unit	Rate	Amount
1	2.1(a)/P-3: Earthwork in excavation upto a depth of 2m below the existing ground level for foundation trenches of foundations, footings of column/ walls, retaining walls, septic tank etc. including bailing out water where necessary and removal of surplus earth with all lead and lifts as directed and specified for the following classification of soils.(a) All kind of soil(Ordinary soil/hard soil/dense soil)	2	1.2	1.20	1.800	5.18	cum		
		4	1.4	1.40	1.800	14.11	cum		
		2	1.6	1.60	1.800	9.22	cum		
		1	5.5	0.55	0.700	2.12	cum		
		3	7.00	0.55	0.700	8.09	cum		
		2	2.5	0.55	0.700	1.93	cum		
		4	4.375	0.55	0.700	6.74	cum		
					Total	47.38	cum	Rs.213.00	Rs. 10,091.30
2	12.5(b) (i)/P-45: Providing stone soling in foundation and under floor with stone/ best quality picked jhama brick, sand packed and laid to level and in panel after preparing the subgrade as directed including all labour and materials and if necessary dewatering. complete.(b) Stone soling (i)100mm	2	1.2	1.20	-	2.88	sqm		
		4	1.4	1.40	-	7.84	sqm		
		2	1.6	1.60	-	5.12	sqm		
		1	5.5	0.55	-	3.03	sqm		
		3	7.00	0.55	-	11.55	sqm		
		2	2.5	0.55	-	2.75	sqm		
		4	4.375	0.55	-	9.63	sqm		
		1	2.5	5.50	-	13.75	sqm		
		2	4.375	7.00	-	61.25	sqm		
		1	1.20	0.80	-	0.96	sqm		
		1	2.65	0.75	-	1.99	sqm		
		2	1.55	0.80	-	2.48	sqm		
		1	1.30	0.90	-	1.17	sqm		
		1	3.00	1.60	-	4.80	sqm		
1	3.40	1.00	-	3.40	sqm				
					Total	132.59	sqm	Rs.415.00	Rs. 55,023.81

3	5.1(b)/P-9: Plain cement concrete works with coarse aggregate of sizes 13mm to 32mm in foundation bed for footing steps, walls, brick works etc. as directed and specified including dewatering if necessary, and curing complete (shuttering where necessary shall be measured and paid separately).(c) 1:3:6 (1 cement: 3 coarse sand: 6 graded stone aggregate 20mm nominal size)	2	1.2	1.20	0.100	0.29	cum		
		4	1.4	1.40	0.100	0.78	cum		
		2	1.6	1.60	0.100	0.51	cum		
		1	5.5	0.55	0.100	0.30	cum		
		3	7.00	0.55	0.100	1.16	cum		
		2	2.5	0.55	0.100	0.28	cum		
		4	4.375	0.55	0.100	0.96	cum		
		1	2.5	5.50	0.100	1.38	cum		
		2	4.375	7.00	0.100	6.13	cum		
				Total	11.78	cum	Rs.7,601.00	Rs. 89,532.18	
4	8.1 (a)/P-19: Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement: 6 coarse sand: 12 grade stone aggregate 20mm nominal size) up to plinth level with : (a) cement mortar 1:6 (1 cement: 6 coarse sand)	1	5.5	0.45	0.750	1.86	cum		
		3	7.00	0.45	0.750	7.09	cum		
		2	2.5	0.45	0.750	1.69	cum		
		4	4.375	0.45	0.750	5.91	cum		
				Total	16.54	cum	Rs.6,098.00	Rs. 1,00,845.68	
6.11(b)/P-12: Supplying, fitting and fixing in position reinforcement bars upto 1st floor level, conforming to relevant I.S. Code for R.C.C. work/ R.B. walling including straightening, cleaning, cutting and bending to proper shapes and length as per details.	No.			L	Unit weight	Qty	Unit		
	FOOTING								
	4	2	1	10	1.20	0.889	85.34	kg	
	4	2	1	10	1.40	0.889	99.57	kg	
	2	2	1	10	1.60	0.889	56.90	kg	
	PLINTH BEAM								
	1	4	1	1	6.20	1.580	39.18	kg	
1	1	2	1	2.07	1.580	6.53	kg		

