

**PRIORITY NO. 1: CONSTRUCTION OF APPROACH ROAD TO CHALFILH TOURIST CENTRE**  
**(Rs. 4.99 crores)**

**1. Background History :**

The approach road to Chalfilh (Vanzau) starts from NH-150 at 51.350 Kmp within Khanpui village and the proposed alignment runs towards east and climbs up to the top of the hill. About 16 years back, jeepable road was constructed for the purpose of transportation of agriculture and horticulture products. However, the road gradient is too steep and due to non-maintenance of the road, this existing road is almost untraceable now. The proposed new alignment gradient is within the permissible limiting gradient. The total length of the road will be 10.50 Km. The proposed alignment passes through hilly terrain and has to cross a number of valleys, a few number of small streams and finally climb up to the top of the Vanzau hill, which is one of the highest peak in Mizoram. This proposed road passes through agriculture and jhum areas.

**2. Road network of the area :**

As stated in the preceding Para there is only old existing jeepable road which is almost untraceable now. Therefore, it can safely be said that the road network in this particular area is non-existent. The road density in the whole of Mizoram is 32.80 Kms. Per 100 Sq.Km which is still very low as compared to the National average as well as other States of North Eastern Region.

**3. Development objectives :**

Mizoram is a landlocked state and is economically backward as compared to other state of India. There are no big industries and factories for upliftment of the economy of Mizoram. The growth of the economic conditions therefore mainly depends on agriculture, horticulture and tourism. However, the road networks of Mizoram is insufficient and is still the problem for transportation of agriculture and horticulture products. Some of the famous places which can be used for tourist attraction are not accessible due to insufficient road net-works. The geographical location and the scenic beauty of hills and valleys of Mizoram have very high potential for tourist attraction not only from different parts of India but also from foreign countries. As such, it is proposed to have Tourist Centre at the top of the hill (Vanzau). The climate is very pleasant at the top of the hill and the landscape is very beautiful with a very good view in all directions. There is a vast flat land at the top of the hill with virgin forest and many varieties of birds. The area is rich in flora and fauna. Moreover, the alignment passes through area with high potential for agricultural and horticultural products. Therefore, construction of this road is essential not only for Tourist Centre but also for transportation of agricultural and horticultural products.

**4. Benefit :**

The construction of this road will in general be beneficial for economic upliftment of the area as the proposed road will serve as the only mean of access to this area which is very rich in agriculture and horticulture potential and also for transportation of the product to other places. in addition to the economic benefits the construction of this road will also be useful for day to day running of administration and maintenance of law and order in the area.

**5. Ongoing initiatives :**

The state government has taken initiative to develop agriculture and horticulture in this area. The Government of Mizoram is also intending to develop tourism by constructing tourist centre at the top of the hill (Vanzau). Construction of the approach road to Chalfilh is therefore considered essential for making accessibility to this tourist centre. There will be no duplication with other ministry/state government/funding agency nor with other roads, as there is no alternative route other than this proposed road. Hence, synergism with other organization does not arise.

**6. Economic Parameter :**

The economy of the area to be served by the proposed road depend mostly on agriculture, horticulture and forest products. The area is very fertile having high potential for further development of agriculture and horticulture. in addition to agriculture and horticulture potential, as stated above development of the area for tourism will further generate revenue for the State as a whole. The important of the road connection to the area for the economic upliftment of the people and for generating revenue for the state therefore need no further emphasis.

The direct and indirect economic benefit that the road will bring to the people of the area cannot be easily quantified. This is mainly due to the absence of traffic data since the road is new for all practical purposes. However, it is certain beyond any doubt that the road once constructed will bring much benefit to the area in general and for the economic upliftment in particular.

**7. Sustainability :**

The effort of the state government to develop agriculture, horticulture, tourism and other economic growth measure have been stalled and can not properly sustain by poor road transport infrastructure as there is no mean of transportation of various products to market places. Once this road is constructed it will go along way in sustaining the various economic development of the area. The economic development that will accrue from the proposed road will also be sustained through proper upkeep and maintenance of the road.

**8. Statutory Clearance :**

The alignment of the road follows the existing jeepable road except in some portion where re-alignment is found necessary. The road does not pass through reserve or built-up area and does not involve acquisition of land or property. Land is available free of cost and encumbrances. in short, no forest or environmental clearance is required.

**9. Implementation Readiness :**

Sufficient labour both skilled and unskilled are available in Mizoram for execution of the work. There will be no necessity of bringing labour from outside the state.

Construction materials like good quality stones for stone masonry and pavement works are available locally. However manufactured materials like cement, bitumen etc. will have to be brought from outside the state.

All types of construction machineries required for execution of the project is readily available within the state.

The work will be executed through contract following normal procurement procedure.

**10. Time frame and physical & financial phasing :**

The project is proposed to be completed within 2 (two) years i.e. by March 2006 with the following physical and financial phasing :

Year	Physical Target (Cumulative)	Financial Target (Rs. in lakhs) (Cumulative)
2004 - 2005	70%	349.97
2005 - 2006	100%	498.59

**11. Project Cost :**

The total project cost on a constant price is Rs. 498.59 lakhs based on current Schedule of Rates 2004.

**PRIORITY NO. 2: BAMBOO CONSTRUCTION BOARD INDUSTRY AT BAMBOO INDUSTRIES COMPLEX, SAIRANG, MIZORAM**  
**(Rs. 4.95 crores)**

**1. Introduction :**

This project is to set up bamboo construction board manufacturing industry in the bamboo rich state of Mizoram. The main raw material is bamboo of various species, which is abundantly available in the State to the tune of 25.28 million tones.

So this project is prepared to tap the economic potential of huge bamboo resources available in the State and all possible care has been taken to frame this Report as per generic structure of DPR for funding under NLCPR framed and circulated by DONER.

**2. The State of Mizoram :**

The State of Mizoram, in the southern most tip of North East India is having positive characteristics like all round peace, favourable climate, high literacy and education, rich bamboo resources etc., it is yet to start development towards self-sufficiency despite hindrances like :

- Industrially overall backwardness.
- Problems of unemployment
- Decrease in forest coverage
- Limited presence of natural minerals
- High dependency of State on Central Government on economy
- Hilly terrain topography

3. **Uses of bamboo construction board :**

Due to advantageous properties of bamboo, bamboo concrete board is superior to other boards. The main uses are concrete formwork (paper-laminated), partition walls, panels, furniture, truck and other floors etc.

4. **Manufacturing process :**

Manufacturing processes of the bamboo construction board is briefly described in the following sequences of activities :

- Harvesting and collection of desirable species of matured bamboo.
- Cross cutting at desired length.
- Splitting for desired dimensions.
- Slivering (outer retina and inner layer discarded).
- Weaving mats for exterior or weaving with thread for internal layer.
- Drying at proper temperature to moisture contents.
- Application of glue.
- Hot pressing with waterproof epidermal layers.
- Sanding wherever required.
- Edge cutting/sizing.
- Edges/sides treatment.
- Ready for use.

5. **Approach and strategy :**

With the strength and weakness of the overall situation in the State and opportunities and threat present, the project is proposed to be funded under NLCPR and limited amount by private stakeholder.

The project implementation will be two-folds, infrastructure development by the implementing agency and the equipment part including pre-commercial operation jointly with the private partner.

6. **Estimated Cost :**

The total estimated cost and fund applied under NLCPR from DONER is given as :

A. Infrastructure development :

i)	Approach road	Rs.	16.50	lakhs
ii)	Water supply	Rs.	7.80	lakhs
iii)	Factory Buildings	Rs.	116.88	lakhs
iv)	Workers' shed	Rs.	7.20	lakhs
v)	Chowkider's shed	Rs.	2.30	lakhs
vi)	Utilities building	Rs.	2.10	lakhs
vii)	Mat production building	Rs.	13.56	lakhs
viii)	Fencing	Rs.	1.25	lakhs
ix)	Electrification	Rs.	7.35	lakhs
	<u>Sub Total</u>	Rs.	<u>174.94</u>	<u>lakhs</u>

B. Industry set up etc :

i)	Mat production unit	Rs.	2.70	lakhs
ii)	Press and accessories	Rs.	251.88	lakhs
iii)	Drying lines	Rs.	38.50	lakhs
iv)	Miscellaneous assets	Rs.	32.50	lakhs
v)	Pre-operative and miscellaneous expenses	Rs.	9.50	lakhs
vi)	Working Capital margin	<u>Rs.</u>	<u>50.00</u>	<u>lakhs</u>
	<b>Sub Total</b>	<b>Rs.</b>	<b>385.08</b>	<b>lakhs</b>
	<b>Total Project Cost</b>	<b>Rs.</b>	<b>560.02</b>	<b>lakhs</b>
	<b>Say</b>	<b>Rs.</b>	<b>560.00</b>	<b>lakhs</b>

Of the total amount of Rs. 560.00 lakhs, the project is framed such that Rs. 65.00 lakhs will come as equity share from joint venture partner.

Hence, the total amount applied under NLCPR from DONER is

Rs. 560.00 lakhs - Rs. 65.00 lakhs

**i.e. Rs. 495.00 lakhs only.**

7. **Status of readiness, Implementation schedule and phasing expenditure :**

Site proposed is within the Bamboo Industries Complex, Sairang, Aizawl District in Mizoram. The implementing agency is already in possession of the site and land acquisition is not necessary. Hence, the site is available already for implementation of the project as soon as sanction is accorded. The project is scheduled to be completed within a period of 2 years (24 months) from the date of sanction. Phasing of expenditure is given below in the table :

Sl. No	Items	Year 1				Year 2				TOTAL
		Qtr.1	Qtr 2	Qtr 3	Qtr 4	Qtr.1	Qtr 2	Qtr 3	Qtr 4	
<b>A.</b>	<b>Infrastructure Dev.</b>									
1	Approach road	3.5	4	9						16.5
2	Water supply	2	3	2.8						7.8
3	Factory building		26	38	27.9	12		5	8	116.9
4	Workers shed		2.5	4.7						7.2
5	Chowkidar shed				1	1.3				2.3
6	Utilities building			1.1	1					2.1
7	Mat prod. Bldg			3		4	6.56			13.56
8	Fencing	0.25	1							1.25
9	Electrification			5.8				1.55		7.35
<b>B.</b>	<b>Industry set up</b>									
1	Mat prod. Mach			2	0	0	0.7			2.7
2	Hyd. Hot press			125	10.5		22	70	24.38	251.88
3	Druying lines							19.25	9.75	29
4	Misc. assets							16		16
5	P.o. exp. & misc.	0.5	1.2	1.3	1.3	1.3	1.2	1.2	1.5	9.5
6	W/C margin								50	50
	<b>TOTAL</b>	<b>6.25</b>	<b>37.7</b>	<b>192.7</b>	<b>41.7</b>	<b>18.6</b>	<b>30.46</b>	<b>113</b>	<b>93.63</b>	

8. **Implementing agency :**

The proposed implementing Agency is the Bamboo Development Agency, a society formed by the Government of Mizoram for all round development of bamboo sector in the State. The Agency is chaired by Chief Secretary of the State and draws technically capable employees from the State Government Departments. The Agency is undertaking various projects and activities on bamboo sector development and is one of the leading institutions on this field in India.

9. **Objectives of the project :**

The project is to utilize huge available bamboo resources which are presently unexploited for economical gains with projected results of :

- Generation of 114 direct employees.
- Creation of indirect employment to the tune of Rs. 400.00 lakhs.
- Profit generation of more than Rs. 200.00 lakhs per year.
- Providing alternative livelihood to jhum cultivators.
- Check in decrease of forest cover by providing timber substitute.
- Pilot for bamboo sector development.

10. **Financial analysis :**

Some points regarding financial analysis are :

- Net sales realization of Rs. 1836.00 lakhs at 100% capacity utilization.
- Profit of Rs. 187.61 lakhs in the first year, Rs. 198.30 lakhs in the second year and Rs. 218.38 lakhs on the third year.
- Break even point at 35%.

11. **Sustainability of the project :**

The project is proposed to be under the management of private partner of the joint venture and the profit share and lease rent projected to come to the implementing agency will be applied for furtherance of the purpose of the project. As such, the project is estimated to be sustainable by itself.

**PRIORITY NO. 3: INFRASTRUCTURAL DEVELOPMENT OF COLLEGE INSTITUTIONS**  
**(Rs. 30.00 crores)**

**Background**

Govt. of Mizoram has established 8 Govt. Colleges, 12 Deficit Grant-in-Aid Colleges and 7 Private Colleges within a span of last 20 years to meet the need of the State and the aspiration of the people of Mizoram. Due to low income of the Mizo people most of the students depend upon the Colleges within Mizoram for their study. The Govt. of Mizoram has established 27 nos. of Degree Colleges but instead of numerical expansion, it has now turned its attention towards improvement of physical conditions of the existing colleges and Institutions with its limited resources. In order to improve the quality of education, it is obvious that in addition to improvement of faculty members, building up of infrastructure and procurement of Teaching - Learning equipment are equally essential. In the meantime,

the present buildings and equipment are insufficient to meet the students enrolled in the colleges. It is therefore, submitted Project Proposal for improvement of physical condition of Colleges and Post Matric Institutions in Mizoram to the tune of Rs. 30.00 crores.

1. **Necessity:** The colleges and Institutions are established more than 20 years back where the buildings were constructed by the Local Community and College Management Board in a small size of Assam type buildings. The Govt. of Mizoram has repaired and reconstructed Govt. Institutions but due to constant financial problems faced by the State Govt. even the minimum requirement of the students could not be solved. At present the college buildings are worn out due to old age, constant use and cyclonic storm. in the meantime, procurement of teaching - learning equipment of Science and other equipment, books etc. are extremely necessary for development of students in the State.
2. **Objective:** The main objective of the Project is infrastructural development and procurement of Teaching- Learning equipment.
3. **Scope & Benefit:** The project will cover all the Revenue Districts and Autonomous District Councils within the State where the works and procurements will be executed. It will also be extended to Shillong, the capital of Meghalaya where the students from Mizoram will directly benefit as students/ boarders of the hostels. The enrolment of students increases every year. The Project will be benefited by 3070 nos. of students directly from the inception of the scheme within Mizoram and 140 nos. of students at Shillong as Hostel Boarders.
4. **Due to** constant financial problems being faced by the State Government, no initiative has been taken by the State Government and as such no duplication will come on the scheme. The funding from NLCPR is the only source for implementation of the scheme.
5. **Since** the State Govt. is facing acute financial constraints funding from the NLCPR is the only hope to achieve the infrastructure development and purchase of teaching-learning equipment which will develop the higher education status in the State.
6. **Operation & maintenance** after completion of the project will be done from the fund allocated to the State Govt. under Plan.
7. a) Estimated cost = Rs. 30.00 crores  
b) Financial & Physical phasing

Items of works	[Rs. in lakhs]		
	Amount		
	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	Total
Construction of building	1080.00	1520.00	2600.00
Purchase of Teaching- Learning equipment	400.00	-	400.00
<b>Total</b>	<b>1480.00</b>	<b>1520.00</b>	<b>3000.00</b>
		=	<b><u>Rs 30.00 crore</u></b>

c] Time Frame = within two years.

d] The land for the construction of buildings are available at free of cost where the works will be executed and no other clearance from the State/ Central Govt. if required. The construction work will be taken up by the Department through the State PWD by floating tender for a period of 3 months. The detail estimate with blue print and drawing of the work will be done by PWD as per the latest scheduled of rates [SOR]. The Teaching- Learning equipment will be purchase through the approved supplier of the State Govt. after quotation for the equipment is obtained.

**PRIORITY NO. 4: COMPUTERISATION OF CADASTRAL MAP SHEET, ETC.**  
**(Rs. 2.08 crores)**

**1. Component of brief description of Project**

- (a) Computer of Cadastral Map sheets
  - (i) Digitising the existing Cadastral map sheets, and
  - (ii) Generating the individual plot/land parcel in suitable scale.
- (b) Computerising of village map from Cadastral map sheets;
- (c) Mosaicing of Cadastral map sheets to generate computerised village map;
- (d) Computer generation of Revenue Survey boundaries of individual land holding;
- (e) Scanning;
- (f) Vectorisation of the raster image.
- (g) Scale factors and accuracies.
- (h) Annotation of Indian language script and numerals.
- (i) Plotting for hard copy of computerised Cadastral map sheets.
- (j) Integration of non-spatial data.
- (k) Training
- (l) Final Printing of Cadastral Maps and Village Maps with deliverables.

**2. Justification of the Project :**

Main objective of the projects are: —

(a) To create a computerised Land Information System (LIS) for efficient storage, easy retrieval and prompt maintenance of cadastral information through:

1. Scanning and digitisation of the cadastral map sheets of the village integrating all survey boundaries.
2. Integrating the village map with the village boundary, and make it error and distortion free.
3. Integrating the computerised database of individual land holding with the survey field in the digitised cadastral map of the village.

4. Preparation of village maps in electronic media for the purpose of easy retrieval and reproduction.
5. Generation of hierarchical administrative boundaries such as, Sub-Division, R.D. Blocks and Villages wherever the information is available.
6. Preparation of village cadastral map on 1:4000 scale with the base topo maps supplied by Govt. of Mizoram.
7. Preparation of planimetry ground control network of village cadastral maps for database with geo-referencing using Satellite data with thematic information superimposed.
8. Generation of individual plot/parcel maps for conferment of ownership rights to land owners and for assessment of land revenue.

(b) Realisation of the above objectives accords the following benefits to the land records administration in the State of Mizoram.

1. Outdated maintenance procedures shall be phased out and replaced by computer based updation of land records.
2. The survey framework on ground can efficiently be safeguarded by the department, which will minimize vexatious boundary disputes and consequently civil litigation.
3. The State Government can harness computerized database of every feature of land records in terms of survey numbers and subdivisions (individual land holdings) for macro level and micro level planning activities.
4. Computerised Land Information System ensures easy and instantaneous availability of correct record to the public and thereby helps in introducing the much-wanted transparency of public records.
5. The Cadastral Map as well as Parcel maps (Plot maps) will have National Co-Ordinates System supported by Geo-coded references.
6. The State Government may grant ownership right over the land to the land owners and at the same time it may imposed land revenues/taxes/fees charges on account of grant of certificates and copies of cadastral maps/parcels maps and that may be regarded as a kind of additional resource of the State.

3. **Estimate Cost, financial and physical and implementation of Time Schedule including phasing out of fund :**

Cost for computerizing cadastral map sheets pertaining to Lunglei District including Geo-referencing and super imposing topographic Information and generation of 2 km × 2km maps is as follows: -

Sl. No	Description	Area Qty	Rate (Rs)	Fund requirement during		
				2004-05	2005-06	Total
1.	Computerising (Scanning, Digitisation) of cadastral map sheets including mosaicing for generation of computerised village map, storage and delivery in CD ROM and plotting	4358 Sq. Km	L.S.	43,49,284.00	43,49,284.00	86,98,568.00
2.	Geo-referencing the village cadastral maps superimposing topographic information derived from satellite data	4358 Sq. Km	L.S.	37,04,300.00	37,04,300.00	74,08,600.00
3.	Generation of 2 Km × 2 Km map sheets on 1:4000 scale with overlap/side lap and superimposing village boundaries from the small-scale maps supplied by Govt. of Mizoram.	1270 map sheets	L.S.	23,87,700.00	23,87,700.00	47,75,400.00
<b>TOTAL COST</b>				<b>1,04,41,284.00</b>	<b>1,04,41,284.00</b>	<b>2,08,82,568.00</b>

(Rupees two crore eight lakhs eighty two thousand five hundred and sixty eight) only

4. Beneficiaries :

The scheme will benefit 136221 or more population consisting of 28809 families or more.

5. The on-going initiatives taken by the State Government :

The State Government had taken the scheme in the Aizawl District only. The up-to-date achievement is (a) 718 Nos. of P.T. Sheets and (b) 70,086 plot maps had already been digitised.

6. Economic parameters :

The main economic parameters had already been highlighted at Para No. 1 & 2.

7. Sustainability of the Project :

After completion of the Project the computer hard wares will be retained by the Department for generation of Land Information System of the concerned District for land owners and other users.

8. Nature and magnitude of the problem :

The work relating digitisation of Cadastral Maps and other related works will be taken in the Office of Assistant Settlement Officer - I at Lunglei at which there is sufficient space for installation of Computer System. At this Office all land records of the same district is also available.

9. Status of administrative and Statutory clearance from the State Government :

The State land law had already provided for preparation of Cadastral Maps as well as parcel maps and there may be no legal hurdles.

The State Government had also approved preparation of cadastral maps or parcel maps either by manual method or digitisation through electronic or computer hardwares. Hence, clearance is already given in all aspects.

**PRIORITY NO. 5: CONSTRUCTION OF COMMUNITY HALLS**  
**(Rs. 11.75 crores)**

**Context and background:**

1. The State of Mizoram has some uniqueness in comparison with other States. As Mizoram is a hilly area and the hills are steep and congested creating deep gorges between the hills. So, it is quite difficult to construct play fields for games and sports. For instance, even the Capital of Mizoram, Aizawl has only one fully-fledged playfield named 'Assam Rifles Playground' which can only be used after obtaining approval of the Assam Rifle Authorities. As such, Community Halls assume more importance for sports and recreational activities because the topography of the land offers very less scope for construction of playfields. It is, therefore, quite imperative to build Community Halls for the whole community for social gatherings in general and sports and recreational centre for the youths in particular as Mizo youths are coming up on sports from the past decade. Hence, the construction of Community Halls in rural areas as well as in the urban areas with the provision of Sports and Library facilities providing scope for group activities in all desirable forms will no doubt wean away the mislead youths in the society from the acquired ill-habits and bring them back to the right orbit and broadening their path for the coming future.

2. Construction of Community Halls has always been a priority since Mizoram attained statehood. Community Halls used to be constructed from the State Plan fund and other CSS funds like JRY and EAS.

With this meagre fund, 165 nos. of Community Halls have been constructed out of which 52 nos. are reported to be in dilapidated condition. Since the Government does not have any provision for constructing new Community Halls, hence, this proposal.