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supplying and binding with 20G annealed black wire and placing in position with proper blocks, supports, chairs, spacers etc. complete. (Rates inclusive of all wastage, lappage, hooks, chairs, anchorage etc. and no measurements for the same is required) (b) High Yield Strength Deformed bars or Tor Bars	1	57	1	1	1.20	0.395	27.02	kg			
	3	4	1	1	7.70	1.580	145.99	kg			
	3	1	2	1	2.57	1.580	24.33	kg			
	3	71	1	1	1.20	0.395	100.96	kg			
	2	4	1	1	3.20	1.580	40.45	kg			
	2	1	2	1	1.07	1.580	6.74	kg			
	2	30	1	1	1.20	0.395	28.53	kg			
	4	4	1	1	5.03	1.580	127.03	kg			
	4	1	2	1	1.68	1.580	21.17	kg			
	4	47	1	1	1.20	0.395	88.51	kg			
	Column										
	8	8	1	1	6.05	1.580	611.78	kg			
	8	47	1	1	1.40	0.395	207.93	kg			
	8	47	1	1	1.20	0.395	178.22	kg			

total= 1896.18 kg
or = 18.96 qntl **Rs.10,936.00** **Rs. 2,07,366.56**

6.1

4.1/P-7: Shuttering/ Formwork Centering and shuttering including strutting, propping etc. and removal of form for all heights complete and as directed by engineer in charge Foundations, Footing, bases of columns, etc. for mass concrete (using steel)	8	1.20	-	0.300	2.88	sqm		
	16	1.40	-	0.300	6.72	sqm		
	8	1.60	-	0.300	3.84	sqm		
	Column below plinth							
	32	0.35	-	1.350	15.12	sqm		
	Total				28.56	sqm	Rs.251.00	Rs. 7,168.56

6.2

4.5/P-7: Columns, Pillar, Piers, Abutment, Posts and Struts (using steel)	32	0.35	-	3.300	36.96	sqm		
Total				36.96	sqm	Rs.609.00	Rs. 22,508.64	

6.3


4.4/P-7: Lintel, Beam, Plinth beams, girder, bressumer and cantilever (using steel)	Plinth beams							
	2	5.50	-	0.350	3.85	sqm		
	6	7.00	-	0.350	14.70	sqm		
	4	2.50	-	0.350	3.50	sqm		
	8	4.38	-	0.350	12.25	sqm		
	Beam							
	2	5.50	-	0.400	4.40	sqm		
6	7.00	-	0.400	16.80	sqm			

		4	2.50	-	0.400	1.00	sqm		
		8	4.38	-	0.400	14.00	sqm		
					Total	73.50	sqm	Rs.486.00	Rs. 35,721.00
		2	1.2	1.20	1.800	5.18	cum		
		4	1.4	1.40	1.800	14.11	cum		
		2	1.6	1.60	1.800	9.22	cum		
		1	5.5	0.55	0.700	2.12	cum		
		3	7.00	0.55	0.700	8.09	cum		
		2	2.5	0.55	0.700	1.93	cum		
		4	4.375	0.55	0.700	6.74	cum		
		deduction							
		2	1.2	1.20	0.500	-1.44	cum		
		4	1.4	1.40	0.500	-3.92	cum		
		2	1.6	1.60	0.500	-2.56	cum		
		8	0.35	0.35	1.350	-1.32	cum		
		1	5.5	0.45	0.600	-1.49	cum		
		3	7.0	0.45	0.600	-5.67	cum		
		2	2.5	0.45	0.600	-1.35	cum		
		4	4.375	0.45	0.600	-4.73	cum		
					Total	24.90	cum	Rs.141.00	Rs. 3,511.46
		2	1.2	1.20	0.500	1.44	cum		
		4	1.4	1.40	0.500	3.92	cum		
		2	1.6	1.60	0.500	2.56	cum		
		8	0.35	0.35	1.350	1.32	cum		
		1	5.5	0.25	0.350	0.48	cum		
		3	7.0	0.25	0.350	1.84	cum		
		2	2.5	0.25	0.350	0.44	cum		
		4	4.375	0.25	0.350	1.53	cum		
					Total	13.53	cum	Rs.9,336.00	Rs. 1,26,320.75