**Socio-Economic Analysis:**

3. As stated above, the construction of Community Halls has a wide scope in terms of Socio-Economic objectives to achieved —

in the absence of the “Zawlbuk” (Bachelors’ Dorm) in the present age, the Community Hall assumes more importance as it gives the youths an opportunity to overcome the major evils of the society which are alcoholism, drug addiction, gambling and idleness which is constantly hampering the growth of our youths and the society who need a form of recreation and an abode to play out their talents in the form of sports and in social gatherings and keeping them active mentally and physically. Community Halls also incorporate with indoor games such as — Badminton, Boxing, Table Tennis, Taekwon-Do, etc. assumes significant importance for the welfare of the society as a whole and the future generation to come. The provision of Community Halls shall enable the youth and the society to be active throughout the year in the events of sports and cultural recreation. It shall also provide the youth with an opportunity to practise their own choice of indoor activities which is necessary for them to achieve their own goals in life.

4. in view of the rapid growing population, the existing school building in that particular area which is mainly used for the sport events and social, cultural gatherings has proved to be quite congested and not sufficient enough for the present prevailing situation and programme. Moreover, School Halls be used by all the youths except the students of that particular School and that too during school hours. It is highly necessary to construct a new Community Hall which can accommodate the needs of the society in the events of various activities such as sports and cultural programmes. The Community Halls which are proposed to be constructed in those particular area and population is enclosed herewith.

**Operation and Maintenance:**

5. The actual construction of Community Hall will be done by a committee duly appointed by the State Government from members of the community where the hall is proposed to be constructed. The construction will also enable the youths of the locality to have meaningful employment in construction works. They will also have a sense of ownership in the Hall so constructed with their own labour. It may be noted that the land for construction of the Community Halls will be donated by the community at free of cost.

**Target Beneficiaries:**

6. The Hall as the name denotes is for the community as a whole for public gathering, cultural activities, etc. It will also be clubbed together with sports facilities, e.g., Badminton, Table Tennis, etc. for the youth of the locality.

There will not be any adverse impact of the weaker sections of the society and will not have any negative impact to any section of the society.

**Project Strategy:**

7. The Government of Mizoram after completion of the project constitutes a committee of NGO’s from within the locality where the Community Hall will be constructed. This committee will consists of selected members from the voluntary organisations, i.e., YMA,

MUP, MHIP, etc. This committee is fully responsible for the maintenance and upkeep of the Community Halls. The Committee also has to abide by the rules and regulations as laid down by the State Government. The Committee itself will ensure the completed maintenance of the Community Halls and to make sure that it is not being misused by the members of the society. The Committee is also responsible for the various gatherings, functions and sports events that are partaken in the Community Halls. The Committee can also impose hiring charges from the associations for using the Hall. Any revenue that is collected will be used for the maintenances of the Hall. The Committee at all times is accountable to the Government if the Community Hall is damaged in any form as it holds full responsibility.

**Ongoing Initiatives:**

8. Due to financial constraint faced by the State, substantial amount can no longer be earmarked for community development. Though it is still a very important aspect of progress, a token provision of a minimal amount of Rs.0.10 lakh only is kept since 2001. Rural Development Department operates among others the Head of Account under —

4515 - Capital outlay on ORDP  
103 - Community Development  
01 - Social Education

9. As pointed above, the State does not have any other resources for construction of Community Hall and hence, there cannot be any publicity. Further, the prioritised Community Halls listed in the project are mainly outside the Border Area Blocks and hence there cannot be any duplicity.

10. After going through all the available records, it is certified that 165 nos. of Community Halls have already been constructed from State Plan Funds and funds received from the Ministry of Rural Development under JRY, EAS. Hence, the Department has therefore, felt that the original DPR submitted is too ambitious taking the present population and Halls already constructed, the Department have now submitted a new list of Community Halls which are categorized as follows.

1. Type 'A' - Rs. 25.00 lakhs x 10 = Rs. 250.00 lakhs  
Category 'A' are proposed for urban areas. These are required for larger population requiring more space and facilities.
2. Type 'B' - Rs. 19.00 lakhs x 30 = Rs. 570.00 lakhs  
Category 'B' are proposed for town areas. These are required for comparatively smaller population than urban areas.
3. Type 'C' - Rs. 12.00 lakhs x 21 = Rs. 237.00 lakhs  
Category 'C' are proposed for Sub-Town areas. These are required for smaller population than town areas.
4. Type 'D' - Rs. 7.50 lakhs x 11 = Rs. 82.00 lakhs  
Category 'D' are proposed for rural areas. These are required for smaller population than Sub-town areas.

The Plan and estimate as per SOR 2003 has been made and replaced/enclosed in this Detailed Project Report. Land for construction of the Community Halls will be donated by the Community at free of cost.

**Time frame:**

The Department proposes to construct Community Halls simultaneously in the first phase which can be completed within a year of receipt of sanction. List of these are given in Annexure V. in the second phase, Community Halls will be constructed and another Community Halls in the next year.

The total outlay for the project is Rs.1175.50 financial and physical phasing of this project is given below: -

		<u>(Rupees in lakhs)</u>	
<b>I.</b>	1 <sup>st</sup> year		
	Category -A	= Rs.25.00 lakhs x 6	= 150.00
	Category -B	= Rs.19.00 lakhs x 8	= 152.00
	Category -C	= Rs.13.00 lakhs x 2	= 26.00
	Category -D	= Rs. 7.50 lakhs x 1	= 7.50
	<b>TOTAL</b>	<b>= 17 Nos.</b>	<b>335.50</b>
<b>II.</b>	2 <sup>nd</sup> year		
	Category -A	= Rs.25.00 lakhs x 4	= 100.00
	Category -B	= Rs.19.00 lakhs x 13	= 247.00
	Category -C	= Rs.13.00 lakhs x 5	= 65.00
	Category -D	= Rs. 7.50 lakhs x 2	= 15.00
	<b>TOTAL</b>	<b>= 24 NOS.</b>	<b>427.00</b>
<b>III.</b>	3 <sup>rd</sup> year		
	Category -A	=	
	Category -B	= Rs.19.00 lakhs x 9	= 171.00
	Category -C	= Rs.13.00 lakhs x 14	= 182.00
	Category -D	= Rs. 7.50 lakhs x 8	= 60.00
	<b>TOTAL</b>	<b>= 31 nos.</b>	<b>413.00</b>

**PRIORITY NO. 6: IMPROVEMENT OF REVENUE COLLECTION INCLUDING METERING & COMPUTERISATION**  
**(Rs. 2.27 crores)**

Aizawl Power Circle covers the area of 2086.97Sq.Km with population of 218456 as per 2001 census. Power demand during p peak hour is 40 MW. The energy input 2003-2004 was 120 MU and revenue collected from it was Rs. 1350.00 lakhs. The T & C loss in the circle is about 58%, which needs improvement. in order to get satisfactory improvement

computerization of the system is the only means for which the project report is prepared and submitted for approval. For information the system summary in the circle is given in annexure I, II and III of DPR.

OBJECTIVE :

1. To get input energy data at every point and to know availability of power for sale.
2. To improve billing of the actual energy consumed by any consumers which will give good effect thus improving billing efficiency.
3. Provision of facility for the consumers to enable them to pay at any revenue counter within the circle giving effective for improvement of collection efficiency.
4. Implementing above objectives revenue will be increases substantially.

BENEFITS :

1. Reduction of T & C loss from 58 % to 30% to earn Rs. 5.00 to Rs.6.00 crores in addition to existing revenue.
2. Increase in billing efficiency i.e. 80% to 90% of energy input dispose giving T & C losses within permissible range.
3. Increase of collection efficiency from 50% -85% to 90% i.e., realized energy is within satisfactory level.

CIRCLE PROFILE :

1.1.1 Consumers

There are about 35037 consumers in circle predominantly domestic consumers (95%). There is no agricultural consumer in the circle. Sub-division wise number of consumers in Aizawl Power Circle is given below in Table-1.1. It may be mentioned here that all the consumers under Aizawl Power Circle is under Revenue Division.

Table 1.1 : Category wise consumers

Sl. No.	Sub-Division	Dom		Com		LT		HT Ind		Others		Total
		No.	%	No.	%	No.	%	No.	%	No.	%	
1.	Rev. - I	5751	96.27	189	3.16	11	0.18	7	0.12	16	0.27	5974
2.	Rev. - II	10826	90.90	1068	8.97	0	0.00	0	0.00	16	0.13	11910
3.	Rev. - III	9680	96.73	317	3.17	0	0.00	0	0.00	10	0.10	10007
4.	Rural	7101	99.37	25	0.35	2	0.03	4	0.06	14	0.20	7146
	TOTAL	33358	95.21%	1599	4.56%	13	0.04%	11	0.03%	56	0.16%	35037

ENERGY CONSUMPTION :

Total energy consumption in the circle is about 53.83 MU per annum out of which 57% is being consumed by Domestic consumers. Category wise annual energy consumption is given below in Table - 1.2 :

Table - 1.2 : Category wise energy consumption/annum

Sl. No.	Sub-Division	Dom		Com		LT		HT Ind		Others		Total
		No.	%	No.	%	No.	%	No.	%	No.	%	
1.	Rev. - I	5.506	69.73	0.41	5.19	0.23	2.91	0.13	1.65	1.62	20.52	7.896
2.	Rev. - II	12.835	47.23	1.74	6.40	0	0.00	0	0.00	12.6	46.37	27.175
3.	Rev. - III	11.94	70.32	4.23	24.91	0	0.00	0	0.00	0.81	4.77	16.98
4.	Rural	0.69	38.74	0.015	0.84	0.03	1.68	0.046	2.58	1.0	56.15	1.781
	TOTAL	30.971	57.53%	6.395	11.88%	0.26	0.48%	0.176	0.33%	16.03	29.78%	53.832

### 1.1.3 Sub-transmission and distribution system.

The salient features of the Sub-transmission and Distribution system are as given below :

#### Sub-Stations

33/11 kV : 5 Nos. and 46.8 MVA capacity

#### Feeders

- 33kV lines : 6 Nos., 93.6 ckm
- 11kV lines : 26 nos., 526.81 ckm
- LT lines : 658 ckm

Distr. Transformers (DT) : 296 Nos., and 64.16 MVA capacity

LT : HT ratio : 1.25

Power factor : 0.8

Peak demand : 40 MW

### 1.4 Scope of work :

To implement the above objectives and benefits the following works has to be implemented :

1. Mapping and indexing of consumer network within the circle.
2. Computer data logging for all sub-station within the circle and connected with Circle Office.
3. Computerised billing to improve billing and collection efficiency.
4. Inter-connecting circle office with Divisional offices and revenue sub-division offices where revenue counters are in operation i.e. Wide Area Network (WAN) so that any consumer could pay their bill to any revenue counter according to their convenience.

**PRIORITY NO. 7: CONSTRUCTION OF SECONDARY SCHOOL BUILDINGS IN MIZORAM**  
**(Rs. 18.44 crores)**

1. There is tacit recognition of the importance of quality education for over all human development. And the quality education depends to a great extent on improvement of infrastructural facilities of the schools at various levels. Realizing this need, the School Education Department had preferred various projects and had them submitted to Government of India. But, only a small amount of the project cost was sanctioned, which was found inadequate to cover all the needy schools. As a result a good number of schools are left out and are yet to be covered. The present project titled 'Construction of Secondary School Buildings in Mizoram' is prepared with the objective of bridging the infrastructural gaps of such secondary schools.

Currently, there are 71 (Seventy one) Higher Secondary Schools in the State including Private Higher Secondary Schools. Of these, 19 (nineteen) are Govt. Higher Secondary Schools and 8 (eight) are Govt. Aided Higher Secondary School. These schools need bigger and better buildings to accommodate students seeking admission at the + 2 level. Besides good school buildings, the schools need Science Laboratory, Computer Room, Library, etc. Hitherto such facilities are non-existent in such Higher Secondary Schools. There is a big infrastructural gap.

in addition to these Higher Secondary Schools, there are a good number of High Schools, which need better buildings equipped with better facilities. So far 399 High Schools have been covered under the previous project 'Secondary School Improvement Project (SSIP)'. There are still many High Schools whose buildings are in a dilapidated condition. The need is, therefore, urgently felt to improve infrastructural facilities of those schools. The basic idea in preparing this project is, therefore, improvement of the infrastructural facilities of Secondary Schools identified as poor schools in terms of physical condition. This may be explained briefly as under:

1.1 in this Detailed Project Report, two Higher Secondary Schools came up prominently. They are (1) Mizo Higher Secondary School, Aizawl and (2) Govt. Higher Secondary School, Lunglei.

The Mizo Higher Secondary School, Aizawl was formerly known as Mizo High School. It was the premier High School, established in 1944. It was upgraded into Higher Secondary School in 1996 and is now named as Mizo Higher Secondary School. During the years 1996-1997, the building of the Higher Secondary School was constructed. What is now felt urgently necessary is reconstruction of the High School building as the existing one is very old now. Construction of Hostels for Boys and Girls is also included in the project. This is badly needed for students coming from rural areas.

As for Govt. Higher Secondary School, Lunglei, it was established in 1948 as Venture High School. It is the premier High School for South Mizoram. It was upgraded into Higher Secondary School in 1996. Consequently, the +2 building was constructed with State Plan fund. The high School building, though very old, could not be constructed due to resource constraint. It is, therefore, felt absolutely necessary to reconstruct the High School building.

1.2 There is one special Higher Secondary School, known as 'Mizoram Institute of Comprehensive Education (M.I.C.E.)'. This school needs to be taken up as one important component of the project. It is special in the sense that it has classes from Class I to Class XII. Moreover, the school has been affiliated to Central Board of School Education (CBSE). So far, his school is the only school under Government of Mizoram, which has affiliation to Central Board of School Education (CBSE).

in spite of the fact that the school has special characteristics, it is a pity that it has no building of its own. So, it is being housed in a rented private building. Running Government school in private building is not desirable at all. As such, priority is attached to this school.

1.3 Reconstruction of 8 (eight) Higher Secondary Schools is also another Important item under this project. These Higher Secondary Schools are identified as having very poor buildings. The existing buildings are in a poor shape and need reconstruction.

1.4 Another component of the Detailed Project Report is reconstruction of selected 25 High School buildings. These High Schools were established by the community in the 1960s. Most of the buildings of these schools are semi pucca and they need reconstruction.

2. The main objective of the project as stated in the forgoing Para, is improvement of the basic infrastructure of secondary schools, such as construction of school buildings including Library, Computer Room, Office Building and Hostel, etc.

3. Due to poor financial resources the state Government is not in a position to take up such project as this with its own resource. So the question of duplication does not arise.

4. The cost of project is formulated as per Schedule of Rate (SOR) 2004 of the Public Works Department (PWD). As already mentioned, implementation of the project will result in improved physical condition and facilities. As a result of this, the quality of education and efficiency of service is expected to be increased. Moreover, the implementation of the project will generate employment of 4,10,738 man-days to unemployed skilled, semi skilled labourers of the state.

5. After implementation of the project, the school buildings and other Buildings will be maintained from Plan and Non-Plan fund of the state budget.

6. The Detail Project Report (DPR) for Construction of Secondary School Buildings in Mizoram have been prepared as per Schedule of Rate (SOR) 2004 of the Public Works Department (PWD) and the Project Cost is as given below -

a. Project cost	-	Rs. 1843.88 lakhs
b. Component	-	As indicated below-

Sl. No.	Particulars	No. of Buildings	Amount (Rs in lakhs)
1	2	3	4
1	Construction of Mizo Higher Secondary School Building, Aizawl (School Building Complex with Library, Computer Room, Laboratory, etc.)	1	Rs. 200.04
2	Construction of Govt. Higher Secondary School Building, Lunglei (School Building Complex with Library, Computer Room, Laboratory, etc.)	1	Rs. 100.19
3	Construction of Mizoram Institute of Comprehensive Education (MICE) Building at Aizawl	1	Rs. 46.00
4	Reconstruction of Higher Secondary Schools @ Rs.46.00 lakhs	8	Rs. 368.00
5	Reconstruction of High Schools @ Rs.28.00 lakhs	25	Rs. 700.00
6	Construction of Hostel for Boys and Girls at Mizo Higher Secondary School, Aizawl	1	Rs. 104.85
7	Construction of Boys and Girls Hostel at Higher Secondary School	5	Rs. 237.60
8	Construction of Principal/ Headmaster Quarters	10	Rs. 80.00
9	Supervision cost	LS	Rs. 7.00
	<b>TOTAL</b>	<b>52</b>	<b>Rs. 1843.88</b>

(Rupees eighteen crores forty three lakhs eighty eight thousands) only

Since the buildings are to be reconstructed or renovated on the same site no statutory clearance is needed neither from state nor central Government.

For the implementation of the Project there will be State Level Steering and Monitoring Committee under the Chairmanship of Commissioner and Secretary, Department of Education and Human Resource Development. The committee will work out the modus operandi of the project and the execution of works at various levels. The committees will consist of the following as members.

**1. State Level Monitoring and Steering Committee:**

- |   |   |               |
|---|---|---------------|
| (a) Commissioner & Secretary, E &HRD              | - | Chairman      |
| (b) Director, School Education                    | - | Vice Chairman |
| (c) Joint Director, School Education (Planning)   | - | Secretary     |
| (d) All District Education Officers               | - | Member        |
| (e) Deputy Director of Accounts, School Education | - | Member        |
| (f) Assistant Engineer, School Education          | - | Member        |

This working group will be responsible in monitoring the progress of work and evaluating the progress of work and submitting the Report to the Government.

**2. District Level Working Group:**

This working group will be formed in the District to monitor the work in the District and supervise the progress of work in all items. It will comprise the following: -

- |  |   |                  |
|--|---|------------------|
| (a) District Education Officer of the concerned district.      | - | Chairman         |
| (b) Sub-Divisional Education Officer of the concerned district | - | Member Secretary |
| (c) President Teacher Association, Sub-Headquarters            | - | Member           |
| (d) Representative of Directorate of School Education          | - | Member           |

**3. School Level Working Group:**

Working group has also been formed for each School. Besides this, Parents Teachers Association has also been formed. This working group is active when fund is available and remained in active when work is made ready. At present the committee is properly reformed, comprising the following members.

- |   |   |           |
|---|---|-----------|
| (a) President, Village Council            | - | Chairman  |
| (b) Headmaster of the School              | - | Secretary |
| (c) Teachers representative of the School | - | Member    |
| (d) Parents representative                | - | Member    |
| (e) Prominent member of the village       | - | Member    |
| (f) President Y.M.A (N.G.O)               | - | Member    |

The Department under the supervision of Assistant Engineer and Junior Engineers of the Department will execute the work as and when the fund is available.

**PRIORITY NO. 8: LOWER SAKAWRDAI WATER SUPPLY SCHEME**  
**(Rs. 2.86 crores)**

**CONTEXT/BACKGROUND**

The State of Mizoram is situated at the extreme North East of India. It has an International Border with Bangladesh at South West, Myanmar at South East and Inter State Border with Assam, Tripura and Manipur. Mizoram is a small state covering 21,087 sqm. km only. Mizoram is entirely hilly terrain and almost all villages and towns located at the top of a hill.

Water supply has been a priority sector under the state policy as well as in the Government of India Policy. As per National Agenda for Governance of Government of India, all the villages and Towns are to be covered with adequate water supply as per National Norm of 40 lpcd in rural area and 70 lpcd in urban area by 31<sup>st</sup> March 2003. But Mizoram State could not achieve this National Goal mainly due to scarcity of Fund in the sector. The State Government is still making attempt to achieve this National Goal with whatever resources it can manage.

PROBLEMS TO BE ADDRESSED :-

Lower Sakawrdai is a Sub-Town under Aizawl District situated at the North- Eastern side of Mizoram at a distance of 168 Km from Aizawl. It has population of 1998 souls as per 2001 census. It is the headquarters of SDO (Civil) and Chhinlung Hill Development Council and is near inter-state border of Manipur and Mizoram. The present water supply is gravity feed scheme commissioned during 1992 and the present level of water supply is 21 lpcd is which is less as compared to Government of India norms for town i.e 70 lpcd. Moreover, the existing water supply is not provided with treatment unit and water are distributed Raw. Due to this, water supply is one of the priority task for the inhabitants of the Town.

The Town is now facing the water related problems as below:

- 1) Water borne diseases like Dysentery, Cholera etc are still prevalent especially during the beginning of Monsoon season.
- 2) Sanitary condition is still poor. People use only a Dry Pit Latrine type due to shortage of Water Supply.

PROJECT OBJECTIVE:-

The project objective is to provide safe drinking water @ 70lpcd for the design population of 4000 souls i.e. Design period 30 years ( 20031 A.D.) water will be supplied to the public through community water point and private water connection.

The proposed water Supply Scheme after Commissioning will have the following impact :

1. Prevalence Water borne diseases will be minimised.
2. The general living condition will improve in respect of cleanliness, Health and Hygiene.
3. The sanitary condition will be improved due to adoption of safer type of human excreta disposal system like Pour Flush Latrine / Septic Tank.
4. No of Man-days required for collection of Water will reduce which will increase the per-capita income of the household.

ENVIRONMENTAL IMPACT ASSESMENT :-

No adverse Environmental Impact is foreseen. The gravity pipeline will be laid on the road side, no damage of forest land will involve.

Land acquisition will not be required as the Town authorities will give/donate the land free of cost.

ON-GOING INITIATIVE :-

There is No on-going initiative of this nature for Lower Sakawrdai. It therefore does not arise any occurrence of duplication of development.

TECHNOLOGY ISSUES :-

- Various Options had been surveyed and for Water Supply to Lower Sakawrdai W.S.S.
1. Impounding Reservoir:- There is no possible site for construction of Impounding Reservoir to cover the whole population.
  2. Rain Water Harvesting Structure :- Capital Cost on construction of this scheme is quite high. Moreover, there is a problem of sufficient area and convenient location.
  3. Pumping one Spring Source, tapping other perennial source and improvement of existing scheme is the economical and technically sound project selected for the town.

MANAGEMENT ARRANGEMENT :-

in the State of Mizoram, PHE Department is the Nodal Department in respect of Public Water Supply. Management of the project implementation and Operation & Maintenance of the Project will be the responsibility of Government of Mizoram through the Nodal Department viz. PHE Department, Government of Mizoram.

MEANS OF FINANCE AND PROJECT BUDGET:

The Estimated cost of the Project is as below:

1. Intake & Site preparation	-	Rs.	512,000.00
2. Approach road	-	Rs.	324,000.00
3. Building	-	Rs.	747,643.00
4. Pumping Machineries	-	Rs.	900,000.00
5. Raw Water Sump	-	Rs.	494,400.00
6. Power Supply	-	Rs.	1,041,349.00
7. Pumping Main	-	Rs.	799,815.00
8. Reservoir	-	Rs.	3,790,400.00
9. Feeding Main	-	Rs.	2,145,684.00
10. Distribution System	-	Rs.	4,000,897.00
11. Supply Tanks	-	Rs.	1,705,600.00
12. Treatment Plant	-	Rs.	930,000.00
13. Conveyance Main	-	Rs.	7,438,920.00
14. Security Fencing	-	Rs.	437,550.00
15. Carriage of Jungle Clearance	-	Rs.	868,711.00
<b>TOTAL :</b>	-	<b>Rs.</b>	<b>26,136,969.00</b>
Cost of Operation & Maintenance (1.5%)	-	Rs.	392,054.00
3% W.C. Establishment	-	Rs.	784,109.00
5% Contingencies	-	Rs.	1,306,848.00
<b>Grand Total :</b>	-	<b>Rs.</b>	<b>28,619,980.00</b>
<b>SAY :</b>	-	<b>Rs.</b>	<b>28,620,000.00</b>

(Rupees two crore eighty six lakh twenty thousand) only.

The phasing of Expenditure will be as follows: —

1<sup>st</sup> Year (2005-2006): During 1<sup>st</sup> Year, items of work like Intake and site preparation, approach road, procurement of pipe for pumping main, feeding main and gravity main, carriage and jungle clearance will be executed with anticipated expenditure of Rs. 130.66 lakh.

2<sup>nd</sup> Year (2006-2007): Construction of building, procurement of pumping machineries, raw water sump, power supply, laying and fitting of pumping main and gravity main, feeding main and distribution system, construction of supply tank and treatment will be taken up with anticipated expenditure of Rs. 141.57 lakh.

3<sup>rd</sup> Year (2007-2008): Security fencing, testing, commissioning including operation and maintenance will be taken up with anticipated expenditure of Rs.13.97 lakh.

The state government is not in a position to finance the project, 100% financial assistance is expected from DONER, Government of India.

OPERATION AND MAINTENANCE:

Operation and maintenance after completion of the project will be taken up by State Government through the nodal Department i.e. Public Health Engineering Department, Mizoram, who have will set up of technical personnel's for operation and maintenance of the project.

**PRIORITY NO. 9: CONSTRUCTION OF 33 KV D/C TRANSMISSION LINE (TOWER TYPE)  
LAWNGTLAI TO SAIHA  
(Rs. 6.20 crores)**

◆ 33kV **Sub** Station at Saiha - the Capital of Saiha District receives Power supply at 33kV about 72.0 Kms away at Lawngtlai 33kV Sub Station. The total transformation capacity in the District area is 12.0 MVA. The present power demand is approximately 5.0 MW during peak load.

The existing line through which power supply drawn is constructed by means of Steel **Tabular** Poles. The line passes through hilly terrains, which frequently caused and yet to cause power supply interruption mainly due to rusted poles collapsion and poor ground clearances for limitation of its sizes. Due to fund constraint the State Government cannot provide fund for construction of the new line.

Hence, project report is prepared at the cost of Rs.619.74 lakhs for favour of approval and funding from NLCPR.

◆ **Objectives:**

Construction of new 33kV Double Circuit line (Lattice type) 50.0 Kms is required to eliminate an aged/rusted Steel Tabular Poles type 33kV line. Double Circuit line is proposed with a view to catering up future load growth, which is expected at the rate of 20% per year for 10 years to come.

◆ **Benefits:**

- i) Improvement of Transmission line at 33kV level.
- ii) Improvement of voltage regulation.
- iii) Regularity/Reliability of power supply
- iv) Improvement of Revenue achievement
- v) Expansion of industrial growth viz. Agro-based : Steel Industries, etc.

◆ **Phasing of the project:**

◆ **Estimated Cost : Rs. 619.74 lakhs**

◆ **Completion schedule:**

The project will be completed in 2 years (24 months) as mentioned below:-

- i) Year - 1 : Tendering, finalisation of tender, procurement of materials and completion of 50% of the project works for which fund requirement is estimated as Rs. 309.00 lakhs.
- ii) Year -2 : Completion of 50% of the balance works and commissioning of the projects for which fund requirement will be 310.74 lakhs.

**PRIORITY NO. 10: TLABUNG WATER SUPPLY SCHEME**

**(Rs. 4.34 crores)**

1. BACKGROUND AND INTRODUCTION

1.1 Town Profile :

Tlabung is one of the 22 towns in Mizoram. It is located within Lunglei District and second biggest town next to Hnahthial. It is Administrative Sub-Divisional Headquarters headed by SDO (Civil) and many other establishments of Divisional levels are situated. It has a distance of 332 KM from Aizawl. It is located at Southern part of Mizoram near the International Boundary of Indo-Bangladesh. The navigable River called Khawthlang Tuipui is flowing at the boundary of the two countries. By using the river for communicating with Bangladesh, trade centre is proposed. The Government of Mizoram is taking initiative for establishment of International border trade centre at Tlabung. The construction of infrastructures like buildings, roads etc. are in full swing.

### 1.2 Infrastructure and Economic Profile :

The Headquarter of Constituency Assembly Tlabung is spreading over hillock like plateau. It is a well planned and connected by internal road network to each corner of town. The arrangement of streets and housing is just like a well-planned city. The Telecommunications network is available and possible to contact all District Headquarters, Towns and Villages in this state. The Electric Power is supplied by 11KV Sub-Station by State Electricity Department. The Civil Administration of the town is headed by Sub-Divisional Officer (Civil). There are many others Government activities, which are headed by Divisional level. It has well established 40 bedded Civil Hospital. Two (2) Doctors are looking after the Hospital. The town is having an Institution like, Post Office, SBI, Rural Bank and Public Relation etc. Educational facilities from Primary level to Higher Secondary School level are available. The literacy rate as per 2001 census is 74.40%.

### 1.3 Development in Water Sector:

in the year 1984, 1990 & 2002, Tlabung is provided with Piped Water Supply through Gravity feed Scheme from the stream located at higher altitude tapping from three different sources viz. Pawlhtawn Lui, Phivawk Lui & Zodin. These Three sources can only feed the lower portion of town. The State Public Health Engineering Department has overall responsibility for planning, designing, and implementing of the Scheme under accelerated Urban Water Supply Programme. Monitoring and evaluation as well as operation and maintenance are running under State Public Health Engineering Department.

The Department, Public Health Engineering Department is providing and installing House Water Connection to private household, Government Establishment, other institutions etc. earning revenue based on flat rate system of Rs. 100/- (Rupees one hundred) per month. The present water supply can only provide the level of 17.62 lpcd which is still far below the CPHEEO Norms of 70 lpcd.

The existing water supply is highlighted here as under :-

(1) The discharge at driest period are :-

a. Pawlhtawn & Phivawk Lui	= 59.69 lmp.
b. Zodin source	= 32 lpm
Total	= 88.96 lpm.

(2) Intake Chamber :

R.C.C. Intake chamber 2000 lits capacity each are constructed at all the three sources.

(3) Gravity Main :

50 mm dia G.I. Pipe	= 25000 Rm
65 mm dia G.I. Pipe	= 4394 Rm

(4) Distribution Network :

50 mm dia G.I. Pipe	= 260 Rm
40 mm dia G.I. Pipe	= 600 Rm
25 mm dia G.I. Pipe	= 2920 Rm
20 mm dia G.I. Pipe	= 2080 Rm

(a) RCC Reservoir 1000 Gals.	
(b) Stone Masonry Reservoir	= 2 Nos.(30000 lits Capacity)
(c) No. of Public Water Point	= 52 Nos.
(d) No. of House Connection	= 170 Nos.

2. PROJECT OBJECTIVES:

in reality, all the households within Tlabung Town are having Sanitary latrines, no matter what type of the system, but the existing water supply is too meagre to have sufficient water for cleaning, washing toilet as well as regular bathing. The present water supply level is only 17.62 lpcd. which is inadequate to achieve overall health and hygiene of community.

- ❖ To increase the present water supply level from 17.62 lpcd to 70 lpcd and to rise revenue earning.
- ❖ Improve drinking water supply free from contamination and others foreign materials.
- ❖ Reduce the incidence of water borne, water-related diseases among the communities.
- ❖ Provide sufficient quantity of water to achieve health for all.
- ❖ Promote higher standard of living and more economic productivity.

3. PROJECT BENEFICIARIES (STRATEGIES) :

The beneficiaries of this project are the whole population of this town. The treated water will reach to each and every individual household. The specific beneficiaries are 3681. People will receive improved water supplies and all children in schools will get improved water supply.

The advantages for implementation of this project is the high literacy rate of communities and having well-organized NGO'S, people easily understand the objectives of project through public awareness campaign. The Survey and assessment revealed that the acquisition of land for project activities (location of Reservoir, Treatment Plant, Intake works) will be available free of cost with the involvement of NGO'S and Village Council (Panchayat). The Project objectives need to stress among the beneficiary to contribute land for implementation of the project. The implementing agency will coordinate and makes opportunity for direct involvement of NGO'S. It is proposed to provide public stand post for weaker section of the society.

4. ENVIRONMENTAL IMPACT ASSESSMENT :

The Major impact on environment will be construction of .86 km length, 60 metre width approach road (Kacha). However, this construction of road will not destroy forest land. The forest clearance need not be obtained from Forest & Environment Department, Government of Mizoram.

5. TECHNOLOGY OPTION:

The Technology choice is gravity feed system by piped water supply with intake structure. Plain sedimentation tank is proposed to construct at intake side.

The project comprised of Treatment plant, Storage Reservoir and Distribution network. The design of distribution pipe is to flow water up to the end where T-Cluster is provided and T- Cluster will supply water to the consumer.

The pumping scheme required huge expenditure for initial construction as well as operation and maintenance, hence, the gravity feed scheme is opted for water supply to this town.

6. MANAGEMENT ARRANGEMENT :

The Public Health Engineering Department, Government of Mizoram will be responsible for implementing, Monitor and Evaluation as well as maintenance of this project. The Department having well organized structure headed by Chief Engineer, has long experience in implementation and maintenance of water supply system. The State Government has been entrusted as nodal department in water supply sector in Mizoram. The Sub-Divisional Office headed by the Sub-Divisional Officer is already in existence for looking after project activities and monitoring on the spot. The nodal officer will be appointed to be made responsible for programme scheduling, administrative and regulatory clearance and overall implementation of the project.

7. MEANS OF FINANCE :

The Department of Development of North Eastern Region, Government of India will give 100% financial assistance for funding the project. The total estimated cost of the project is Rs. 4.333 Crores. in case the increase in cost is due to factors beyond the control of the executing agency, the Ministry may considered escalation. The abstract of estimate of the project is as under: -

1. Intake	-	Rs.	60,202.00
2. Conveyance Main	-	Rs.	215,26,342.00
3. Purification	-	Rs.	3,486,670.00
4. Pump & Machineries with pump house	-	Rs.	26,80,000.00
5. Distribution Network	-	Rs.	63,57,139.00
6. Building	-	Rs.	4,37,466.00
7. Road	-	Rs.	38,28,424.00
8. Carriage & Jungle Clearance	-	Rs.	23,06,000.00
<b>Total :</b>	-	<b>Rs.</b>	<b>4,06,82,243.00</b>
Running and Maintenance operation	-	Rs.	6,10,234.00
<b>Sub-Total :</b>	-	<b>Rs.</b>	<b>4,12,92,477.00</b>
Add 5 % for W/C & Contingencies	-	Rs.	20,64,625.00
<b>Grand Total</b>	-	<b>Rs.</b>	<b>4,33,57,101.00</b>
<b>Say :</b>	-	<b>Rs.</b>	<b>4,33,57,000.00</b>

(Rupees four crore thirty three lakh fifty seven thousand) only.

The phasing of expenditure will be as follows: -

1<sup>st</sup> Year (2005-2006): During 1<sup>st</sup> year, Items of work like Intake, conveyance Main, Road, carriage and Jungle Clearance will be taken up. The anticipated expenditure is 98.40 lakh.

2<sup>nd</sup> Year (2006-2007): During 2<sup>nd</sup> year, conveyance Main, Water Treatment Plant (Purification), Procurement of Pump and Machineries, construction of Pump House will be taken up with anticipated expenditure of Rs. 280.64 lakh.

3<sup>rd</sup> Year (2007-2008): During 3<sup>rd</sup> year, Distribution network, Building will be implemented with anticipated expenditure of Rs. 41.83 lakh.

4<sup>th</sup> Year (2008-2009): Testing and commissioning including operation and maintenance with anticipated expenditure of Rs. 12.70 lakh.

8. MONITORING & EVALUATION :

The concerned Department will have responsibility on overall Monitoring, Supervision and Evaluation of the Project. Quarterly and Yearly Progress Reports with all expenditure details could be prepared and submitted to the DoNER, Government of India through State Government until the end of the project period. The findings evaluation will be submitted to the funding agencies. In addition, upon request, specific information and details will be provided annually.

9. SOCIAL BENEFIT EVALUATION:

The Government is formed to govern the welfare of the people. The subject is to maximise social gains, and the concept of social gains, direct or indirect, is clearly a basic constituent of rational public policy including selection of public projects.

It can be elaborated in few lines to justify in terms of social economic benefit to undertake this project, which are: -

- ❖ Eradication of water borne and water related diseases will enable the beneficiaries to save treatment expenditure.
- ❖ Provision of safe drinking water to the community will help the residents to achieve health for all which will drastically increase economic productivity to the level of gross national product.
- ❖ Providing sufficient quantity of safe water will automatically promote higher standard of living.
- ❖ The installation of water meter will raise direct revenue earning resulting better cost benefit on financial analysis.

10. SUSTAINABILITY :

The present practice in rural areas are Community Managed Maintenance systems. The Village level Committee used to collect some nominal contribution from each household and purchase spare parts. The PHED provide some back-up support in case major repairs. Considering this project, Sub-Divisional Office has already being set-up, and will have all responsibilities to operation and maintenance after completion of this project. The present field staff are expected in plumbing as well as maintenance of piped water system. It is proposed to utilised the existing incumbents to look after water supply project without further recruitment.

11. OPERATION AND MAINTENANCE:

Operation and maintenance after completion of the project will be taken up by State Government through the nodal Department i.e Public Health Engineering Department, Mizoram. Who have will set up of technical personnel for operation and maintenance of the project.

**PRIORITY NO. 11: IMPROVEMENT OF SUB-TRANSMISSION & DISTRIBUTION WITHIN SAIHA POWER DIVISION**  
**(Rs. 9.60 crores)**

◆ Saiha Town is the Capital of Saiha District at the southernmost part of Mizoram. The energy input for the Saiha Division is 6.582MU for the year 2003-2004 and consumption is 3.331MU. Revenue collected during 2003-04 is Rs. 63.69 lakhs.

To improve power system within the stated area, the State Government is giving importance and the concerned department was informed to prepare Project Report. in regards to the benefits of the area concerned the Sate Government is trying her best in getting source of fund. It was thought that, to get the project done, DONER will be the best source of fund and the project report is prepared for approval.

By improving power system in this area will give great chance to the public to establish Small Scale Industries (SSI). in order to implement the project all necessary infrastructures such especially road communications is already existed. It may also mentioned that system reliability will challenge socio-economic analysis reducing technical and commercial losses giving more available power to consume by the consumer.

The details of the projects are given below for favour of consideration and approval:

◆ **OBJECTIVE:**

The Works required to be taken up for strengthening and improvement of the Sub-Transmission and Distribution in the Saiha Power Division during the period of 2½ years have been assessed considering the deficiencies in the technical as well as commercial areas. The proposed schemes and the estimated cost thereof are given below in Table-I.

Table-I: Scope of Works and cost estimate:

Sl. No.	Name of Works	Amount (Rs in lakhs)
1.	Revamping of Lawngtlai Sub-Station	32.62
2.	Installation of 9 new 4x63KVA, 11/0.4KV transformer at Lawngtlai and Saiha with associated 20Km, 11kV line and 13Km LT line.	133.00
3	Construction of 33/11kV S/S at Saiha	116.95
4.	Construction of 33kV D/C line (Lattice type of tower) 50cKm	630.78
<b>Total Cost</b>		<b>913.35</b>

The project proposals have been prepared with the following objectives:

- Commercial loss reduction
- Increase in revenue realization
- Increase in metered energy
- Increase in billing and revenue collection efficiencies:
- Reduction of outages
- Reduction in technical losses
- Improvement in voltage profile
- Improvement in quality and reliability of power supply

◆ **BENEFITS:**

Implementation of the above schemes will result in increase revenue realisation, reduction in consumer supply interruption duration and reduction in T&D losses as well as improvement in quality & reliability of power supply.

The aggregate T&D losses would reduce to 34% as estimated, i.e. from present level of 49% to 15%. The proposed scheme would be implemented in 2½ years.

◆ **DIVISION PROFILE:**

**1.1 Consumers**

There are 8171 consumers at present in Saiha Power Division predominantly domestic consumers (70%) and likely to increase by 10% per year. There is no agricultural consumer in the Division. Category-wise number of consumers in Saiha Division is given below in Table-1.2 :

**Table-1.2: Category wise consumers**

Dom.		Comm.		LT Indust.		Bulk (HT)		Others		Total
No.	%	No.	%	No.	%	No.	%	No.	%	
5701	70	149	2	1	0.01	1	.01	7	.09	8171

◆ **Energy Consumption**

Total energy consumption in the Division is about 3.331MU per annum out of which 70% is being consumed by Domestic consumers 2% by commercial, 0.01% by LT Industries and 0.1% is being consumed by Bulk Consumers. Category wise annual energy consumption is given below in Table-1.3:

Table-1.3: Category wise energy consumption/annum

Dom.		Comm.		LT Indust.		Bulk (HT)		Others		Total
MU	%	MU	%	MU	%	MU	%	MU	%	
2.9	64.5	0.27	6			0.0005	.11	1.32	30	3.33

◆ Sources of power supply

The Division receives its supply from 33kV Sub-Station Lawngtlai fed from 132KV Sub-station, Lunglei.

◆ Sub-transmission and distribution system

The salient features of the Sub-transmission and Distribution system are as given below:

**Sub-stations**

– 33/11 kV : 1 No. and 1x2.5MVA capacity

**Feeders**

– 33 kV lines : 1 no., 378 ckm

– 11kV lines : 3 nos., 141 ckm

**Distr. Transformers (DT)** : 24 Nos., and 7.84 MVA capacity

◆ **Transmission and Distribution losses**

As mentioned earlier, the aggregate T&D losses in the Division are estimated as below:

Aggregate Transmission & Distribution

– Losses : 43.26 MU (25%)  
 – Estimated Technical loss : 25.95 MU ( 15.00 %)  
 – Estimated Commercial loss : 17.30 MU (10.00%)

◆ Outages

The failure rate of Distribution Transformer is about 1% per annum. Capacity wise failure of DTs in the year 2004-06 are given below in Table 1.5:

Table-1.5: Failure rate of Distribution Transformers

Division	Distribution Transformers							Total
	1000 kVA	400 kVA	250 kVA	100 kVA	63 kVA	25 kVA	16 kVA	
PDS	1	1	1	6	4	8	3	24
TOTAL	1	1	1	6	4	8	3	24

### ***Constraints/Deficiencies in the Existing System***

◆ SUBSTATION AND TRANSFORMATION CAPACITY

33/11kV substations are the backbone of Power Distribution System, and any failure in the substation results into darkening of the large area. Therefore, while improving reliability of entire distribution network, higher priority needs to be given to make power supply reliable and interruption free, as well as to make the substation fault-free to the extent possible.

The details of 33/11kV substations along with transformation capacity and 11kV feeders are given below in Table-2.1:

Table-2.1: List of substations and capacity

Division	Subdivision	33/11kV Substation	Capacity		11 kV feeders (Nos.)
			Nos	MVA	
PDS	Saiha SD	Meisatla	1x2.5	2.5	4
		Tuipang	1x1.0	1	2
	Lawngtlai SD	Chawnhu	1x2.5	2.5	4
<b>Total :-</b>			<b>6.0</b>	<b>6</b>	

◆ CONDITION OF EXISTING SUBSTATIONS

It has been observed that a number of equipment are missing/defective in most of the substations. The defective/missing elements are affecting the reliability of supply and therefore there is an immediate need to carry out R&M of these Substations. The condition of equipment in various sub-stations is assessed and the requirement of materials is proposed in the next chapter.

◆ CONDITION OF 11kV FEEDERS

It was noticed that peak power flow on 11kV feeder is of the order of 1 - 2 MW and few feeders are very lengthy (35 kms.). The long feeders are resulting into poor voltage regulation as well as high energy loss. Some of the lines are quite old which need re-conductoring.

◆ SCOPE OF WORKS AND INVESTMENT PROPOSALS FOR 2004-2006

The present Project report covers the strengthening/augmentation in following major areas:

- R&M of sub-stations and DTs to minimize failure rate of equipment with increase in reliability of power supply.
- Establishment of New 33/11 kV S/S and new DTs along with new lines.
- Reconductoring/bifurcation/addition of 33kV, 11kV feeders.

◆ **COPE OF WORKS**

The proposed network improvement schemes for 2003-04 along with their estimated cost are given below in Table-3.6:

Sl.No.	Name of Works	Amount (Rs in lakhs)
1.	Revamping of Lawngtlai Sub-Station	32.62
2.	Installation of 9 new 4×63KVA, 11/0.4KV transformer at Lawngtlai and Saiha with associated 20Km, 11kV line and 13Km LT line.	133.00
3	Construction of 33/11kV S/S at Saiha	116.95
4.	Construction of 33kV D/C line (Lattice type of tower) 50cKm	630.78
	Total Cost	913.35

*NOTE : This is an indicative list and items may be deleted or added as per Requirements.*

◆ **PROJECT IMPLEMENTATION SCHEDULE**

The project shall be implemented in two and half year period. The financial and physical phasing are given below :

- First 6 Months - Administrative approval and necessary statutory clearances will be obtained from State or Central Authorities.
- 2<sup>nd</sup> & 3<sup>rd</sup> 6months - Tendering for procurement of equipment and materials to obtain approval from State Government and selection of the contractors and the work will be started for which Rs.600.00 lakhs will be earmarked.
- 4<sup>th</sup>, 5<sup>th</sup> & 6<sup>th</sup> months - The project will be completed and the required fund will be Rs.359.01 lakhs.