9	6.2 (b)/P-11: Reinforced cement concrete work in walls (any thickness) including attached pilaster, buttresses, fillets, columns, pillars, post and struts etc. above plinth level up to first floor level, excluding cost of centering and shuttering, finishing and reinforcement: (b) M20 or 1:11/2:3 (1 cement: 11/2 coarse sand: 3 grade stone aggregate 20mm nominal size)	8	0.35	0.35	3.300	3.23	cum		
					Total	3.23	cum	Rs.9,923.00	Rs. 32,090.98
								TOTAL =	Rs. 6,90,180.92
								Add @ 2.0% for Contingency =	Rs. 13,803.62
								GRAND TOTAL =	Rs. 7,03,984.54
								Say =	Rs. 7,04,000.00
								(Rupees Seven Lakhs Four Thousand Only)	
<p>NOTE: As per The Megghalaya P.W.D (B) SOR 2021-2022 the effect of GST on work contract @ 12% has been incorporated in all the items.</p>									


Ar. J.S Cajee

CEO & Chief Architect
Jwathor Cajee & Associates
Architects:Engineers:Designers
Project Management & Turnkey Solutions


Er. S. Langstang
Asstt. Engineer
Jwathor Cajee & Associates
Architects ; Engineers : Designers
Project Management & Turnkey Solutions

List of Project Villages for Community Hall Construction Capacity Building at Garo Hills Region

District	Block	Village
EGH	DOMBO RONGJENG	Thaugittim
	DOMBO RONGJENG	Rongchong
	DOMBO RONGJENG	Nengkongkil
	DOMBO RONGJENG	Gindil
	DOMBO RONGJENG	Badilpa
	DOMBO RONGJENG	Miktongjeng
	DOMBO RONGJENG	Dogep Gipuram
	DOMBO RONGJENG	Simseng Balkol
	DOMBO RONGJENG	Simseng Wale
	DOMBO RONGJENG	Simseng Rongal
	DOMBO RONGJENG	Simseng Aringga
	DOMBO RONGJENG	Simseng Gading
	DOMBO RONGJENG	Chibilbang
	DOMBO RONGJENG	Mejolge Nokat
	DOMBO RONGJENG	Simseng Bolma
	DOMBO RONGJENG	Rongchek Akong
	DOMBO RONGJENG	Dagal Nokat
	SAMANDA	Dorakgre
	SAMANDA	Jongmegre
	SAMANDA	Gitokgre
	SAMANDA	Meronggre
	SAMANDA	Jingamgre
	SAMANDA	Chonggigre
	SAMANDA	Bansinggre
	SAMANDA	Sawilgre
	SAMANDA	Kalak Songgital
	SAMANDA	KalakDorek
	SAMANDA	RongriboAmalgre
	SAMANDA	RongriboWatrege
	SAMANDA	Rongkinggre
	SAMANDA	Rongchek Manda
	SAMANDA	Bandigre
	SAMANDA	Rengregre
	SAMANDA	Rapdikgre
	SAMANDA	KalakSonggitcham
	SONGSAK	Dangkong Gilmatdam
	SONGSAK	Rongrang Nokat
	SONGSAK	Asil Chiringgre
	SONGSAK	Asil Songgital
	SONGSAK	Danal Dasik
	SONGSAK	Danal Megapgre
	SONGSAK	Kentra
	SONGSAK	Resagre
SONGSAK	Rongrong Songgitcham	

List of Project Villages for Community Hall Construction Capacity Building at Garo Hills Region

District	Block	Village
EGH	SONGSAK	Watenangre
	SONGSAK	Rongronggre
	SONGSAK	Danal Apal
	SONGSAK	Mandalang Akoksi
	SONGSAK	Bolsongchok
WGH	DALU	Rimrangpara Bajigre
		Mandanggre
		Dopnangre
		Soropagre
		Chollongpara
		Rimrangpara Asim
		Upper Mibonpara
		Chasinpara
		Ajugre
		Ranggapara
		Pathanggre
		Sangjeng- Nokat
		Sandongpara
		Akinpara
		Basulpara
		Sangjengpara
		Selbalgre
		Songmagre
		Mandagre
		Rangdapara
	Darenggagiri (Darangagre)	
	Possenggagre	
	GAMBEGRE	Abendagre
		Balikingiri
		Jarimpara
		Kapogre
		Rajinpara
		Santogre
		Sisogiri
		Wakolanggre
		Dana Bollonggre
		Dorenggri
		Galwanggre A
		Galwanggre B
Jawakgri		
Nalnpara		
RongareAdinggre		
Sampalgri		
Kerupara		
Tochapara		
Dadokgre		