**PRIORITY NO. 12: IMPROVEMENT OF SUB-TRANSMISSION & DISTRIBUTION OF KOLASIB TOWN**  
**(Rs. 14.29 crores)**

◆ Kolasib Town is the Capital of Kolasib District and is situated at about 83Kms North of Aizawl. The energy input for the Kolasib Division is 18.04 MU for the year 2003-2004 and consumption is 7.574MU. Revenue collected during 2003-04 is Rs. 136.69 lakhs.

To improve power system within the stated area, the State Government is giving importance and the concerned department was informed to prepare Project Report. in regards to the benefits of the area concerned the Sate Government is trying her best in getting source of fund. It was thought that, to get the project done, DONER will be the best source of fund and the project report is prepared for approval.

By improving power system in this area will give great chance to the public to establish Small Scale Industries (SSI). in order to implement the project all necessary infrastructures such especially road communications is already existed. It may also mentioned that system reliability will challenge socio-economic analysis reducing technical and commercial losses giving more available power to consume by the consumer.

◆ DIVISION PROFILE

◆ Consumers

There are 10145 nos consumers in the Division at present predominantly domestic consumers (97%). There is no agricultural consumer in the Division. Category-wise number of consumers in Kolasib division is given below:

Table-1.1: Category wise consumers

Dom.		Comm.		LT Indust.		Bulk (HT)		Others		Total
No.	%	No.	%	No.	%	No.	%	No.	%	
9831	97	262	3	34	0.34	12	0.12	6	0.06	10145

◆ Energy Consumption

Total energy consumption in the Division is about 7.254MU per annum out of which 97% is being consumed by Domestic consumers 3% by commercial, 0.34% by LT Industries and 0.12% is being consumed by Bulk Consumers. Category wise annual energy consumption is given below in Table-1.2:

Table-1.2: Category wise energy consumption/annum

Dom.		Comm.		LT Indust.		Bulk (HT)		Others		Total
MU	%	MU	%	MU	%	MU	%	MU	%	
7.1	97	0.21	3	0.024	0.34	0.0008	0.12	0.0004	0.06	9452

◆ Sources of power supply

The Division can receive its supply from two sources namely at normal condition from 66kV Dulabcherra S/S and 132 kV Aizawl Sub- station at the level of 66KV.

◆ 1.4 Sub-transmission and distribution system

The salient features of the Sub-transmission and Distribution system are as given below:

**Sub-stations**

66/11kV : 1 No. and 2.5MVA Capacity  
 33/11 kV : 4 Nos. and 11 MVA capacity

**Feeders**

33 kV lines : 2 nos.  
 11kV lines : 24 nos.  
 Distr. Transformers (DT) : 97 Nos., and 12.315 MVA capacity

◆ **Transmission and Distribution losses**

As mentioned earlier, the aggregate T&D losses in the Division are estimated:

Aggregate Transmission & Distribution losses: 10.78 (40%)

75% of the total losses are assumed to be Commercial and remaining 25% is technical loss.

The details of the projects are given below for favour of consideration and approval:

◆ **OBJECTIVE**

The works required to be taken up for strengthening and improvement of the Sub-Transmission and Distribution system in the Division have been assessed considering the deficiencies in technical as well as commercial areas. The works have been identified based on the information/data available in the Division by analysing the existing network in the Division.

The proposed schemes and the estimated cost thereof are given below in the Table-1.

Table-1 : Scope of work and cost estimate

Sl. No.	Description of Items	Estimated Cost (Rs. in Lakhs)
1.	33KV Mains at Kolasib	1300.37
2.	Installation of Distribution Transformer with associated 3.09Km, 11kV line	36.25
3.	Reconductoring of lines	18.18
4.	R&M of Bawktlang sub-Station	5.80
	<b>TOTAL COST</b>	<b>1360.60</b>

The project proposals have been prepared with the following objectives:

- Commercial loss reduction
- Increase in revenue realization
- Increase in metered energy
- Increase in billing and revenue collection efficiencies:
- Reduction of outages
- Reduction in technical losses
- Improvement in voltage profile
- Improvement in quality and reliability of power supply

◆ **BENEFITS**

Implementation of the above schemes will result in increased revenue realization, reduction in consumer supply interruption duration and reduction in T&D losses as well as improvement in quality and reliability of power supply.

Proposed schemes would increase metered energy by about 8.4MU against assessed energy of 4.430 MU.

The aggregate T&D losses would be reduced by 40% as estimated, i.e. from present level of 60% to 20%. The proposed scheme would be implemented in 2½ years.

◆ **SCOPE OF WORKS**

The proposed network improvement schemes for 2004-06 along with their estimated cost are given below in Table-3.6:

Table-3.6: Scope of Works and cost estimate

Sl. No.	Description of Items	Quantity	Estimated cost (Rs. in Lakhs)
1.	33kV S/S at Kolasib	1 No.	299.25
2.	33kV S/S at Kolasib P/H	1 No.	288.20
3.	33kV S/S at Diakkawn	1	304.42
4.	33Kv S/S at Bawktlang	1	326.90
5.	33kV line Mains (Bawktlang-PH-Diakkawn-Kolasib S/S-Bawktlang)	12 Km	81.60
6.	Installation of New 11x100KVA, 11/0.4KV Transformer at Kolasib with associated 3.09Km, 11kV line	11 No	36.25
7.	Reconductoring of 11kV line	18 Km	9.18
8.	Reconductoring of LT lines	25 Km	9.00
9.	R.M. of Bawktlang Sub-Station		5.80
	<b>TOTAL COST</b>		<b>1360.60</b>

**NOTE :** This is an indicative list and items may be deleted or added as per Requirements.

Break-up of cost estimate of the proposed schemes is given at **Annexure 1 to VIII**

◆ **PROJECT IMPLEMENTATION SCHEDULE**

The project shall be implemented in two and half years period. The phasing of works will be done keeping in view the followings

The project shall be implemented in two and half year period. The financial and physical phasing is given below:

- First Year - Tendering for procurement of equipment and materials to obtain project approval from State Government and selection of the contractors and the work will be started for which Rs. 500 lakhs will be earmarked.
- Second Year - The balance work carried over from the first year and the required fund will be Rs. 650.00 lakhs.
- Last 6 Months - Completion of the projects physically and financially and the required fund will be Rs. 279.00 lakhs.

**PRIORITY NO. 13: CONSTRUCTION OF STEEL GIRDER BRIDGE OVER LANDSLIDE AREA BETWEEN BARA BAZAR & DISTRICT COUNCIL SECRETARIAT WITHIN LAWNGTLAI TOWN**  
**(Rs. 2.42 crores)**

The LADC (Lai Autonomous District Council) was constituted on 29<sup>th</sup> April, 1972 under the Sixth Schedule to the Constitution of India. The Council is the replication of the State Assembly and the Council exercises executive powers over specifically the subjects/ Departments. Subjects/Departments allotted to the Council is 18 [eighteen]. The area of the Council is 1870.75 sq.km and its population is 56,354 as per 2001 census.

The Lai Autonomous District Council being situated in the southern corner of the State of Mizoram, not to mention of the fact that the State itself is very far flung area from the east of India, Communication as well as fund constraints retard development in the area.

The District Council Executive Committee is aware of the fact that development through any available fund, especially under the NLCPR be availed from the Ministry of Development of North - Eastern Region, Government of India as one of the pioneer projects. Therefore, the Executive Committee of the Lai Autonomous District Council [LADC] had decided to select this project to be implemented through fund from the DONER, Government of India.

To substantiate the concepts and the needs for implementation of this Project, it may be elaborated as follows.

in the year 1995 during monsoon season there was heavy landslide all over the district area, many houses and road formations were lost within Lawngtlai town and other areas. Remedial measures were taken in the early part of 1996 and most of the remedial measures survive till date. However, in this particular location [i.e. road from Bara Bazar and Council Secretariat within Lawngtlai Town] where road formation was wash off, Retaining Wall was constructed in 1996m, the same was again slide off during rainy season in 1997 and it was again reconstructed during 1997 itself.

However, in the year 1999 during rainy season heavy rain washed off again the Retaining Wall and with the assistance from Government of Mizoram restoration work was again carried out in the year 2000 under the closed supervision of expert, but only after three years of construction in 2003, the whole work was again completely wash off by the heavy rain leaving only one light vehicle could pass with great difficulty at a time. Since this road connects the most important Office of the Council Secretariat with the main town and the area is congested with no other alternative route and area for widening is difficult. With the suggestion o f the Engineering Geologist, no other solution for reconstruction of the road for Medium and heavy vehicles to pass and to survive the natural angry of the rainy season, it was decided that Steel Girder Bridge needs to be constructed.

Since the proposal is for the interest of the public it will solve the problems within the town and serve the safety of the public.

There is no any duplicacy with the ongoing initiatives taken by the State Govt. The work shall be carried out through external agency and may be able to complete within a calendar year.

Operation and maintenance of this asset after completion of the project may be carried on by the Council's authority. Funds required for the same may be met from the Annual Plan Fund of the District Council.

No statutory clearances need to obtain from the State/ Central Govt. authorities for implementation of the project as all the needs for execution of works like land etc. are under the control of the Council's authority.

From the above elaboration the need for this project may be realized and the competent authority may award financial assistance for immediate construction of Steel Girder Bridge over this Landslide Area between Bara Bazar and Council Secretariat within Lawngtlai town.

**PRIORITY NO. 14: IMPROVEMENT OF SUB-TRANSMISSION & DISTRIBUTION NETWORK  
IN AND AROUND SERCHHIP TOWN**  
**(Rs. 11.70 crores)**

◆ Serchhip Town is the Capital of Serchhip District at the heart of Mizoram. It is the load centre for the district and its adjoining areas. The energy input for the Serchhip Division is 13.58 MU for the year 2003-2004 and consumption is 4.915MU. Revenue collected during 2003-04 is Rs. 83.44 lakhs.

To improve power system within the stated area, the State Government is giving importance and the concerned department was informed to prepare Project Report. in regards to the benefits of the area concerned the State Government is trying her best in getting source of fund. It was thought that, to get the project done, DONER will be the best source of fund and the project report is prepared for approval.

By improving power system in this area will give great chance to the public to establish Small Scale Industries (SSI). in order to implement the project all necessary infrastructures such especially road communications is already existed. It may also mentioned that system reliability will challenge socio-economic analysis reducing technical and commercial losses giving more available power to consume by the consumer.

◆ DIVISION PROFILE

○ Consumers

There are 8481 nos. of consumers in the Division at present predominantly domestic consumers (83%). There is no agricultural consumer in the Division. Category-wise number of consumers in Serchhip division is given below:

Table-1.2: Category wise consumers

Dom.		Comm.		Public Water Works		Bulk (HT)		Others		Total
No.	%	No.	%	No.	%	No.	%	No.	%	No.
7072	83	127	1.5	1	0.01	2	0.2	1279	15.10	8481

○ Energy Consumption

Total energy consumption in the Division is about 4.92MU per annum out of which 83% is being consumed by Domestic consumers 1.5% by commercial, and 0.02% is being consumed by Bulk Consumers. Category wise annual energy consumption is given below in Table-1.3:

Table-1.3: Category wise energy consumption/annum

Dom.		Comm.		Public Water Works.		Bulk (HT)		Others		Total
MU	%	MU	%	MU	%	MU	%	MU	%	
4.08	83	0.07	1.5	0.0009	0.01	0.0098	0.20	0.74	15.10	4.92

○ Sources of power supply

The Division receives its supply from 132 kV Sub-station Zuangtui Aizawl.

○ Sub-transmission and distribution system

The salient features of the Sub-transmission and Distribution system are as given below:

**Sub-stations**

33/11 kV : 3 Nos. and 10 MVA capacity

**Feeders**

33 kV lines : 3 nos.

**Distr. Transformers (DT)** : 70 Nos., and 8.184 MVA capacity

◆ **Transmission and Distribution losses**

As mentioned earlier, the aggregate T&D losses in the Division are estimated:

Aggregate technical & Commercial losses : 60.40%

Commercial loss : 4.40%

Technical Loss : 56%

The details of the projects are given below for favour of consideration and approval:

◆ **OBJECTIVE:**

The Works required to be taken up for strengthening and improvement of the Sub-Transmission and Distribution in the Division during the period 2004-06 have been asses considering the deficiencies in the technical as well as commercial areas. The proposed schemes and the estimated cost thereof are given below in Table-I.

Table-I: Scope of Works and cost estimate:

Sl.No.	Name of Works	Amount (Rs in lakhs)
1.	Construction of 33kV Sub-Station at Serchhip	292.342
2.	Construction of 33kV Sub-Station at Thenzawl	204.332
3.	Construction of 33kV Sub-Station at Chhingchhip	279.784
4.	Improvement of existing 132 kV at Serchhip (Bukpui)	58.91
5.	Construction of New Distribution S/S with associated 4.4Km, 11kV line and 2.75LT line	62.95
6.	Construction of 32Km, 33/11kV line, 20Km 11kV line for the above 3 New S/Ss.	215.188
	<b>GRAND TOTAL</b>	<b>1113.51</b>

The project proposals have been prepared with the following objectives:

Commercial loss reduction

Increase in revenue realization

Increase in metered energy

Increase in billing and revenue collection efficiencies:

Reduction of outages

Reduction in technical losses

Improvement in voltage profile

Improvement in quality and reliability of power supply

◆ **BENEFITS**

Implementation of the above schemes will result in increased revenue realization, reduction in consumer supply interruption duration and reduction in T&D losses as well as improvement in quality and reliability of power supply.

The aggregate T&D losses would be reduced by 25% as estimated, i.e. from present level of 56% to about 31% . The proposed scheme would be implemented in 2½ years.

◆ **SCOPE OF WORKS**

The proposed network improvement schemes for 2004-06 along with their estimated cost are given below in Table-3.8:

Table-3.8: Scope of Works and cost estimate

Sl. No.	Name of Works	Amount (Rs in lakhs)
1.	Construction of 33kV Sub-Station at Serchhip	292.342
2.	Construction of 33kV Sub-Station at Thenzawl	204.332
3.	Construction of 33kV Sub-Station at Chhingchhip	279.784
4.	Improvement of existing 132Kv at Serchhip (Bukpui)	58.91
5.	Construction of New Distribution S/S with associated 4.4Km, 11kV line and 2.75LT line	62.95
6.	Construction of 32Km, 33/11kV line, 20Km 11kV line for the above 3 New S/Ss.	215.188
	<b>GRAND TOTAL</b>	<b>1113.51</b>

**NOTE :** This is an indicative list and items may be deleted or added as per Requirements.

Break-up of cost estimate of the proposed schemes is given in the *Annexure*.

◆ **PROJECT IMPLEMENTATION SCHEDULE**

The project shall be implemented in two and half years period. The phasing of works will be done keeping in view the followings.

The project shall be implemented in two and half year period. The financial and physical phasing is given below:

- First year - Tendering for procurement of equipment and materials to obtain project approval from State Government and selection of the contractors and the work will be started for which Rs.400.00 lakhs will be earmarked.
- Second year - The balance work carried over from the first year and the required fund will be Rs. 500.00 lakhs.
- Last 6 Months - Completion of the projects physically and financially and the required fund will be Rs. 269.18 lakhs.

**PRIORITY NO. 15: ESTABLISHMENT OF VETERINARY POLYCLINIC AT AIZAWL, MIZORAM**  
**(Rs. 3.50 crores)**

Livestock rearing have been occupying Central theme in Mizo Society since time immemorial and have been gaining more important place day by day. It is the traditional practice in Mizo Society to rear/keep at least one or more species of domestic animal by each family as a subsidiary income.

With the increase in human population and improvement in standard of living, the requirements of protein in the form of meat are significantly high at present. To meet the increasing demand of meat and meat products as well as improvement of economic condition of general people, a large section of people took rearing of domesticated animals and poultry farming as the main source of livelihood. This results in the induction of economic and improved breeds of livestock and poultry.

Apart form various concurrent animal diseases prevalent in the State, Exotic diseases got entry into the State of Mizoram along with influx of animals from across the State and international boundaries. This led to an increase in various complicated cases and endemic animal diseases. Nowadays, various zoonotic diseases become more public health concern since certain emerging diseases lead to serious public health hazards, sometimes to fatality. in places particularly in urban areas, certain groups of people keep quality and improved breeds of pet animals. Due to increase in vehicular Traffic, automobile accidents causing casualty to animals, particularly of pet ones become a common happening everyday.

People become more conscious on the environmental pollution. The Hospital Wastes are nowadays, public nuisance which poses public health hazards. It is mandatory to establish and install scientific method of wastes disposal system to Hospitals/Clinics so that all the wastes from these institutions become harmless and free of environmental pollution.

To combat, Control and Eradicate these ever increasing disease incidence as well as to contain all other related conditions, establishment of well equipped Veterinary Polyclinic comprising of various Departments with systematic approach is considered inevitable.

**OBJECTIVES :**

The objective of the project is to establish well-planned and equipped Veterinary Polyclinic comprising of various clinical and para-clinical departments with systematic approach in Animal disease diagnosis and treatment. in order to counter/combat the increasing Animal disease, a project on establishment of Veterinary polyclinic is proposed with the following components: -

- 1) Provision of essential facilities and equipments in disease diagnosis for specific and effective treatment.
- 2) Establishment of various clinical and Para clinical departments and make systematic approach for disease prevention and treatment.

- 3) Maximum utilization of human resource: - Use of Veterinarians having additional specialized qualification in their respective departments and utilized their areas of specialization at a maximum level. For this purpose, unemployed Qualified Veterinarians having appropriate specialized degree shall be temporarily employed on contract/fixed pay basis for effective and smooth running of the proposed polyclinic.
- 4) Provision of Scientific polyclinic waste disposal shall be made by installation of appropriate Incinerator to prevent environmental pollution.
- 5) By engaging adequate qualified Veterinarians, the proposed polyclinic shall functions 24 hrs. a day by adopting routine roster duty so that emergency case shall be handled effectively round the clock.
- 6) Inpatient Ward for small animals - Small animals, generally pet animals shall be provided in-ward facilities for regular observation and necessary treatment.

**Project cost Estimate:**

The proposed Veterinary Polyclinic comprises the following components

	<u>Civil Works</u>	<u>Rs. in lakh</u>
1.0	Polyclinic building	- 175.00
1.1	Residential Quarters	- 73.00
2.0	Machinery & Equipment	- 102.12
	TOTAL:	- 350.12

(Rupees three hundred fifty lakhs and twelve thousand) only

**Project Finance:**

The Project shall be wholly financed under the Non-lapsable Central Pool of Resources.

	<u>Civil Works:</u>	<u>Rs. in lakh</u>
1.0	Polyclinic building	175.00
1.1	Residential Quarters	73.00
2.0	Machinery & Equipment	<u>102.12</u>
	TOTAL:	350.12

(Rupees three hundred fifty lakhs and twelve thousand) only.

**Project Finance:**

The Project shall be wholly financed under the Non-lapsable Central Pool of Resources.

PROJECT IMPLEMENTATION SCHEDULE / KEY PHYSICAL TARGET

(Rs. in lakhs)

Sl. No	Particulars		2004-05		2005-06		2006-07	
			Phy	Fin	Phy	Fin	Phy	Fin
1.	a) Construction of Vety. Polyclinic building		50%	75.00	50%	75.00	-	-
	b) Construction of In-patient ward for small animals		-	-	100%	25.00	-	-
2.	Construction of residential quarters for Officers	2 blocks	-	-	100%	60.00	-	-
3.	Construction of residential quarters for Supporting staff	1 block	-	-	100%	13.00	-	-
4.	Procurement & installation of Machinery & Equipments including necessary environmental safeguards	-	-	-	-	-	100%	102.12
				75.00		173.00		102.12

YEAR WISE FUND REQUIREMENT (Rs. in lakhs)

2004-05	2005-06	2006-07	TOTAL
75.00	173.00	102.12	350.12

**(Rupees three hundred fifty lakhs and twelve thousand) only.**

**PRIORITY NO. 16: CONSTRUCTION OF SCHOOL BUILDINGS WITHIN MARA AUTONOMOUS DISTRICT COUNCIL**

**(Rs. 3.861 crores)**

The Mara Autonomous District Council is one of the Autonomous District Councils in Mizoram. The total area of the District Council is 1500 Sq.Km and its population is 49,060. The headquarter of the District is Saiha. The area is very backward in all aspects particularly in education. The main factor for its backwardness is due lack of amenities like School buildings, furniture, toilet facilities etc. etc. which stand on the way for achieving the major aims and objectives of elementary education. It is therefore, felt imperative the need for improvement of the quality and standard of Education in the MADC area by way of re-construction/renovation and providing amenities like furniture, toilet etc. in the Schools.

There are 65 Middle Schools and 98 Primary Schools within Mara Autonomous District Council. The Mara Autonomous District Council was constituted under the sixth scheduled of the Constitution of India, which confers certain powers to the District Council. As such, the management of the schools, among other things, are transferred to the hands of the District Council. However, due to financial constraint the District Council had faced the untold problems to look after the elementary education within their jurisdiction. As such the condition of the School building is in a dilapidated condition and the basic amenities cannot be provided in the Schools within the existing fund allocation under Plan. Keeping this in mind it is proposed to take up the following item of works: -

(Rs. in lakh)

Sl. No.	Items of works	Unit cost	No. of Bldg.	Total
1.	Reconstruction of Primary School building	4.50	22	99.00
2.	Renovation of Primary School building	1.00	13	13.00
3.	Reconstruction of Middle School Building	3.86	16	61.76
4.	Renovation of Middle School Building	1.00	10	10.00
5.	Constn. of Septic tank for Primary School	0.50	22	11.00
6.	Constn. of Septic tank for Middle School	0.50	16	8.00
7.	Constn. of Pit Latrine for Primary School	0.30	13	3.90
8.	Constn. of Pit Latrine for Middle School	0.50	10	3.00
9.	Constn. of Urinal shed for Primary School	0.20	42	8.40
10.	Construction of Urinal shed for Middle School	0.20	24	4.80
11.	Construction of Courtyard for Primary School	0.50	13	6.50
12.	Construction of Urinal shed for Middle School	0.50	9	4.50
13.	Construction of Retaining Wall approach to Primary School	0.80	11	8.80
14.	Construction of Retaining Wall approach to Middle School	0.80	7	5.60
15.	Constn. of approach road to Primary School	0.50	19	9.50
16.	Constn. of approach road to Middle School	0.50	12	6.00
17.	Constn. of Step approach to Primary School	0.50	11	5.50
18.	Constn. of Step approach to Middle School	0.50	7	3.50
19.	Fencing of Primary School building	0.90	15	13.50
20.	Fencing of Middle School building	0.90	10	9.00
21.	Constn. of Kitchen for midday meal for Primary School	0.85	23	19.55
22.	Constn. of School Hostel for Primary School	2.00	6	12.00
23.	Constn. of School Hostel for Middle School	2.00	7	14.00
24.	Supply of School furniture for Primary School	0.20	26	5.20
25.	Supply of School furniture for Middle School	0.20	17	3.40
26.	Supply of sport material for Primary School	0.40	23	9.20
27.	Supply of sport material for Middle School	0.40	15	6.00
28.	Supply of groceries for Primary School	0.10	86	8.60
29.	Supply of teaching aid for Primary School	0.10	86	8.60
30.	Supply of teaching aid for Middle School	0.10	47	4.70
	<b>TOTAL</b>			<b>386.51</b>

The project proposal is formulated in such a way as to cover all Middle and Primary Schools within the Mara Autonomous District Council.

The beneficiaries of this scheme will be all the school going children within this Autonomous District Council and will certainly create the willingness for attending the good school amongst the School going children.

As already stated, due to financial constraint the State Government also could not provide sufficient fund for this purpose, therefore, there is no question of duplicacy for implementation of the scheme.

The main objective of this proposal is to bridge the infra-structural gap that exist between the Elementary Education within the Autonomous District Council jurisdiction and the Secondary Education looked after by the State Govt. which are having better facilities like building, furniture etc.

Operational and maintenance of assets after completion of the project will be looked after by the Council with the allocated fund under Plan.

Since each school is to be reconstructed/renovated on its own site no clearance from either the State or Central Govt. is required.

The works will be taken up departmentally under the guidance and supervision of the departmental officers as well as the building committee of the concerned villages and it will be completed within one year from the release of funds. Contractors/Suppliers will be engaged where necessary.

**PRIORITY NO. 17: TUIPANGLUI MINOR IRRIGATION PROJECT, TUIPANG**  
**(Rs. 2.25 crores)**

**INTRODUCTION:**

Mara Autonomous District Council situated in the remote corner of the country has the most variegated hilly terrain in the southern part of Mizoram, situated between latitude 21°35' and 22°36' N & 92° 18' and 93° 09' E Longitude. The geographic area of the autonomous district is about 1445sqkm. The total population of Mara Autonomous Dist according to 2001 (Census provisional) is 45,422. The district is thinly populated having density of 32people per sq-km. The percentage of population to the state is 5.09%.

The numbers of villages with household and cultivators families within Mara Autonomous district as on 2002 is given below:

1. No. of Village	:	47
2. Total no. of household	:	4669
3. No. of cultivator families	:	2714
4. No. of Jhum cultivators	:	2532
5. No. of WRC cultivators	:	182

*(Based on village level statistics survey report-Saiha Dist.2002. issued by Dist. Research Officer, Economics & Statistics: Saiha Dist: Saiha)*

The total available potential flat land suitable for Wet Rice Cultivation has been worked out as 4419 Ha, out of which 245Ha has been brought under irrigation by the state Agriculture & Minor Irrigation department (as on 2003). Due to the topography and other location as well as financial constraints the paced of execution of Minor Irrigation Works have been slow.

#### THE PROBLEM :

- 6) Local Level: The economy of Mara Autonomous District council which is within Saiha district of Mizoram state, is based on agriculture and forest. The per Capita income of Saiha dist is 12,185 only. Shifting Jhum cultivation which is rainfed have been the usual practices. As such the entire district has to depend on Rice and Vegetables imported from the neighbouring Assam state. Being economically poor, the farmers could not afford the cost of permanent irrigation structures. Hence, immediate measure is required to develop fresh potential flat land for Wet Rice Cultivation and introduce intensive cultivation with the help of Minor Irrigation Schemes.
- 5) State Level: Out of 58638Ha potential Area in the state only 4527 Ha. Have been covered (Dec. 2003) by 107 nos. completed Minor Irrigation Projects in Mizoram. The source of fund for development of Irrigation Project are central Loan Assistance under AIBP and NABARD loan under RIDFs. State matching share(to be met from State Plan Fund) have to complement those scheme/ programmes.

Due to financial constraints, the pace of development of Irrigation cannot be accelerated. Therefore, Fund is sought from the Non-Lapsable Central Pool of Resources in order to take up more projects.

#### DEVELOPMENT OBJECTIVES:

- 4) To provide Irrigation facilities to 90Ha cultivable command area.
- 3) To maximize utilization of created Irrigation potentials by extending Ayucut Development works of On-Farm Dev. & Off-Farm Dev. Works such as Land levelling, bunding, Training to farmers, seminar, awareness campaign etc.

- 2) To accrue maximize benefit early from the scheme, Off-Farm Dev. Work namely construction of Farm Approached road connecting the potential area to the village has been included under Ayucut development head.
- 1) The schemes also aim at Conserving Forest by providing permanent wet rice cultivation for jhumia families who otherwise will have no alternative than to destroy the forest by chopping down & burning forest trees of area 40 to 50 ha(at the least) annually for Jhum cultivation for they livelihood.
- 0) As may be seen from the above given table, there are 2532 jhumia families and only 182 families practicing WRC. Hence, the scheme aims at providing irrigation facilities to available potential more or less flat land so that switching over from traditional jhum cultivation to permanent Wet Rice Cultivation is possible for more families at the earliest.

**BENEFIT:**

- 1) 28 or more families having WRC area within the proposed command area will get direct benefit by switching over from the tradition jhum cultivation to more eco-friendly, productive and reliable permanent cultivation. (List of farmer at annexure in the DPR).
- 2) Tuipang villages namely Tuipang 'V' & Tuipang 'L' of 499 household with 2144 population will have direct benefit after completion of the scheme as vegetables and domestic food requirement is likely to be met from the scheme.
- 3) The farm approach road after completion will lower the entire production cost as manual transportation cost of agri. Inputs and produces is very high.
- 4) The scheme is also expected to generate employment for the local population in term of daily labour basis.

**ECONOMIC ANALYSIS:**

The Benefit Cost Ratio for the scheme is work out to be 2.94 : 1, by considering the annual value of agri. Produce and the annual cost. The annual yield per hectare and its prices has been converted into monetary terms. Considering the remoteness and backwardness of the local tribal inhabitants who are benefiting from the scheme and the value of B.C. Ratio, the project is found to be justified.

**PROJECT OPERATION & MAINTENANCE :**

The operational & management of the project after completion shall be taken over by the water user association. Water distribution system, minor upkeep and maintenance of the project, other agriculture inputs such as seed, fertilizer, etc as well as marketing of the produce shall be directly look after by the water user association. The state Agriculture & Minor Irrigation Dept. will taken care of major repair involving higher cost to make the project operational. It is also proposed to maintain proper record of account for each family so that the actual benefit from the project can be properly assessed after commissioning of the project.

ESTIMATED COST & TIME-COST SCHEDULE:

The Estimated cost of the project is as follow:

a) Irrigation components	-	Rs 163.95 lakh
b) Ayucut Development works	-	<u>Rs 54.20 lakh</u>
Total	-	Rs 218.15 lakh
c) Contingencies	-	<u>Rs 6.55 lakh</u>
Total	-	Rs 224.70 lakh

The project is schedule for completion within a period of three years, and the tentative Time-Cost schedule of project implementation is as stated below:

2005-06	-	Rs 144.17 lakhs
2006-07	-	Rs 68.75 lakhs
2007-08	-	<u>Rs 11.78 lakhs</u>
Total	-	Rs 224.70 lakhs

The financial and physical phasing of the project is shown below:

(Rupees in lakh)

S.N	ITEMS	YEARWISE DISTRIBUTION			
		2005-06	2006-07	2007-08	TOTAL
1	2	3	4	5	6
A	IRRIGATION COMPONENT				
1	Survey & Investigation/ Preliminary	1.780	0.800	0.300	2.880
2	Construction of Irrigation structures				
	1) Trench Weir	12.370	4.560	0.000	16.930
	2) Desiltation tank	9.700	3.400	0.000	13.100
	3) C.C. Channel	45.412	12.693	0.000	58.105
	4) Procurement & Laying of Pipes	9.390	4.967	0.000	14.357
	5) Farm Pond	25.600	25.600	0.000	51.200
3	Carriages of Materials	3.936	0.876	0.000	4.813
4	Procurement of Tools & plants	0.500	0.420	0.000	0.920
5	Hiring charges of Vehicle for supervising staff	0.600	0.600	0.450	1.650
	SUB-TOTAL	109.289	53.916	0.750	163.955
B	AYUCUT DEVELOPMENT				
	1) Construction of Farm approach road	27.428	0.000	0.000	27.428
	2) Farmer Training	0.000	0.445	0.460	0.905
	3) Land Levelling, shaping & bunding	0.000	12.390	10.230	22.620
	4) Special Machineries	1.800	0.000	0.000	1.800
	5) Site office cum staff camp	1.450	0.000	0.000	1.450
	SUB-TOTAL	30.678	12.835	10.690	54.203
	TOTAL	139.967	66.751	11.440	218.158
C	Contingencies @3% of total cost	4.206	1.999	0.340	6.545
	G.TOTAL	144.173	68.750	11.780	224.703
	SAY	144.170	68.750	11.780	224.700

SCOPE OF THE PROJECT:

The project proposal provides for construction of the following minor irrigation structures:-

i.	Trench type RCC Weir	-	7 nos.
ii.	Open channel lined with cement concrete	-	4350 rm.
iii.	G.I. Pipes lines	-	2292 rm.
iv.	Desiltation Tank	-	7 nos.
v.	Farm Tank cum Rain Water harvesting tank	-	20 nos.

The Scheme also provides for Ayucut works as briefly stated below to maximize irrigation potential created and accrue early benefits from the schemes.

i.	Approach road (without soiling, metalling, etc)	-	4.1 km
ii.	Land levelling, shaping, bunding	-	60 ha.
iii.	Land improvement works like realignment & reshaping of existing plots presently under cultivation	-	25 ha.

ADMINISTRATIVE APPROVAL:

The Project has been approved by the competent Authority.

ENVIRONMENT & FOREST CLEARANCE:

The project will have no adverse impact on environment as the work will be carried out along the existing wet rice cultivated area.

MODE OF EXECUTION :

The project will be executed departmentally.

TIME OF COMPLETION:

The project will be completed within three working seasons.

**PRIORITY NO. 18: SERZAWL MINOR IRRIGATION PROJECT**  
**(Rs. 2.30 crores)**

INTRODUCTION:

Serzawl minor irrigation project, located at Bualpui(Ng) under the jurisdiction of Lai Autonomous District Council of Mizoram State, has the most variegated hilly terrain in the southern part of Mizoram, situated between latitude 21°35' and 22°36' N & 92° 18' and 93° 09' E Longitude. The district is said to be the most backward district in the state. The geographical area of the Autonomous district council is about 1870.75 sq.km. The total population of the Autonomous district according to 2001(Census provisional) is 53230 of which 27183 are male and 26047 are female. The district is thinly populated having density of 30.49 per sq-km. The percentage of population to the state is 6.4%. The literacy rate of the district is 78.82% against 88.49% of the state.

The numbers of villages with household and cultivators families within Lai Autonomous District Council as on 2002 is given below:

1.	No. of Village	:	77
2.	Total no. of household	:	8395
3.	No. of cultivator families	:	3751
4.	No. of Jhum cultivators	:	3524
5.	No. of WRC cultivators	:	227

*(Based on village level statistics survey report-2002.Blockwise, Directorate of Economics & Statistics: Mizoram)*

The total available potential flat land suitable for Wet Rice Cultivation has been worked out as 7008Ha, out of which no area has been brought under irrigation by the state Agriculture & Minor Irrigation department as of now (as on 2003). The local farmer have constructed kutchha irrigation channel to irrigate wet rice cultivated areas at different locations. Due to the topography and other location constraints the paced of execution of Minor Irrigation Works have not been started.

THE PROBLEM :

- a) Local Level: The economy of Lai Autonomous District council of Mizoram state, is based on agriculture and forest. Shifting Jhum cultivation which is rainfed have been the usual practices. As such the entire district has to depend on Rice and Vegetables imported from the neighboring state. Being economically poor, the farmers could not afford the cost of permanent irrigation structures. Hence, immediate measure is required to develop fresh potential flat land for Wet Rice Cultivation and introduce intensive cultivation with the help of Minor Irrigation Schemes.
- b) State Level: Out of 58638Ha potential Area in the state only 4527Ha have been covered (Dec. 2003) by 107nos completed Minor Irrigation Projects in Mizoram. *The source of fund for development of Irrigation Project are central Loan Assistance under AIBP and NABARD loan under RIDFs. State matching share(to be met from State Plan Fund) have to complement those scheme/ programmes.*

*Due to financial constraints, the pace of development of Irrigation cannot be accelerated. Therefore, Fund is sought from the Non-Lapsable Central Pool of Resources in order to take up more projects.*

DEVELOPMENT OBJECTIVES:

- 1) To provide Irrigation facilities to 130Ha cultivable command area.
- 2) To maximize utilization of created Irrigation potentials by extending Ayucut Development works such as Land leveling, bunding, Training to farmers, seminar, awareness campaign etc.
- 3) To accrue maximize benefit early from the scheme, construction of Farm Approached road connecting the potential area to the village has been included under Ayucut development work.
- 4) The schemes also aim at Conserving Forest by providing permanent wet rice cultivation for 28jhumia families who otherwise will have no alternative than to

destroy the forest by chopping down & burning forest trees of area 40 to 50 ha(at the least) annually for Jhum cultivation for they livelihood.

**BENEFIT:**

- 1) 28 or more families having WRC area within the proposed command area will get direct benefit by switching over from the tradition jhum cultivation to more eco-friendly, productive and reliable permanent cultivation.
- 2) Tuipang villages of 330 household with 1960 population will have direct benefit after completion of the scheme as vegetable and domestic requirement is likely to be met from the scheme.
- 5) The approach road after completion will benefit the entire district as it will serve the purposes of both communication link of not only agriculture produce but also other natural resources.
- 6) The scheme is also expected to generate employment opportunity for the local population in term of daily labour basis.

**ECONOMIC ANALYSIS:**

The Benefit Cost Ratio for the scheme is work out to be 1.57 : 1, by considering the annual value of agri. Produce and the annual cost. The annual yield per hectare and its prices has been converted into monetary terms. Considering the tribal population of the autonomous district council and the command areas benefited by implementation of this scheme and the value of B.C. Ratio of 1.57, the project is found to be feasible.

**PROJECT OPERATION & MAINTENANCE :**

The management of the project after completion shall be entrusted over to the water user association. Water distribution system, minor upkeep and maintenance of the project, other agriculture inputs such as seed, fertilizer, etc as well as marketing of the produce shall be directly under the purview of water user association. The state Agriculture & Minor Irrigation Dept. in turn will make sure that the farmer get the latest technology required for project utilization and will be responsible for major repair involving higher cost to make the project operational. It is also proposed to maintain proper record of account for each family so that the actual benefit from the project can be known.

**ESTIMATED COST & TIME-COST SCHEDULE:**

The Estimated cost of the project is as follow:

a)	Irrigation components	-	Rs 252.75 lakh
b)	On-Farm Development works	-	Rs 75.40 lakh
c)	Off-Farm Development works	-	Rs 9.85 lakh
	Total	-	Rs 338.00 lakh

The project is schedule for completion within a period of three years, and the tentative Time-Cost schedule of project implementation is as stated below:

2005-06	-	Rs 134.45 lakhs
2006-07	-	Rs 69.36 lakhs

2007-08	-	<u>Rs 26.22 lakhs</u>
Total	-	Rs 230.04 lakhs

The financial and physical phasing of the project is shown below:

(Rupees in lakh)

S.N	ITEMS	YEARWISE DISTRIBUTION			
		2005-06	2006-07	2007-08	TOTAL
1	2	3	4	5	6
A.	IRRIGATION COMPONENT				
1	Survey & Investigation/ Preliminary	1.200	1.000	0.400	2.600
2	Construction of Irrigation structures				
	1) Diversion weir	17.440	0.000	0.000	17.440
	1) Trench Weir	24.250	12.125	0.000	6.375
	2) Desiltation tank	17.000	8.500	0.000	25.500
	3) C.C. Channel	37.164	44.962	0.000	90.196
	4) Procurement & Laying of Pipes	8.230	4.380	0.000	12.600
	5) Distribution tank	0.000	3.600	0.000	3.600
	6) Farm Pond	19.680	32.800	6.560	59.040
3	Carriages of Materials	5.036	4.658	0.000	
4	Procurement of Tools & plants	0.750	0.000	0.000	0.750
5	Hiring charges of Vehicle for supervising staff	0.200	0.200	0.100	0.500
	SUB-TOTAL	138.690	12.966	7.060	
B.	AYUCUT DEVELOPMENT				
	1) Construction of Farm approach road	32.995	0.000	0.000	32.990
	2) Farmer Training	0.000	0.587	0.000	0.587
	3) Land levelling, shaping & bunding	0.000	16.400	16.368	32.775
	4) Special Machineries	0.000	3.400	0.000	3.400
	5) Site office cum staff camp	5.646	0.000	0.000	5.646
	SUB-TOTAL	38.641	20.394	16.370	
	TOTAL	169.591	150.059	23.430	
C.	Contingencies @3% of total cost	5.087	4.502	0.702	
	G.TOTAL	174.679	154.561	24.132	
	SAY	174.680	154.560	13.14	

SCOPE OF THE PROJECT:

The project proposal provides for construction of the following irrigation structures:-

- vi. Trench type RCC Diversion Weir - 2 nos.
- vii. Open channel lined with cement concrete - 2400 rm.
- viii. G.I. Pipes lines - 5200 rm.
- ix. Distribution Tank (lined) - 2 nos.
- x. Farm Tank cum Rain Water harvesting tank - 7 nos.

The Scheme also provides for Ayucut works as briefly stated below to maximize irrigation potential created and accrue early benefits from the schemes.

- iv. Approach road (without soiling, metalling etc )- 4.5km
- v. Land levelling, shaping, bunding - 45 ha
- vi. Land improvement works like realignment & reshaping of existing plots presently under cultivation - 30 ha.

**ADMINISTRATIVE APPROVAL:**

The Project has been approved by the competent Authority.

**ENVIRONMENT & FOREST CLEARENCE:**

The project will have no adverse impact on environment as the work will be carried out along the existing wet rice cultivated area. In fact, protection and plantation of forest trees on the catchments area of the project will be taken up as first priority jointly by the water user association and the department.

**MODE OF EXECUTION :**

The project will be executed departmentally in consultation with water user Association under the direct supervision of Divisional Agril. Engineer, Lunglei and Saiha Irrigation Sub-Division.

**PRIORITY NO. 19: THINGVA MINOR IRRIGATION PROJECT**  
**(Rs. 3.01 crores)**

**INTRODUCTION:**

Thingva minor irrigation project is located within Lunglei district of Mizoram State which has the most variegated hilly terrain in the southern part of Mizoram, between latitude 23°10' and 23°15' N & 92° 40' and 92° 45' E Longitude. The geographic area of the district is about 4538sq.km. The total population of according to 2001(Census provisional) is 1,37,155 of which 71,353 are male and 65,802 are female. The district is thinly populated having density of 30.22people per sq-km. The percentage of population to the state is 15.39%. The literacy percentage is 84.20%.

As per existing scenario, the total area under Wet Rice Cultivation within Lunglei district is only 859.45ha where as total area under jhum or shifting cultivation is

31,069.61ha. Due to the topography and other location constraints the paced of execution of Minor Irrigation Works have been slow.

The numbers of villages with household and cultivators families to be benefited by the present scheme is given below:

1.	No. of Village	:	3
2.	Total no. of Population	:	1550
3.	No. of cultivator families	:	1250
4.	No. of Jhum cultivators	:	1200
5.	No. of WRC cultivators	:	50

*(Based on IMDS by science & Technology & Environment Cell, Planning Deptt., G.O.M)*

#### THE PROBLEM :

- a) Local Level: The economy of Lunglei district of Mizoram state, is based on agriculture and forest. Shifting or Jhum cultivation which is rainfed have been the usual practices resulting in rapid degradation of primary forest, heavy soil erosion and rapid water runoff. Being economically poor, the farmers could not afford the cost of permanent irrigation structures. Hence, immediate measure is required to develop fresh potential flat land for Wet Rice Cultivation and introduce intensive cultivation with the help of Minor Irrigation Schemes.
- b) State Level: Out of 58638Ha potential Area in the state only 4527Ha have been covered (Dec. 2003) by 107nos completed Minor Irrigation Projects in Mizoram. *The source of fund for development of Irrigation Project are central Loan Assistance under AIBP and NABARD loan under RIDFs. State matching share(to be met from State Plan Fund) have to complement those scheme/ programmes.*

*Due to financial constraints, the pace of development of Irrigation cannot be accelerated. Therefore, Fund is sought from the Non-Lapsable Central Pool of Resources in order to take up more projects.*

#### DEVELOPMENT OBJECTIVES:

- 1) To provide Irrigation facilities to 110ha cultivable command area.
- 2) To maximize utilization of created Irrigation potentials by extending Ayucut Development works such as Land levelling, bunding, Training to farmers, seminar, awareness campaign etc.
- 3) To accrue maximize benefit early from the scheme, construction of Farm Approached road connecting the potential area to the village has been included under Off-farm component of Ayucut development work.
- 4) The schemes also provides for construction of inter farm road for easy movement of machineries within the command area for land development operations. It is also

provides for purchase one tractor with implements for various farming operation within the command area.