	RONGRAM	Adinggre Nokatgre
WGH	TIKRILLA	Bibragre
		Chandigre
		Sasatgre
		Tosekgre
		Anogre
		Chinapgre
		Dirikgre
		Gindopara
		Manggakgre
		Renchagre
		Silsakgre
		Teksragre
		Adugre
		Bugakolgre
		Gambarigre
		Daljagre
		Goeragre
		Marakapara
		Bawegiri
		Dildigre
		Mengotchigre
		Bolsaldamgre
		Lower Khongrapara
		Nayapara
		Rabukong
		Belguri
		Borogobol
		Dotrongre
		Khasipara
		Lower Rembigiri
		Mothapara
		Kurung
		Pedaldoba (Rabha)
Megonggiri		
Kotchugre		
Naguapara		
Upper Rembigiri		
NGH	KHARKUTTA	IllaRongchim
		Mitegittim
		Remagittim
		Imsambal
		Dokongsi C
		Kalwe
		Mandadrop
		Rangsa
		Rajasimla Songgital

District	Block	Village
NGH	KHARKUTTA	ChibraJambal
		Lower Jambal
		Lower Sare Awe
		Upper Sare Awe(Reserve)
		Memilam
		Imbeng Akong/Adap
		Jajilgittim
	RESUBELPARA	Rongpetchi
		Chore Pahar
		Ajasiram
		Nokatgre
		Rongmatcha
		Gambil Apal
		Bangsi Aga
		Bangsi Bokda
		Bangsi Dogru
		Bangsi Minol
		Thapa Dajonggre
		Thapa Dangre
		Thapa Darenchi
		Thapa Matronggre
		Thapa Ragolgre
		Thapa Rongdeng
		Rompa
		Galwangsa
		Nanil Apal
		Dokasaram
SGH	BAGHMARA	Chramgre
		Darit Asim
		Gare Chigitchak
		Era aning
		Gare Nengjabing
		Jadigittim
		Rongsa Awe
		Dobakol Awemong
		Rongkandi Nengbrekgittim
		Rongkandi Songgital
		Darang Akepgittim
		Darang Boldak
		Darang Chiga
		Darang Nengsranggittim
		Sudugre
		Rongkandi Dengjama
		Dobakol Chenggalgittim
Darang Dura		

District	Block	Village
SGH	GASUAPARA	Atabenga
		Ginengkolsi Songgital
		Gnengkolsi Songgitcham
		Kalsigre
		Andamarigre
		Balmoragre
		Darit Simragittim
		Darit Wacholgre
		Genabra
		Nilwasagre
		Rongchonggre
		Tebisokgre
		Wagebokgre
		Wakskogre
		Watregre
		Dompaigne
		Galwanggitok
		Karawengre
		Rangmai Aruakgre
		Rangmai Chigitchak
		Ruatsogre
	SilkiAdu	
	RONGARA	Amonggre
		Dombuk Atong
		Gulpani Nokat
		Gulpani Songmong
		Inolgre
		Kasarisora
		Kunchung Songmong
		Nengsra
		Rona Agal
		Seelpang
		Taidang
Bolbokgre		
Bolchugre		
Dilsinggre		
Gaobari		
Toklekbari		
Wachal Chiring		