**BENEFIT:**

- 1) 42 or more families having WRC area within the proposed command area will get direct benefit by switching over from the tradition jhum cultivation to more eco-friendly, productive and reliable permanent cultivation.
- 2) Three villages of 1550 population will have direct benefit after completion of the scheme as vegetable and domestic requirement is likely to be met from the scheme.
- 7) The approach road traversed through 350ha bamboo forest which after completion may be developed for orchard plantations. Approximately 120 jhumia may settled for permanent cultivation.
- 4) The scheme will generate 760 men-days during construction period, which will be met mainly from the local people in term of daily labour basis.

**ECONOMIC ANALYSIS:**

The Benefit Cost Ratio for the scheme is work out to be 1.83 : 1, by considering the annual value of agri. Produce and the annual cost. The annual yield per hectare and its prices has been converted into monetary terms. The value of B.C. Ratio is found to be justified.

**PROJECT OPERATION & MAINTENANCE:**

Water User Association formed from the three benefited area will be entrusted with water distribution system, minor upkeep and maintenance of the project, other agriculture inputs such as seed, fertilizer, etc as well as marketing of the produce. The state Agriculture & Minor Irrigation Dept. in turn will make sure that the farmer get the latest technology required for project utilization and will be responsible for major repair involving higher cost to make the project operational. It is also proposed to maintain proper record of account for each family so that the actual benefit from the project can be known.

**ESTIMATED COST & TIME-COST SCHEDULE:**

The Estimated cost of the project is as follow:

a)	Irrigation components	-	Rs 161.850 lakh
b)	Ayucut Development works	-	Rs 109.171 lakh
	Total	-	<u>Rs 271.021 lakh</u>
c)	Contingencies @ 3%	-	Rs 8.000 lakh
d)	Establishment cost @8.25%	-	<u>Rs 22.350 lakh</u>
	G. Total	-	<u>Rs 301.321 lakh</u>
	Say	-	Rs 301.30 lakh

The project is schedule for completion within a period of three years, and the tentative Time-Cost schedule of project implementation is as stated below:

1st Year/2005-06	-	Rs 158.40 lakh
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2nd Year/2006-07	-	Rs 83.97 lakh
3rd Year/2007-08	-	<u>Rs 58.93 lakh</u>
Total	-	Rs 301.30 lakh

The financial and physical phasing of the project is shown below:

(Rupees in lakh)

S/N	ITEMS	YEARWISE DISTRIBUTION							
		First Year		Second Year		Third Year		TOTAL	
1	2	3		4		5		6	
A	IRRIGATION COMPONENT	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy
1	S & I/ Preliminary	2.780	100%	Nil	Nil	Nil	Nil	2.780	100%
2	Div weir -1	22.100	100%	Nil	Nil	Nil	Nil	22.100	100%
3	Div weir -2	28.560	100%	Nil	Nil	Nil	Nil	28.560	100%
4	Div weir -3	8.180	100%	Nil	Nil	Nil	Nil	8.180	100%
5	Channel for C-1	22.748	100%	Nil	Nil	Nil	Nil	22.748	100%
6	Channel for C-2	Nil	Nil	45.163	100%	Nil	Nil	45.163	100%
7	Channel for C-3	Nil	Nil	Nil	Nil	18.240	100%	18.240	100%
8	Aqueduct	Nil	Nil	Nil	Nil	1.783	100%	1.783	100%
9	Reservoir 2nos	Nil	Nil	2.146	50%	2.150	50%	4.296	100%
10	Carriages of Materials	2.000	50%	1.000	25%	1.000	25%	4.000	100%
11	Maintenance	1.000	50%	1.000	25%	2.000	50%	4.000	100%
	SUB-TOTAL	87.38		49.309		25.173		161.85	100%
B	AYUCUT DEVELOPMENT(ON FARM & OFF FARM)								
1	Survey &Contn of Farm A/ road	43.570	100%	Nil	Nil	Nil	Nil	43.570	100%
2	Inter farm road	Nil	Nil	1.596	100%	Nil	Nil	1.596	100%
3	Land Leveling,..	Nil	Nil	48.735	100%	Nil	Nil	48.735	100%
4	Spl Machineries	4.500	100%	Nil	Nil	Nil	Nil	4.500	100%
5	Field Drains	Nil	Nil	Nil	Nil	1.945	100%	1.945	100%
6	RCC Bridge	Nil	Nil	1.860	100%	Nil	Nil	1.860	100%
7	Temp. Bridge	1.965	100%	Nil	Nil	Nil	Nil	1.965	100%
8	Misc.	5.000	100%	Nil	Nil	Nil	Nil	5.000	100%
	SUB-TOTAL	55.035		26.220		27.916		109.171	100%
	TOTAL	142.403		75.529		53.089		271.021	100%
	Contingencies @3% cost	4.25		2.25		1.50		8.00	
	Estab. Cost @ 8.25%	11.75		6.20		4.40		22.35	
	G.TOTAL	158.403		83.979		58.939		301.321	
	Say	158.40		83.97		58.93		301.30	

SCOPE OF THE PROJECT:

The project proposal provides for construction of the following irrigation structures:-

- xi. RCC Diversion Weir - 3 nos.
- xii. Open channel lined with cement concrete - 11800 rm.

xiii.	Field channel	-	1120 rm.
xiv.	Service Reservoir	-	2 nos.
xv.	Aqua duct	-	3 nos.

The Scheme also provides for Ayucut works as briefly stated below to maximize irrigation potential created and accrue early benefits from the schemes.

a.	Approach road at 2 locations (without soiling, metal ling, etc)	-	18.50 Km
b.	Temporary Bridge	-	1 no.
c.	RCC Bridge	-	2 nos.
d.	Land levelling, shaping, bunding	-	55 ha.
e.	Construction of inter farm roads & Field Drains		
f.	Machineries for tilling, etc		

**ADMINISTRATIVE APPROVAL:**

The Project has been approved by the competent Authority.

**ENVIRONMENT & FOREST CLEARANCE:**

The project will have no adverse impact on environment as the work will be carried out along the existing wet rice cultivated area.

**MODE OF EXECUTION :**

The project will be executed departmentally in consultation with water user Association under the direct supervision of Divisional Agril. Engineer, Lunglei and Lunglei Irrigation Sub-Division.

**PRIORITY NO. 20: THEIRIAT COMPOSITE WATER SUPPLY SCHEME**  
**(Rs. 3.62 crores)**

**CONTEXT/BACKGROUND**

The State of Mizoram is situated at the extreme North East of India. It has an International Border with Bangladesh at South West, Myanmar at South East and Inter State Border with Assam, Tripura and Manipur. Mizoram is a small state covering 21,087 sqm. km only. Mizoram is entirely hilly terrain and almost all villages and towns located at the top of a hill.

Water supply has been a priority sector under the state policy as well as in the Government of India Policy. As per National Agenda for Governance of Government of India, all the villages and Towns are to be covered with adequate water supply as per National Norm of 40 lpcd in rural area and 70 lpcd in urban area by 31<sup>st</sup> March 2003. But Mizoram State could not achieve this National Goal mainly due to scarcity of Fund in the

sector. The State Government is still making attempt to achieve this National Goal with whatever resources it can manage.

1. PROBLEMS TO BE ADDRESSED:

The Scheme involves pumping up of already treated water higher elevation by means of a Booster Pump. Since no intermediate of treatment is involved the question of effluent does not arise. The Booster Pump will be mostly seen by Electric Motors, which is non-polluting and only when there is no power supply, the diesel Engine will be run. Hence, the only pollution will be diesel exhaust for which the standard pollution control measures will be adopted. The Pump House will be located in a sparsely populated area.

The laying of Rising Main involves the clearing of shrubs and vegetation and does not require to cut down large and fully-grown trees. The rising main alignment does not cross any reserved forest area or otherwise. The feeding mains and distribution also does not involve any clearing of forested area.

Hence, overall no adverse impact on the Environment is expected by implementation of this project.

2. PROJECT OBJECTIVES AND STRATEGY :

To provide Urban Standard of water to the localities of Theiriat, Hrangchalkawn, Lungpuizawl and Mizoram polytechnic Campus, it is proposed that water be pumped up to Theiriat Tlang from Sethlunkawn. This water will be collected from the feeding main of Greater Lunglei Water Supply Scheme in a sump and this water will be pumped up with the help of Booster Pumping System.

This additional requirement of water will be made available by increasing the Pumping Hours of the Pumps at the Pumping Station at River Tlawng of the existing Greater Lunglei Water supply Scheme.

Since this water is already treated water no further treatment is required. The existing water reservoir at Sethlun is a Pressed Steel Tank and is almost 10 years old and hence a new RCC Tank of 450,000 Litres capacity (1,00,000 Gallons), which will act as sump as well as Zonal Tank for Sethlun locality, is proposed.

A pump house will be constructed near the sump for which the PHE Department already owns a large plot of land. Two Nos of centrifugal pump is proposed to be installed. One will be run by Electric Motor is proposed to be provided by erecting a 11/4 KV Transmission line to tap power from a distance of 3 Km from the proposed Pump House.

Water will be pumped up to Theiriat Tlang using a 150mm dia D.I Pipe (K9 Class). The static head is 237 Meters and the length of the pumping main is 2250 Meters.

Water is proposed to be stored in a RCC main reservoir of 450,000 Litres (1,00,000 Gallons) at Theiriat Tlang from where it will be fed into the Zonal Tank in each locality through feeding mains of different sized of D.I Pipes. Water from the Zonal Tank is

proposed to be distributed by distribution mains of different diameter and ultimately to the consumers through individual House Water Connections given from T-Cluster and Supply Tanks.

3. POPULATION AND TARGET BENEFICIARIES :

The populations of the localities proposed to be covered as per the 2001 census are as follows:

Theiriat	-	1954 Souls
Hrangchalkawn	-	600 Souls
Lungpuizawl	-	774 Souls
Mizoram Polytechnic Campus	-	600 Souls
<b>Total</b>	-	<b>3928 Souls</b>

However the present population including the floating population has already crossed 5000 souls.

Moreover due to the fact that these localities are thinly populated and due to the availability of land it is very likely that a major increase of population will occur in this area. This is because there is no possibility of further increase in the Central Lunglei area as it is already congested.

Hence for the purpose of design the ultimate population that will be served by this scheme is taken as 10,000 Souls. The standard method of population forecast is not done because the decadal growth rates have been very low and would not have been realistic.

For the purpose of design the values of Ultimate population has been arrived at considering the future expansion prospects of the locality, the availability of land and the presence of other infrastructure facilities.

Hence for the purpose of design of Zonal Tank and distribution System, the following values of Ultimate Population are taken.

Theiriat	-	4000	Souls
Hrangchalkawn	-	3500	Souls
Lungpuizawl	-	1500	Souls
Mizoram Polytechnic Campus	-	1000	Souls
<b>Total</b>	-	<b>10,000</b>	<b>Souls</b>

The target beneficiaries of this scheme are almost entirely concerning of Schedule Tribes in urban areas.

4. Even though Theiriat, Hrangchalkawn, Lungpuizawl & Mizoram Polytechnic Campus lies within the urban area of Lunglei Town, due to higher elevation of Theiriat and other factors, the localities have not been covered by Greater Lunglei Water Supply Scheme (GLWSS). Therefore, this scheme is extremely essential to provide sufficient clean, potable water to these localities as there is no alternative arrangement possible.

5. As the localities covered by the proposed scheme falls within Lunglei town area, water is proposed to be supplied to the consumers through Individual House Water Connections. As per the Mizoram Water Tariff Act, each household is now paying Rs.100/month/connection.

However, the Government has now proposed to fit domestic water meters in each connection and consumers will be billed as below.

A minimum of Re. 0.01 (one paise) only per litre for supply of maximum 13,000 litres/month.

A minimum of Re 0.02(two paise) only per litre for supply in excess of 13,000 litres but not exceeding 34,000 litres/month.

A minimum of Re 0.03(three paise) only per litre for supply in excess of 39,000 litres/month.

6. Even though the localities are in great need of the implementation of this project, because of their poor economic condition they may not be able to participate financially as expected in the operation and maintenance stage. But they are ready to render their services in times of need.

7. ESTIMATED COST AND INITIATIVE DRIVE: This project is estimated at a cost of Rs.3,62,00,000.00(Rupees three crore sixty lakh) only. As the State Government is not in a position to finance the project from its normal State Plan Fund initiative have been taken for 100% Funding from DoNER, Government of India for the implementation of the project and hence duplication in this manner is beyond doubt.

Rates have been worked out from the latest PWD SOR 2003 and PHE SOR 1999. The costs of Pump and Machineries have been worked out in consultation with the authorized dealers of the equipments. The cost of pipes has also been worked out on the basis of the latest rates provided by the manufacturers.

However, appropriate index for price escalation may have to be added depending on the time it takes for approval and release of funds.

8. TIME FRAME: The most time consuming part of the project will involve the laying of pipelines, both Feeding and Distribution as well as the Rising Main. However, no major Jungle Clearance is required and the pipes can be easily stacked along the road on which the Rising Main is aligned. Hence, not much of head load is required. From our work experience, the Rising Main can be completed within 6 months. Concurrent to this the Feeding Mains and Distribution lines can be taken up and completed within 1 year.

Construction of the reservoir, clear water sump and the RCC Pump House can also be taken up concurrently and is expected to be completed within 1 year.

Procurement, erection, testing and commissioning of Pump and Machineries can also be taken up concurrently with the others.

However, the fund flow is expected to be in stages and hence the time frame for the completion of the project is taken as 2 years provided funds are made available as requested.

9. MANAGEMENT ARRANGEMENT :-

in the State of Mizoram, PHE Department is the Nodal Department in respect of Public Water Supply. Management of the project implementation and Operation & Maintenance of the Project will be the responsibility of Government of Mizoram through the Nodal Department viz. PHE Department, Government of Mizoram.

MEANS OF FINANCE AND PROJECT BUDGET:

The Estimated cost of the Project is as below:

1. Survey & Investigation	-	Rs.	500,000.00
2. Site preparation & jungle clearance	-	Rs.	500,000.00
3. Clear Water Sump	-	Rs.	1,458,000.00
4. Booster Pump House	-	Rs.	1,123,466.00
5. Pumps and Machineries	-	Rs.	5,500,000.00
6. Power Supply	-	Rs.	2,662,628.00
7. Pumping Main	-	Rs.	4,599,988.00
8. Main Reservoir & Zonal Tanks	-	Rs.	2,828,250.00
9. Feeding Main and distribution lines	-	Rs.	11,019,414.00
10. Buildings	-	Rs.	1,793,648.00
11. Fencing	-	Rs.	804,237.00
12. Miscellaneous	-	Rs.	1,000,000.00
13. Carriage of Materials	-	Rs.	862,286.00
14. Testing and commissioning	-	Rs.	255,722.00
<b>TOTAL :</b>	-	<b>Rs.</b>	<b>34,907,639.00</b>
Cost of Operation & Maintenance (1.5%)	-	Rs.	523,615.00
2% W.C. Establishment	-	Rs.	698,153.00
<b>Grand Total :</b>	-	<b>Rs.</b>	<b>36,129,407.00</b>
<b>SAY :</b>	-	<b>Rs.</b>	<b>36,200,000.00</b>

(Rupees three crore sixty two lakh) only.

The phasing of Expenditure will be as follows: -

1<sup>st</sup> Year (2005-2006): During 1<sup>st</sup> year, Items of work like Survey & Investigation, Site preparation and Jungle Clearance, Procurement pipes and fitting for Pumping Main, Feeding Main and Distribution lines and carriage of Materials may be taken up. The anticipated expenditure during this year is estimated as Rs. 86.00 lakh.

2<sup>nd</sup> Year (2006-2007): During 2<sup>nd</sup> year, Items of work like Clear Water Sump, Booster Pump House, Procurement and Installation of Pump and Machineries, Power Supply, Construction of Main Reservoir and Zonal Tanks, Building, Fencing and Laying Fitting and fixing of

Pumping Main and Distribution lines etc. The anticipated expenditure is estimated as Rs.255.62 lakh.

3<sup>rd</sup> Year (2007-2008): Testing and commissioning including Trial run and operation is scheduled during this year at an anticipated expenditure of Rs. 20.38 lakh.

The state government is not in a position to finance the project, 100% financial assistance is expected from DONER, Government of India.

OPERATION AND MAINTENANCE:

Operation and maintenance after completion of the project will be taken up by State Government through the nodal Department i.e Public Health Engineering Department, Mizoram. Who have will set up of technical personnel for operation and maintenance of the project.

**PRIORITY NO. 21: N.VANLAIPHAI WATER SUPPLY SCHEME**  
**(Rs. 2.04 crores)**

CONTEXT / BACKGROUND

The State of Mizoram is situated at the extreme North East of India. It has an International Border with Bangladesh at South West, Myanmar at South East and Inter State Border with Assam, Tripura and Manipur. Mizoram is a small state covering 21,087 sq. km only. Mizoram is entirely hilly terrain and almost all villages and towns located at the top of a hill.

Water supply has been a priority sector under the state policy as well as in the Government of India Policy. As per National Agenda for Governance of Government of India, all the villages and Towns are to be covered with adequate water supply as per National Norm of 40 lpcd. in rural area and 70 lpcd. in Urban area by 31<sup>st</sup> March 2003. But Mizoram State could not achieve this National Goal mainly due to scarcity of Fund in the sector. The State Government is still making attempt to achieve this National Goal with whatever resources it can manage.

PROBLEMS TO BE ADDRESSED:

N.Vanlaiphai is one of the 22 towns of Mizoram. It has a population of 3275 souls as per 2001 census. The town is 167 kms from the State Capital Aizawl and is link with all - weather Truckable Road. It experiences a moderate climate throughout the year and it still enjoys a pleasant surrounding of good Forestry.

The Town has been provided with a meagre water supply from Rural Sector since 1984. But this water Supply Scheme can supply water at 18 lpcd only and covers only some

portion of the town. Moreover, the existing water supply is not provided with Treatment Unit, the water are distributed raw without any treatment. At the present, the People suffers water scarcity crisis during dry season and water quality crisis during monsoon as the water source are contaminated with turbidity. Due to this, Water is one of the priority requirements for the inhabitants of the Town.

The town is now facing the water related Problems as below: -

- 1) Water borne diseases like Dysentery, Cholera etc are still prevalent especially during the beginning of Monsoon season.
- 2) Sanitary condition is still poor. People use only a Dry Pit Latrine type due to shortage of Water Supply. The Dry Pit Latrine is not a safe disposal of human excretas.
- 3) Water Scarcity is too much during dry period that almost every household has to devote one member to fetch the Water.

PROJECT OBJECTIVE:-

in this proposed Water Supply Scheme, it is proposed to construct an impounding Reservoir/Impounding Dam at a convenient site for storage of Rain water during rainy season which is situated at 10 kms from the Town. The Water so stored in the Impounding Dam will be treated by Slow Sand Filtration method and Simple Chlorination. The treated water will therefore be taken to the town by gravity flow through 80 mm G.I Pipe Gravity main. It will be distributed to the consumers/Public through Distribution network.

This Water Supply Scheme will supply water at 70 lpcd to the designed population of 4543 souls for the Design period and 30 years (2035AD). Water will be supplied to the Public through Community Water Point and Private Water Connection.

The proposed water Supply Scheme after Commissioning will have the following impact:

1. Prevalence of Water borne diseases will be minimised.
2. The general living condition will improve in respect of Cleanliness, Health and Hygiene.
3. The sanitary condition will be improved due to adoption of safer type of human excreta disposal system like Pour Flush Latrine / Septic Tank.
4. No of Man-days required for collection of Water will reduce which will increase the per-capita income of the household.

ENVIRONMENTAL IMPACT ASSESMENT:

No adverse Environmental Impact is for seen. The submerged area of the Impounding Reservoir will be a small area of approximately 10 to 15 hectares. Moreover, the water will submerge only the barren land.

Land acquisition will not be required as the Town authorities will donate/give the land free of cost. Diversion of Forest land or rehabilitation and resettlement issued will also not crop up.

On- going initiative:

There is No on-going initiative of this nature for N.Vanlaiphai Town. It therefore does not arise any occurrence of duplication of development.

Technology Issues:

Various Options had been surveyed for providing Water Supply to N.Vanlaiphai town.

1. Pumping of River Tuipui: There is one water source Tuipui River which can be pumped for N.Vanlaiphai Water Supply. But the Pumping scheme involved huge capital cost as well as maintenance and operation cost. Moreover, Maintenance of Pumping Scheme require good Technical personnel which will be difficult to manage in a town like N.Vanlaiphai
2. Rain Water Harvesting Structure: Possibility of constructing Huge Rainwater harvesting tank and artificial catchments was considered. But the capital cost involvement will be quite high and there is a problem of having sufficient area and convenient location. So the Scheme was dropped.
3. The present proposal of Rain Water Harvesting Scheme by construction of Impounding reservoir and taken to the Town by Gravity is regarded as the best option in terms of Capital cost as well as the Operation and Maintenance cost. Moreover, Mizoram has a good rainfall of about 2500mm annually. So the Rain Water Harvesting is being one of the reliable source of water supply system. Thus, this proposal is considered the best option of the three and therefore proposed.

MANAGEMENT ARRANGEMENT:

The State PHED shall execute and maintain the proposed water supply scheme and is equipped to execute this type of Water Supply Scheme.

in the proposed Water Supply Project, there is no Forest clearance required. The Town authorities will give the land for Water Storage Dam and site for construction of Reservoir and Zonal Tank reservoirs.

The Project will be implemented as soon as the same is sanctioned and fund released to the Department.

MEANS OF FINANCE AND PROJECT BUDGET:

The Estimated cost and the Project is as below.