District	Block	Village
SWGH	BETASING	Rongsang Abagre
		Arenggre
		Rongsang Songma
		Skagre
		Kasibil
		Golmangre
		Ajonggre
		Bolsal Dobokgre
		Chiringpara
		Nepalgre
		Jongchetpara Songma
		Jongchetpara Nokat
		Jelbongpara Songma
		Jelbongpara Nokat
		Kolkatola
		Salbari
		Mokpara
		Lutubari
		Mosheshbathanpara
		Marpara
	ZIKZAK	Koraitola
		Ritekpara
		Dengnagre
		Boldorenggre
		Ullubaripara
		Noonmati
		Rongkaigre
		Dombagre
		Malmua
		Nokatgre
		Ghilajuri
		Melapara
		Torangpara
		Bhoirakupi Nolbari
Wagepara		
Tarapara		
Wadagre		
Songmagre		
Baghana		
Patijora		

Total No. of Villages -261

List of Project Villages for Community Hall Construction Capacity Building at Khasi Hills Region

District	Block	Village
EKH	Mawkyntrew	Laitmynsang
		Mynsang
		Mawsir
		Pashang
		Mynriah
		Mawsna
	Mawryngkneng	Pomlahier
		Iapshyndeit
		KsehPyndeng
WKH	Mairang	Sylleibah
		Nongthyllep
		Mawkyi
		Mawlumkhri
		Patharlyndan
RI BHOI	UMLING	Bleishah
		Umdennongtluh
		Umden Khasi
	UMSNING	Wahpipa
		Mawkorblang
		Sain urbania
		Umnongkrem
		Patharan
SWKH	Mawkyrwat	Domtynrong
		Mawksiar
		Pawphlang
		Phottdei
		Mawiong
		Tlangpui
EJH	SAIPUNG	Tuidam
		Tuituk
		Situng
		Siakan
		Shiabnai
WJH	THADLASKEIN	Lapangap
		Pdeniadaw
		Senaro
		Umjalisiaw

Total No. of Villages- 37

Guideline for Quality Checking of Construction Material
for all kind of construction works under MegLIFE

The VPIC members that are entrusted with the task of quality checking, can contribute well, if they are aware of the basic checks and verification that can easily be done by a layman without relying on technical knowledge. This skill requires adequate literacy. Acquaintance with the English alphabets is mandatorily recommended.

Basic components that are largely consumed during construction are cement, water, aggregates (coarse and fine), bricks, reinforcement steel etc. Some basic ways to ensure the quality of raw materials are briefly mentioned hereunder. These guidelines are only indicative in nature and not comprehensive. Therefore the Field Engineers must ensure that all the technicalities shall be adhered to in all construction activities.

1. Cement- Various types of cement such as Ordinary Portland Cement (OPC), Portland Pozzolana Cement (PPC), Slag cement of various grades are used for joining bricks, for preparation of concrete, for plastering and flooring etc. Cement must be used within 3 months of its manufacturing, beyond which it loses its cementation property. Therefore, the quality of cement must be monitored in all earnest. Some easy tips are:

- ✓ The week of manufacturing is mentioned on each bag. This number varies from 1-52.
- ✓ Cement bag must be without any lumps or hardness when felt by hand.
- ✓ When hand is inserted in a freshly cut cement bag, it must feel warm.
- ✓ If taken on fingertips, cement must feel powdery and not coarse.



2. Water: Water used for preparing cement mortar or Concrete, must be clean and free from injurious amounts of oils, acids, alkalis, salts, sugar, organic materials, or other substances that may be deleterious (harmful) to concrete or steel. Potable water is generally considered satisfactory for mixing concrete or preparing mortar.

3. **Aggregates:** Both coarse aggregates (stone /metal chips) and fine aggregates (sand) must be free from clay lumps, vegetation, organic waste etc. The stone chips must be of uniform size and have angular shape and they should be free from flaky materials and deformed edges.



Well Graded Aggregates



Flaky Aggregates

4. **Bricks:** Bricks are used for constructing walls for different types of structures. The bricks must be having uniform size, well defined edges, well-formed edges. The central depression where, the name/ logo of the manufacturer is placed, also known as FROG must be deep enough to enable proper bonding between different layers. The bricks must produce a metallic sound when struck with the other. Keeping one brick vertical and the other perpendicular to it, drop the bricks from a height of approximately 1m height, the brick on top must break in to two equal parts.



Poor Quality Brick



Good Quality Bricks

5. **Reinforcement steel:** Reinforcement steel is essentially provided to impart strength to the concrete structures. The reinforcement steel being used in construction must be free from scales and rust. It should not be brittle or have any cracks on the surface.