1. IMPOUNDING DAM	-	Rs.	8,815,987.00
2. CATCH DRAIN	-	Rs	230,000.00
3. SLOW SAND FILTER	-	Rs	986,200.00
4. CLEAR WATER RESERVOIR	-	Rs	329,600.00
5. STONE MASONRY CHAMBER	-	Rs	28,108.00
6. JUNGLE CLEARANCE AND HEAD LOAD	-	Rs	195,366.00
7. GRAVITY MAIN	-	Rs	5,210,996.00
8. DISTRIBUTION SYSTEM	-	Rs	3500000.00
9. CHOWKIDER QUARTER	-	Rs	250,000.00

10. CARRIAGE OF MATERIAL	-	Rs	<u>443,200.00</u>
<b>TOTAL</b>	-	Rs	20,019,757.00
Add 2% for Work Charge establishment	-	Rs	400,395.00
<b>GRAND TOTAL</b>	-	<b>Rs</b>	<b>20,420,152.00</b>
<b>SAY</b>	-	<b>Rs</b>	<b>20,420,000.00</b>

**(Rupees Two crore sixty four lakh twenty thousand) Only.**

The phasing of Expenditure will be as follows: -

1<sup>st</sup> Year (2005-2006): During 1<sup>st</sup> Year, items of work like procurement of materials for Impounding Dam, Filtrations, Gravity Main pipes, H/L and Jungle Clearance, carriage of materials and construction of chowkider quarters etc. will be executed with anticipated expenditure of Rs. 99.26 lakh.

2<sup>nd</sup> Year (2006-2007): Items of work like Impounding Dam, catch drain, slow sand filters, clear water reservoir, stone masonry chamber, laying of gravity main and distribution system will be executed with the total expenditure of Rs. 101.96 lakh.

3<sup>rd</sup> Year (2007-2008): Testing and commissioning with anticipated expenditure of Rs. 2.98 lakh.

The state government is not in a position to finance the project, 100% financial assistance is expected from DONER, Government of India.

OPERATION AND MAINTENANCE:

Operation and maintenance after completion of the project will be taken up by State Government through the nodal Department i.e Public Health Engineering Department, Mizoram, who have will set up of technical personnel's for operation and maintenance of the project.

**PRIORITY NO. 22: ESTABLISHMENT OF SURVEY TRAINING INSTITUTE**  
**(Rs. 28.97 crores)**

**1. Component of brief description of Project:**

The Government of Mizoram, Land Revenue & Settlement had proposed to establish the Mizoram Survey Training Institute at Luangmual, Aizawl. Land Revenue & Settlement Department is having a suitable plot of land at Luangmual within the heart of Aizawl under Land Leave No.DPL-21 of 1986, Area=36,075.00 Sq.mts. = 26.96 Bighas = 3.61 Hectares.

The brief items of the Project proposal are: -

- (a) Civil Works
- (b) Library Books
- (c) Equipments

- (d) Furniture
- (e) Local Training/Fellowship
- (f) Outside Training/Fellowship
- (g) Local Consultant
- (h) Stipend and Book Grant
- (i) Stationeries/Consumables
- (j) Operations and Maintenance

**1. Justification of the Project and Objectives:**

(a) 2.02 Necessity for Mizoram Survey Training Institute:

2.02.1 The lack of trained professionals and local youths in the trade of Land Survey and cartography is the main problem of the State of Mizoram due to absence of Survey Training Institute in the State.

2.02.2 Mizoram mainly depends upon the Survey Training Institute, Uppal, Hyderabad run by Survey of India. The Course tuition fee under this Institution is too high, viz. Basic Courses like Surveying Supervisor of Surveying Technician is Rs. 2,40,000/- per trainee for each course. It is, therefore, very difficult to afford such costly training requirements.

2.02.3 The medium of teaching and instruction in such institution is Hindi and English. Most of the in-service personnel of the Department in Mizoram used local language, i.e. Mizo only and it is very difficult for Mizos to follow the lectures and instructions of such Institute.

2.02.4 The survey and settlement works does not concentrate in technology only but only dealt with Land Systems, land revenue, preparation and maintenance of land records of the State.

The local requirements of the State of Mizoram could not be met from other Survey Training Institute due to differences in land systems, topography or geographical conditions.

2.02.5 The minimum prescribed qualifications of S.T.I Hyderabad is also too high for tribal people. Generally, the local youth of Mizoram are not having adequate qualification, especially in Science (Mathematics) for admission to various trades.

2.02.6 The terrains, topography and Vegetation of Mizoram has peculiar type unlike other State of India. It is therefore required to apply modified principles and methods of survey for Cadastral Survey System and in the preparation and maintenance of land records.

2.02.7 Mizoram has no other institute like ITI or polytechnic institute and Engineering College which is conducting survey training. It is therefore, no longer possible to depend upon in the mercy of other Survey Training Institutes to meet the requirements of the State.

(b) **Objectives:**

2.03.1 To meet the needs of awareness, skills and competence of the land revenue and survey or Institution in the preparation and maintenance of land records and land administration of Mizoram.

2.03.2 To cater and meet the needs of other various Departments of the State and other organization or Institutions in the field of Survey, Settlement and Cartography.

2.03.3 To cater and meet the needs of training on comprehensive know-how in basic principle of Survey, Settlement, Preparation and maintenance of land records, cartography, photogrammetry and computer application for Probationer Officer of I.A.S and M.C.S (Mizoram Civil Service) and other allied Services.

2.03.4. To develop and meet user specific training requirements.

2.03.5. To cater and meet the needs of local youths to work independently in the field of Surveying and Valuation of properties as professional license Surveyor and valour.

2.03.6. To cater and meet the local needs of Village Council members in the field of land measurement, demarcation, survey, maintenance of land records and boundary pillars of village boundary as well as individual and owners of rural villages.

2.03.7. To meet the needs of all development Project Survey in Mizoram.

**3. Benefits:**

The beneficiaries of the Survey Training Institute may be summarised as follows:

- (a) All land owners about 191149 nos.
- (b) All Government Departments about 40 nos.
- (c) Village Council Member about 2686 nos.
- (d) Local Youth about 161570 nos.
- (e) Companies and Societies
- (f) In-service personnel of Survey and Land Records Departments or other allied Departments.

**4. On-going initiatives taken by the State Government:**

Since there is no Survey School in Mizoram there may be no question of duplication in this particular project.

**5. Economic parameters:**

It is proposed that the Survey Training Institute may run by deploying personnel from existing Staff and Officers serving in the Department and there will be no extra burden of recurring expenditure for teaching staff and other staff of the Institute. Hence, there will be no extra burden except the non-recurring expenditure.

**6. Sustainability:**

(a) As mentioned above the maintenance of assets or infrastructure will be done under the normal maintenance of work and office expenses without extra expenditure for the operation of training courses.

(b) Necessary training tuition fess will be realised from the trainees and that may contributed/meet the normal expenditure which will meet the cost of maintenance of assets.

**7. Estimated cost, Financial & physical phasing and time frame:**

(Rupees in lakhs)

Sl. No.	Item	Estimated cost Amount	Phasing activity	Year-wise Fund Requirement
1	2	3	4	5
01	Civil Works	1344.00	2004-2006	2004-2005 =1008.00
02	Library Books	111.00	2005-2006	2005-2006 =1015.40

(Rupees in lakhs)

Sl. No.	Item	Estimated cost Amount	Phasing activity	Year-wise Fund Requirement
1	2	3	4	5
03	Equipment	528.60	2005-2006	2006-2007 =873.60
04	Furniture	39.80	2005-2006	
05	Local Training/Fellowship	189.00	2006-2007	
06	Outside Trg. / Fellowship	124.00	2006-2007	
07	Local Consultant	53.00	2006-2007	
08	Stipend & Book Grants	17.60	2006-2007	
09	Stationeries/Consumables	190.00	2006-2007	
10	Operations & Maintenance	300.00	2006-2007	
	<b>Total</b>	<b>2897.00</b>		<b>2897.00</b>

**8. Status of Administrative and Survey Clearance from the State Government/ Central Government:**

8.1. The State Government had recognised the needs for establishment of Survey Training Institute in the principle of "Survey for Development" as lack of trained Surveyor had hampered the progress of Land Survey works in various fields.

8.2. One of the recommendation of APPU Committee which is constituted by Government of India, Ministry of Rural Development in 1995, in respect of Mizoram is as follows: -

"4.13 (b) The shortage of trained personnel and inadequate facilities for Training newly appointed personnel training newly appointed are serious constraints. While senior staff can be obtained on deputation from other States, the field staff will have to be locally recruited and trained".

(c) The Government of India may allot adequate funds and also extend held in establishing training facilities.

**PRIORITY NO. 23: RECONSTRUCTION OF OFFICE BUILDINGS & RESIDENTIAL QUARTERS (RD DEPARTMENT)**  
**(Rs. 2.94 crores)**

**Background :**

Mizoram, one of the smallest states in the North- Eastern corner of the country, presently has a population of 8,91,058 lakh with density of 42 pers sq.km and sex ratio of 938 female per 1000 male. 50.5% of the population in the state lives in the rural areas while the rest 49.5% lives in the urban area. 26% of the population of Mizoram lives in the capital city itself.

The state now has 8 administrative districts. It has 3 Autonomous District Councils in southern Mizoram. Besides this, in order to bring administration closer to people, it has now 23 Civil Sub-Divisions, 22 Rural Development (RD) Blocks and 1 Additional RD Block (Map of Mizoram highlighting RD Blocks is presented in Figure 1).

Rural Development Department is one of the major Departments under the Government of Mizoram that directly works for the upliftment of the rural poor in the state. In implementing its rural development programmes, the Department works closely with District Rural Development Agencies (DRDA) at the district level, RD Blocks at the block level and village level organizations at grassroots level.

RD Blocks are strategically important for successful implementation of rural development programmes as these directly deal with the rural poor at grassroots level. The success of any rural development scheme depends highly on the efficiency of Block Functionaries and the motivation they have.

One of the key factors affecting the efficiency and motivational level of workers in any organization is that of the facilities which provide good working environment. Keeping this in mind, it is now the priority of Rural Development (RD) Department, Government of Mizoram to strengthen its RD Block infrastructures throughout the state in order to create a better working environment at various RD Blocks. In the process, the department is taking initiatives in construction/repair of block buildings. However, due to limited fund only a few RD Blocks could be covered and there still is an urgent need for more funds to cover all the RD Blocks. The department has, therefore, come up with a project proposal for "Reconstruction of Office Buildings and Residential Quarters of RD Blocks in Mizoram" as this is the priority project of the department.

Out of the 22 RD Blocks and 1 Additional RD Block, there are 12 RD Blocks covered under BADP. The project under submission is proposed to cover the 10 RD Blocks and the new Additional RD Block, which are not covered by BADP. Name of the RD Blocks proposed to be covered by the project are : 1) Aibawk, 2) Tlangnuam, 3) Thingsulthliah, 4) Phullen, 5) Darlawn, 6) Serchhip, 7) Reiek, 8) Zawlnuam, 9) Thingdawl, 10) Lunglei, and 11) Bilkhawthlir Additional RD Block (Map highlighting the project locations is presented in Figure 2). It is proposed to construct one each of RD Block Office Building, Type - III Quarters, Type - II Quarters and Type - I Quarters in each RD Block.

**Problems to be addressed :**

Most of the office buildings and residential quarters of various RD Blocks were constructed during 1974 - 1976. As the buildings are now deteriorating, they are no more fit for occupation unless they are newly reconstructed. Such being the case the field functionaries are often reluctant to move to their assigned place of works due to the fact that the facilities at RD Blocks are not up to the level and attractive. Due to this the Administration Department often faces problems with transfer and posting of its field functionaries. Most of these problems being faced by the department will be solved if the deteriorated buildings of the RD Blocks are reconstructed. It is also expected that the project will create safe and more conducive working environment for Block Functionaries, which will in turn improve their work efficiency.

**Project objectives**

The general objective of the project is creation of better working environment by reconstructing the deteriorated office buildings and residential quarters of RD Blocks in Mizoram. Specifically, the project aims at :

1. Strengthening RD Blck infrastructures for creation of better working environment;
2. Increase motivational level of RD Block Functionaries which in turn will increase their work efficiency.

**Target Beneficiaries**

The target beneficiaries of the project are of two folds i.e. Block Functionaries and the general population covered by the RD Blocks. The project will firstly benefit the Block Functionaries wherein they will be provided a better working environment which is believed to boost their motivation and work efficiency. If the Block Functionaries are motivated and their level of work efficiency is increased, it will in turn result in better implementation of rural development programmes and this will on the other hand benefit the general rural population.

**Project Beneficiaries**

The project will directly benefit the villagers and their surrounding communities where the Block Offices are located. Wherever manual/skill labour is required, the local rural people will be employed under the close supervision of technical experts from the RD Department. This will directly create opportunities for wage employment within the project location all over the project periods.

**Environmental impact assessment**

The project will have no negative environmental impact. The department is planning to introduce tree plantation within the premises of every Block Office throughout the state. Tree plantation will go along with construction of the buildings. Fruit bearing trees and other valuable trees will be supplied by the department to all Block Offices for plantation in the sarrounding areas of office buildings and residential quarters. Hence the project will rather improve the working environment of the Block offices.

### **On-going initiatives**

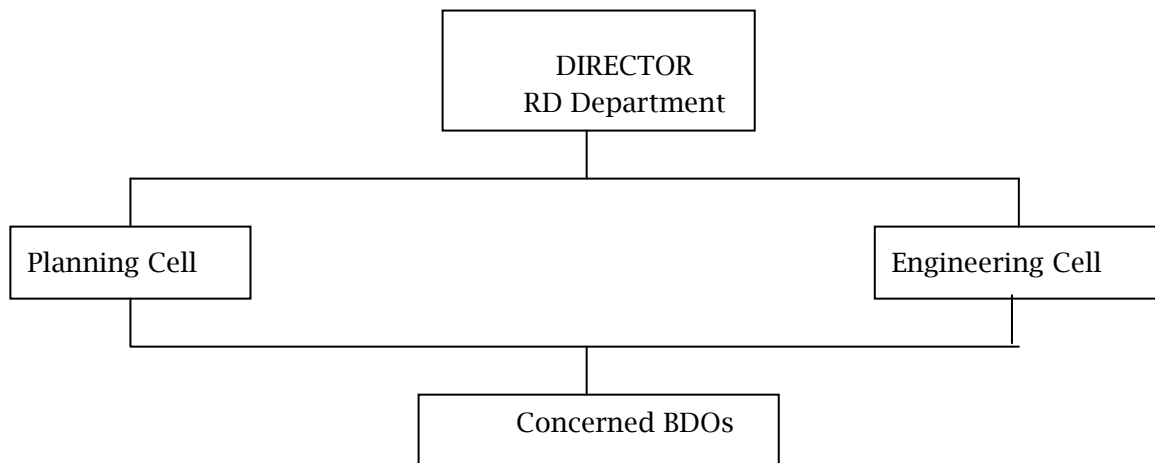
As strengthening of RD Block infrastructure is now the priority of Rural Development Department, the Department has taken initiatives in reconstruction/repair of deteriorated office buildings and residential quarters of various RD Blocks, particularly the RD Blocks covered under Border Areas Development Programme (BADP). The Department has so far been able to manage to construct/repair a total of 3 office buildings and 15 residential quarters with the BADP fund. There is a plan to cover all the RD Blocks that have not been covered by BADP.

### **Management arrangements**

The project will be directly implemented by the Rural Development Department, Government of Mizoram. A Project Management Team has been set up under the leadership of the Director, Rural Development Department, Government of Mizoram. This Project Management Team will be responsible for the successful implementation of the proposed project from initial stage till end of the project.

The Director, Rural Development Department as the Project Leader will work directly with the Team Members of Planning Division and Engineering Wing of the Department in close coordination with the BDOs concerned to ensure the daily functioning of the project throughout the project period. Organizational structure of Project Management Team is presented in Figure 3).

**Figure 3. Organizational Structure of Project Management Team.**



### **Means of Finance and Project Budget**

The total amount (100%) of the project cost is proposed to be financed by DoNER, Ministry of Development of North Eastern Region, Government of India from its Non-Lapsable Central Pool of Resources. The total number of buildings proposed for construction in all 11 RD Blocks are : RD Block Office Buildings - 11 Nos., Type - III Quarter for BDOs - 11 Nos., Type - II Quarters - 11Nos., Type - I Quarters - 11 Nos. The total project cost proposed is Rs. 2,93,93,000.00 (Rupees two crores ninety three lakh ninety thousand) only.

**Time Frame**

The time frame of the project proposed is one year. The project period will begin from the date of sanction of the project fund. Detail schedule of project activities is presented below :

Activities	Project Month												
	0	1	2	3	4	5	6	7	8	9	10	11	12
Sanction of the Project	■												
Procurement of Materials	■	■											
Constn. Of foundation up to plinth			■	■									
Super structure					■	■	■	■					
Roofing								■	■	■			
Finishing (plastering, painting, internal wiring etc.)											■	■	
Submission of completion reports													■

**Evaluation**

Regular monitoring and evaluation of the project will be carried out by the Project Management Team to ensure that the project activities are carefully carried out. Quarterly reports on financial and physical achievements of the project will be submitted to the state authority as well as the DoNER.

**Success Criteria**

The department has recently established Engineering Cell and Planning Cell for the purpose of planning and implementation of various Rural Development projects throughout the state of Mizoram. Hence the department is now fully equipped with technical man power such as Executive Rural Engineer (ERE), Assistant Rural Engineers (AREs), Junior Engineers (Jes) and Project Experts of the Planning Cell required for the successful implementation of the project. It is strongly believed that the project can be successfully carried out by this team of experts.

**Financial and Economic Analysis**

As the project under submission is an infrastructure project, the financial and economic analysis of the project soul only be presented in terms of project input/cost as no immediate financial and economic benefits will be accrued from the project. However, the project, in the long run will benefit the overall implementation of various programmes for upliftment of rural poor.

**Sustainability**

After completion of the project, it will be handed over to the Block Development Officers (BDO). The BDOs will then be responsible for well maintenance of the assets created under the project. The funds required for continuous maintenance of the assets will be arranged by the state government.

**PRIORITY NO. 24: IMPROVEMENT OF SUB-TRANSMISSION & DISTRIBUTION NETWORK  
IN AND AROUND MAMIT**  
**(Rs. 13.87 crores)**

◆ Mamit, the District Capital of Mamit District is situated at 90°30`00"E and of Mizoram. The total Population at Mamit Town as per 1991 Census is 3546, and with the creation of new district at Mamit, the population has increased rapidly and more than doubled of the 1991 figure at present. The administrative set up at Mamit covers the whole North western belt of Mizoram up to the border of Baladesh, Tripura and Assam.

The energy input for the Mamit Division is 6.59MU for the year 2003-2004 and consumption is 2.06MU. Revenue collected during 2003-04 is Rs. 34.56 lakhs.

To improve power system within the stated area, the State Government is giving importance and the concerned department was informed to prepare Project Report. in regards to the benefits of the area concerned the State Government is trying her best in getting source of fund. It was thought that, to get the project done, DONER will be the best source of fund and the project report is prepared for approval.

By improving power system in this area will give great chance to the public to establish Small Scale Industries (SSI). in order to implement the project all necessary infrastructures such especially road communications is already existed. It may also mentioned that system reliability will challenge socio-economic analysis reducing technical and commercial losses giving more available power to consume by the consumer.

◆ DIVISION PROFILE

○ Consumers

There are 5863 nos of consumers in the Division at present predominantly domestic consumers (87.50%). There is no agricultural consumer in the Division. Category-wise number of consumers in Mamit division is given below:

Table-1.1: Category wise consumers

Dom.		Comm.		Others		Total
No.	%	No.	%	No.	%	No.
5130	87.50	37	0.631	696	11.90	5863

○ Energy Consumption

Total energy consumption in the Division is about 2.06MU per annum out of which 87.50% is being consumed by Domestic consumers 0.631% by commercial. Category wise annual energy consumption is given below in Table-1.2:

Table-1.2: Category wise energy consumption/annum

Dom.		Comm.		Others		Total
MU	%	MU	%	MU	%	

1.80	87.50	0.013	.631	0.25	11.90	2.06

o Sources of power supply

The Division receives its supply from 132 kV Sub-station Zuangtui Aizawl

o Sub-transmission and distribution system

The salient features of the Sub-transmission and Distribution system are as given below:

**Sub-stations**

33/11 kV : 3 Nos. and 8.15MVA capacity

**Feeders**

33 kV lines : 3 nos.

**Distr. Transformers (DT)** : 91 Nos., and 6.487 MVA capacity

◆ **Transmission and Distribution losses**

As mentioned earlier, the aggregate T&D losses in the Division are estimated:

Aggregate technical & Commercial losses : 60.40%

Commercial loss : 4.40%

Technical Loss : 56%

The details of the projects are given below for favour of consideration and approval:

◆ **OBJECTIVE:**

The Works required to be taken up for strengthening and improvement of the Sub-Transmission and Distribution in the Division during the period 2004-06 have been asses considering the deficiencies in the technical as well as commercial areas. The proposed schemes and the estimated cost thereof are given below in Table-I.

Table-I: Scope of Works and cost estimate:

Sl.No.	Name of Works	Amount (Rs in lakhs)
1.	Improvement of Distribution system in Mamit Town	15.31
2.	R&M of 33/11kV S/S at Mamit, Phaileng, Zamuang	161.50
3.	Construction of 33/11 S/S at Phuldungsei and Rawpuichhip	423.672
4.	Construction of 109Km, 33kV line, 5.2Km, 11kV line for the above two S/S	720.147
	<b>GRAND TOTAL</b>	<b>1320.63</b>

◆ **BENEFITS**

Implementation of the above schemes will result in increased revenue realization, reduction in consumer supply interruption duration and reduction in T&D losses as well as improvement in quality and reliability of power supply.

The aggregate T&D losses would be reduced by 25% as estimated, i.e. from present level of 56% to about 31%. The proposed scheme would be implemented in 2½ years.