Poor Quality Steel



Good Quality Steel

Cement and Reinforcement Steel are supplied with test certificates by the manufacturers. These must be matched with the specifications in the work order. Test certificates pertaining to each lot must be insisted upon and documented in a file kept at site. This is an essential requirement for ensuring quality at site.

6. Quality Checks during Construction stage

- i. While mixing concrete at site, the proportions (quantities and their respective ratios) of different ingredients must be checked for compliance with the one specified. **Water: Cement ratio** must be checked to ensure that the concrete being mixed has the desired workability. A simple way of doing this is the “LADDU TEST”. Take a sample from the freshly mixed concrete enough to make a Laddu. Roll it between the palms just like you are making a Laddu by hand. After, the concrete has taken the shape of a Laddu, and toss it in the air as if a ball being thrown upwards, it should not come-off. If it comes-off, the desired workability is not there and the Water: Cement ratio must be revised.
- ii. This test is applicable for the concrete being mixed for rafts and foundations. For walls, the concrete requires additional workability to ensure that concrete can be compacted in thin sections. Before pouring concrete the form work (shuttering) erected to give concrete the desired/ designed shape and size must be checked for line and level. It must also be ensured that there are no gaps between two adjacent shutters.
- iii. The reinforcement needs to be checked for ensuring that the spacing between two adjacent layers or bars is as specified in the drawing. Proper cover between the formwork and reinforcement must also be ensured. Proper compaction of cement must be ensured so that the concrete attains the designed strength. This is done using compaction vibrators. Compressive strength tests (cube tests) are an important part of concrete testing. It is done on a Compression Testing Machine in a laboratory. The cube test reports for both 7-day and 28-day compressive strength tests must be documented in a register. Check proper watering/ curing of concrete is done whilst constructing reservoir, pump stations, treatment plant etc. There should not be honeycomb in the structure.

7. Review of Work Progress

The time allocated for the work can either be defined in terms of days, weeks, fortnights or months. After the construction schedule is finalized, the VPIC must monitor the progress of each activity by correlating it with the time taken. The percentage progress may be marked in green directly below the activity, once the task is complete, or if other tasks can be begun simultaneously, the other activities may be allowed. Inclement weather may delay the progress, therefore, daily log of weather conditions, including rainy days must be kept recorded by the VCF. Similarly, the availability of labour, material and other resources also must be recorded.

Guideline for Community Contribution and Accounting

For construction, operation and maintenance of these constructions, VPIC may contribute 5% of the capital cost in cash and / or kind and /or labour. The VPIC Executive Committees may consider exempting individual contribution from the poor, specially-abled, single mother and socially excluded groups. Community contributions shall be accounted separately for audit purpose.

Community Contribution

- ✓ Contribution may be of minimum 5% or less of total capital cost depending on the decision of VPIC in form of cash/ kind or labor or both.
- ✓ Willingness of local villagers to participate and instil a sense of ownership must be ensured.

Accounting

- ✓ A register is required to be maintained to record the receipt of cash contribution received from the community on regular basis before utilizing the fund.
- ✓ Opening separate bank account for contribution received with any scheduled commercial bank is encouraged. This will add to the trust as funds are not with an individual but a bank where all records are properly maintained.
- ✓ The mechanism with and develop ownership among them.
- ✓ This fund may also be utilized in future for maintenance etc.
- ✓ Prepare a plan on how to utilize the contribution received and maintain record of receipt and expenditure. Accounting will bring in transparency to the system.

Daily and annual O&M task

- ✓ VPIC while working as a public utility needs to look after certain day-to-day, service delivery, O&M tasks.
- ✓ Ensuring proper use of infrastructure, cleanliness etc.
- ✓ Carrying out minor repairs as and when required
- ✓ Hold periodic meetings and maintain record for the same.
- ✓ Facilitate inspection and functionality assessment by officials from BPMU/DPMU/SPMU.

Community Contribution Register

Name of VPIC Member	Contribution Received				Signature of the VPIC Member	
	In Cash (Rs.)	In Kind Material (sand/brick/cement etc. specify)		In terms of labour (days)		
		Type	Value (Rs.)	DLs	Value (Rs.)	