The project proposals have been prepared with the following objectives:

Commercial loss reduction

Increase in revenue realization

Increase in metered energy

Increase in billing and revenue collection efficiencies:

Reduction of outages

Reduction in technical losses

Improvement in voltage profile

Improvement in quality and reliability of power supply

◆ **SCOPE OF WORKS**

The proposed network improvement schemes for 2004-06 along with their estimated cost are given below in Table-3.8:

Table-3.8: Scope of Works and cost estimate

Sl. No.	Description of Items	Estimated cost (Rs. in Lakhs)
1.	Installation of 2x63KVA Transformer at Mamit with associated 2Km, 11kV line and 1Km LT line	15.31
2	Construction of 50Km, 33KV line lattice type between Zamuang and Mamit and 22Km 33kV line between W.Phaileng and Mamit	535.716
3.	Construction of 37Km, 33kV line West Phaileng to Phuldungsei	166.371
4.	Construction of 11kV Line for 2 New Sub-Station.	18.060
5.	R&M of 33kV S/S at Mamit	38.96
6.	R&M of 33kV S/S at W.Phaileng	72.69
7.	R&M of 33kV S/S at Zamuang	49.85
8.	Construction of 33kV S/S at Phuldungsei	194.523
9.	Construction of 33kV S/S at Rawpuichhip	229.149
	<b>TOTAL COST</b>	<b>1320.63</b>

**NOTE :** This is an indicative list and items may be deleted or added as per Requirements.

Break-up of cost estimate of the proposed schemes is given in the *Annexure*.

◆ **PROJECT IMPLEMENTATION SCHEDULE**

The project shall be implemented in two and half years period. The phasing of works will be done keeping in view the followings.

The project shall be implemented in two and half year period. The financial and physical phasing is given below:

- |               |   |  |
|---------------|---|--|
| First year    | - | Tendering for procurement of equipment and materials to obtain project approval from State Government and selection of the contractors and the work will be started for which Rs.450.00 lakhs will be earmarked. |
| Second year   | - | The balance work carried over from the first year and the required fund will be Rs. 700.00 lakhs.  |
| Last 6 Months | - | Completion of the projects physically and financially and the required fund will be Rs. 238.66 lakhs   |

**PRIORITY NO. 25: 132KV S/C BETWEEN KHAWZAWL AND CHAMPHAI**  
**(Rs. 5.62 crores)**

◆ The proposed 132kV Single Circuit line construction is to cover Champhai District in the Eastern Region of Mizoram. The total population in District is about one lakh and the power demand at present is 10.0 MW. The District received power supply at 33kV Single Circuit line from the nearest 132kV Sub Station at Khawzawl presently charged at 33kV only. There are three on-going work of 33kV Sub Stations in the District as mention below in addition to the existing transformation capacity 15.0 MVA of different sizes.

- i) 1x6.3MVA called Upper Sub Station and
- ii) 1x2.5MVA called Lower Sub Station both at Champhai, which is the District Capital.
- iii) 1x2.5 MVA at Hnahlan about 45.0 Kms away from the District Capital.

◆ **Objectives :**

As already stated above, the present power demand is 15.0 MW at peak load, which covers the whole areas in the District. The load growth rate is calculated out at 20% per year, which will finally push up power demand upto 30.0 MW in the 10 years to come. It is, therefore, concluded that power supply at 33kV level only will not meet power demand in the future. Hence, it is required to construct 30.0 Kms of 132kV Single Circuit line from Khawzawl-Champhai. Meanwhile, it may be worth to note that construction of 132kV Single Circuit line from Khawzawl- Champhai already included in the 10<sup>th</sup> plan transmission scheme already submitted to CEA vide No. 517/01-CE(PD)/7 Dt.7.01.2003. It is further proposed the line is to be charged at 33kV till construction of 132kV Sub Station at Champhai is done.

Therefore, Project Report is prepared at the probable cost of Rs. 562.28 lakhs for favour of approval and funding from NLCPR.

◆ **Benefits :**

- i) Reliability of power supply to the District
- ii) Improvement of billing efficiency
- iii) Improvement of voltage regulation
- iv) Enlargement of transformation and distribution capacity in Mizoram
- v) Economic viability to the State by earning more revenue
- vi) Reduction of transmission and distribution losses
- vii) Industrial Growth

◆ **Phasing of the Projects:**

Line length : 30.0 Kms.

Estimated Cost : Rs. 562.28 lakhs as in Annexure

◆ **Completion Schedule:**

The proposed project will be completed in 2 years from the date of fund availability as mention below:

- i) Year - 1 : Tendering, finalisation of tender, procurement of materials and completion of 50% of the project works for which fund requirement is estimated as Rs. 282.00 lakhs.
- ii) Year -2 : Completion of 50% of the balance works and commissioning of the projects for which fund requirement will be 280.28 lakhs.

**PRIORITY NO. 26: IMPROVEMENT OF S/T & D WITHIN LUNGLEI POWER CIRCLE**  
**(Rs. 24.81 crores)**

**Introduction**

There are 3 Divisions under Lunglei Power Circle namely Power Maintenance Division-I, Lunglei, Power Maintenance Division-II, Lunglei and Power Division, Saiha. Lunglei is receiving power supply at 132KV level from Bukpui at Khawiva and the same is distributed throughout the Southern part of Mizoram at 33KV through Lungsen, Lawngtlai, Saiha(RE type sub-station) and Tuipang (RE type sub-station). The 33KV sub-station at Hnahthial receives power at 33KV level from Bukpui. The existing sub-station at Hnahthial and Lungsen requires revamping due to equipment defects which are irreparable. Apart from revamping this two sub-stations, it is proposed to construct new 33KV sub-station at Chawngte, Mualthuam, Tuipang and Bungtlang with necessary 33KV line on Towers and Poles. Due to fund constraint works cannot be taken up from State Plan Fund.

Hence, this paper is prepared at the cost of Rs.2481.18 lakh for favour of approval and funding from NLCPR.

**Objective :**

Construction of new sub-station and 33KV line is necessary to reduce transmission and distribution losses which are much more presently due to long 11KV lines. Interruptions too would be minimised there by providing stable and quality power supply. The construction of 33KV lines and sub-station is proposed with a view to meet the future load growth which is expected to rise at the rate of about 10% per year for the next 10 years.

**Benefits :**

- 1) Improvement of transmission line at 33KV level
- 2) Improvement of voltage regulation
- 3) Regularity/reliability of power supply
- 4) Improvement of revenue achievement
- 5) Improvement of industrial and domestic growth
- 6) Reduction in T & D losses, by 15%

**Phasing of the Project :**

Estimated cost - Rs.2481.18

**Completion schedule :**

The project will be completed in 2 1/2 years (30 months) as mentioned below:

1. First six months - Tendering, finalisation of Tender, procurement of materials etc.
2. Next 1 year - Procurement of at least 58% of the materials required for the project works and complete 50% of the schedule work. The fund require is estimated as Rs.1240.59 lakh.
3. Second year - Completion of 50% of the balanced work and commissioning of the project for which fund requirement will be Rs.1240.59 lakh.

**ABSTRACT**

<i>Sl No</i>	<i>Name of Project</i>	<i>Qty</i>	<i>Rate</i>	<i>Amount (Rs. in lakh)</i>
1.	Revamping of Hnahthial 33/11KV sub-station	-	-	110.39
2.	Revamping of Lungsen 33/1KV sub-station	-	-	41.72
3.	Construction of 33/11KV sub-station at Chawngte	1 No	186.95	186.95
4.	Construction of 33/11KV sub-station at Tuipang 'V'	1 No	190.49	190.49
5.	Construction of 33/11KV sub-station at Bungtlang	1 No	190.43	190.43
6.	Construction of 33/11KV sub-station at Mualthuam	1 No	185.42	185.42

7. Construction of 33KV single circuit line from Lungsen to Chawngte on Towers.	64 CKM	10.97	702.08
8. Construction of 33KV single circuit line from Saiha to Tuipang 'V'	56 CKM	7.70	431.23
9. Construction of 33KV line from Khawiva to Mualthuam on steel tubular poles.	40 CKM	3.87	154.74
10. Construction of 33KV line from Lawngtlai to Bungtlang on steel tubular poles.	58 CKM	4.13	239.52
11. Construction of 33KV line from Tuipang 'V' to Tuipang 'L' on steel tubular poles.	7 CKM	4.12	28.82
12. 11KV Interlink line.	7 CKM	3.20	22.39
<b>TOTAL :-</b>			<b>2881.18</b>

**CHAPTER - I**

1. CIRCLE PROFILE :

1.1 Consumers :

There are 28405 consumers at present in Lunglei Power predominantly domestic category (74%) Annual growth is estimated at 15%. There is no agriculture consumer in this Circle. Category wise no. of consumers in Lunglei Power is given below in Table 1.1

Table 1.1 : Category wise consumers

Dom		Com		Ind.		Bulk		P.Ligts		P.H.E		Others		TOTAL
No	%	No	%	No	%	No	%	No	%	No	%	No	%	No
20199	71	820	21	3	0.01	12	0.04	1322	4	5	0.02	6044	21	28405

1.2 : Total energy consumption in the circle is about 17.24 MU per annum out of which 74% is being consumed by domestic consumers, 4.2% by commercial, 0.20% by industry and 1.73% is being consumed by bulk consumer. Category wise annual energy consumption is given below in table 1.2

Table 1.2 : Category wise energy consumption.

Dom		Com		Ind.		Bulk		P.Ligts		P.H.E		TOTAL
MU	%	MU	%	MU	%	MU	%	MU	%	MU	%	MU
12.84	74	0.72	4.2	0.04	0.2	0.3	1.73	0.08	0.48	2.76	16	17.24

1.1.2 : Sources of power supply :

The circle receives its supply at 132KV sub-station Khawiva from 132KV sub-station Serchhip and at 33KV sub-station Hnahthial.

1.1.4 : Sub-transmission and distribution system :

The salient features of the sub-transmission and distribution system are as given below :

Sub-stations

33/11KV - 7 Nos and 23.5 MVA Capacity

Feeders

33KV Lines - 6 Nos, 252 ckm

11KV Lines - 29 Nos, 1221.6 ckm

LT Lines - 658 ckm

Distribution Transformer - 319 Nos and 26578 MVA capacity

1.1.5 : The average purchase rate of Grid Power is about Rs.1.82 per unit and average sale price is Rs.1.32 per unit.

1.1.6 : Transmission and Distribution Losses :

The aggregate T & D loss in the Circle is estimated as below

Aggregate Transmission and Distribution Losses - 61%

Estimate Technical Loss - 20.88 MU (49%)

Estimated Commercial Loss - 2.63 MU (6%)

1.1.7 : The failure rate of Distribution Transformer is about 16% per annum. Capacity wise failure of Distribution Transformers in the year 2003 - '04 are given below in Table 1.5

Table 1.5

LPC	250KVA	100KVA	63KVA	25KVA	16KVA	TOTAL
	3	7	12	21	7	50

**CHAPTER - II**

Constraints/Deficiencies in the Existing System

2.0 SUB-STATION AND TRANSFORMATION CAPACITY :

33/11KV sub-station are the backbone of power Distribution system and any failure in the sub-station results into darkness in the large area, Therefore, while improving reliability of entire Distribution Network, higher priority needs to be given to make power supply reliable and interruption free, as well as to make the sub-station fault free to the extent possible.

Table 2.1 : List of sub-station and capacity.

Divn	S/Sivn	33/11KV S/S	Capacity		11KV Feeders(Nos)
			Nos	MVA	
PMD-I	LSSD	Khawiva	3 x 2.5	7.5	4
		Pialthleng	1 x 5	5	1
PMD-II	Lungsen S/D	Lungsen	1 x 2.5	2.5	5
	Hnahthial S/D	Hnahthial	1 x 2.5	2.5	4
PDS	Saiha S/D	Meisatla	1 x 2.5	2.5	4
		Tuipang	1 x 1.0	1	2
	Lawngtlai	Chawnhu	1 x 2.5	2.5	4
Feeders origination from 11KV Theiriat switching station					
		Polytechnic Complex			1
		Tawipui			1
		Hauruang			1
		Sethlun			1
		Hlumte			1
<b>GRAND TOTAL :-</b>					<b>29</b>

2.1

**CONDITION OF EXISTING SUB-STATION :**

It has been observed that a no. of equipments are missing/defective in most of the sub-stations. The defective/missing equipments are affecting the reliability of supply and therefore there is immediate need of carry out R & M of the sub-stations. The condition of equipments in various sub-stations is assessed and requirement of materials is proposed in the next chapter.

**2.2 : CONDITION OF DISTRIBUTION TRANSFORMERS :**

There are 319 Nos. of 11/0.4KV Distribution Transformer in the Circle. Capacity wise list of Distribution Transformers for each Division is given below at Table 2.2.

Table 2.2 : Existing Distribution Transformers capacity:

DT capacity(KVA)	PMD-I		PMD-II		PDS		TOTAL	
	No.	Total KVA	No.	Total KVA	No.	Total KVA	No.	Total KVA
1000	2	2000	-	-	-	-	2	2000
630	1	630	-	-	-	-	1	630
500	3	1500	-	-	1	500	4	2000
250	15	3750	7	1750	7	1750	29	7250
160	1	160	-	-	2	320	3	480
100	31	3100	13	1300	31	3100	75	7500
63	18	1134	18	1134	18	1134	54	3402
25	25	625	36	900	39	975	100	2500
16	6	96	41	656	4	64	51	816
<b>TOTAL :</b>	<b>102</b>	<b>12995</b>	<b>115</b>	<b>5740</b>	<b>102</b>	<b>7843</b>	<b>319</b>	<b>26578</b>

**2.3 : CONDITION OF 11KV FEEDERS :**

Peak power flow on 11KV Feeder is in the order of 1- 2 MW and few Feeders are as lengthy as 60KM. the long regulation as well as high energy Losses. It is therefore suggested to construct 33KV lines with 33KV sub-station at some of the places to reduce the 11KV line length and minimise T & D Losses.

**CHAPTER - III**

**Works/Investment required for strengthening and Improvement of the Sub-Transmission and Distribution System.**

**3.1 OBJECTIVES :**

The project proposed have been prepared with the following objectives :

- Commercial loss reduction
- Increase in revenue realisation
- Increase in metered energy
- Increase in billing and revenue collection efficiency
- Reduction of outages
- Reduction in technical losses
- Improvement in voltage profiles
- Improvement in quality and reliability of power supply.

**3.2 SCOPE OF WORK & INVESTMENT PROPOSALS FOR 2004 - 2007 :**

The present project report covers the strengthening/augmentation in following major areas:

- R & M of sub-station and Distribution Transformers to minimise failure rate of equipments with increase in reliability of power supply.
- Establishment of new 33/11KV sub-station and new lines.
- Additional 33KV lines and 1KV interlink lines.

**3.3 : 33/11KV SUB-STATION :**

**3.3.1 : R & M of Existing Sub-Station :**

The 33/11KV sub-stations are the backbone of the power distribution system and failure in any sub-station results in outage/Load shedding in large areas. The 33/11KV Sub-Stations in Hnahthial and Lungsen are required to be renovated and modernised. The total quantity of the equipment to be installed in the Sub-Stations is given in table 3.1 below :

Table .3.3.1

Items	Quantity ( Nos )					
	New 33KV sub-station			New 11KV sub-station		
	Hnahthial	Lungsen	TOTAL	Hnahthial	Lungsen	TOTAL
33KV CB	4	2	6			
33KV Isolator with E/S	4	2	6			
33KV Isolator without E/S	7	3	10			
33KV L.A	15	3	18			
33KV CT	12	3	15			
11KV CB (O/G)				4	2	6
11KV Isolator with E/S				7	7	14
11KV L.A				21	-	21

3.3.2 : NEW SUB-STATION :

Presently there are 7 Nos. of 33/11KV sub-stations with total capacity of 23.5MVA through which Lunglei Power Circle distributes its power. However, it is seen that there are few areas where high rate of growth of load is there. The existing facilities are not adequate to cater the demand of those areas hence, the establishment of new 33/11KV sub-stations are proposed. This will help in reduction of technical loss and improve voltage refuelation. Accordingly it is proposed to construct four nos. of new sub-stations. The location and capacity of the proposed sub-stations are tabulated in the table 3.2.

Table 3.2

SI No	Name of sub-station	Proposed capacity (MVA)	No.of 11KV Feeders.
1	Tuipang 'V'	1 x 1	5
2	Bungtlang	1 x 1.6	5
3	Chawngte	1 x 2	4
4	Mualthuam	1 x 2	4

3.4 : SCOPE OF WORKS :

The proposed improvement scheme include the works as indicated in the table 3.3 alongwith estimated cost :

Table 3.3

SI No	Name of Works	Amount (Rs. In lakh)
1	Revamping of Hnahthial sub-station	110.39
2	Revamping of Lungsen Sub-station	41.72
3	Construction of 33/11KV at Chawngte	186.95
4	Construction of 33/11KV at Tuipang 'V'	190.49
5	Construction of 33/11KV at Bungtlang	190.43
6	Construction of 33/11KV at Mualthuam	182.42
7	Construction of 33KV D/C line from Lungsen to Chawngte	702.08
8	Construction of 33KV S/C line from Saiha to Tuipang 'V'	431.23
9	Construction of 33KV line from Khawiva to Mualthuam	154.74
10	Construction of 33KV line from Lawngtlai to Bungtlang	239.52
11	Construction of 33KV line from Tuipang 'V' to Tuipang 'L'	28.82
12	11KV Interlink line	22.39
<b>Total cost :-</b>		<b>2481.18</b>

3.5 : PROJECT IMPLEMENTATION SCHEDULE :

The project shall be implemented in two and half years. The financial and physical target are given below:

- First six months - Administrative Approval and necessary statutory clearance will be obtained from State Central authorities. Tendering for procurement of equipments required for the project works shall be done and necessary approval obtained.
- 2<sup>nd</sup> & 3<sup>rd</sup> six months- At least 50% of the required material shall be procured the requirement of fund is estimated as Rs.1240.59 lakhs.
- 4<sup>th</sup> & 5<sup>th</sup> six month - Procurement of balance 50% of the materials shall be made and the project completed the fund requirement for the period is estimated as Rs. 1240.59 lakh.

**PRIORITY NO. 27: CONSTRUCTION OF OFFICIAL BUILDINGS WITHIN LAI AUTONOMOUS DISTRICT COUNCIL**  
**(Rs. 2.45 crores)**

The LADC [Lai Autonomous District Council] was constituted on 29<sup>th</sup> April, 1972 under the Sixth Schedule to the Constitution of India. The Council is the replication of the State Assembly and the Council exercises executive powers over specifically the Subjects/ Departments. Subjects/ Departments allotted to the Council at present is 18 [eighteen]. The area of the Council is 1870 sq.km and its population is 56,354 as per 2001 census.

The Lai Autonomous District Council being situated in a remote corner of the State of Mizoram, not to mention the fact that the State itself is very far flung area of India, Communication as well as fund constraints retard development in the area.

The present recently formed District Council Executive Committee is aware of the fact that development through any available fund, especially under the NLCPR be availed from the Ministry of Development of North-Eastern Region, Government of India as one of the pioneer projects. Therefore, the Executive Committee of the Lai Autonomous District Council [LADC] had decided to select these projects to be implemented through fund from the DONER, Government of India.

To substantiate the concepts and the needs for implementation of these Projects, it may be elaborated as follows :-

in regard to Official Buildings, the Council's authority managed itself in construction of Official Buildings from its normal Plan fund for the last 32 years and hardly completed its main Office Building which is called the Council Secretariat and the Council Session Hall is also under- construction. Moreover, Lai Autonomous District Council House, Aizawl, Dokulha Hall, Lawngtlai and 5 [five] Official Rest Houses were also completed during the said period.

Although the Council is with the intention of construction more and more Official Buildings, but due to a meagre fund, the proposal could not be taken up accordingly.

However, the present recently formed district Council Executive Committee is aware of the fact that development through any available fund, especially funds from the NLCPR be availed from the Ministry of Development of North Eastern Region, Govt. of India as one of the pioneer projects. Therefore, the Executive Committee of the Lai Autonomous District Council [LADC] had decided to select the following official Buildings to be constructed by funding from the DONER, Govt. of India.

[1] Construction of the LADC Board of School Education Building (Rs. 1,00,12,000.00):

Provided in Para 6(1) of the Sixth Schedule to the Constitution of India, the Lai Autonomous District Council has taken over the control and management of primary and Middle Education within its jurisdiction in 1975 and 1984 respectively. After taking over the control of both Primary and Middle Schools including Middle English School, it is felt necessary to establish Board of School Education to conduct and supervise School Leaving Certificate Examination yearly. As such, the Lai Autonomous District constituted Primary School Board in the year 1987 which conducted primary School Leaving Certificate Examination yearly since its inception till date. Subsequently, Board of Middle School Leaving Certificate Examination is also indispensable to establish. Accordingly, the Executive Committee of the Lai Autonomous District Council has reconstituted a Board known as 'The Lai Autonomous District Council Board of School Education in the year 1998. Since, then, the Board has conducted yearly Leaving Certificate Examination for Primary School, Middle School and Middle English School within its jurisdiction. The Board is now a statutory body having its own rules known as 'The Lai Autonomous District Board of School Education rules, 2001' which is assent to by the Governor of the State of Mizoram.

The following tables show the number of candidates appearing in the Leaving Certificate Examinations conducted by the Board for the last seven [7] years including current year i.e. 2004.

Primary School [i.e. class-IV]

<u>Year</u>	<u>No. of Students appeared</u>
1998	869
1999	882
2000	911
2001	732
2002	671
2003	803
2004	798
<b>Total</b>	<b>5666</b>

Middle School [i.e. Class -VIII]

1998	582
1999	601
2000	514
2001	544
2002	584
2003	634
2004	589
<b>Total</b>	<b>4048</b>

Middle English School [i.e. Class -VII]

Year	No. of Students appeared
1998	39
1999	45
2000	41
2001	61
2002	120
2003	186
2004	182
<b>Total</b>	<b>674</b>

Through the Council is having separate Board of School Education and is conducting Leaving Certificate Examinations for the last seven years [7] year. The Board does not have its own Building since its inception till date. As such, Officials who are engaging in the Examination are also spread out in different buildings and locations which causes difficulty in keeping the secrecy and confidentiality of the Examination documents like Question papers, Results etc But in order to construct separate Building for the Board, the Council's fund is very insufficient and no further steps can be taken up. However, it is indispensable to have a separate Board's Building for which the council needs to approach Government of India for financial assistance.

2. Construction of LADC Court Building (Rs. 52,14,000.00):

The Administration of the LADC comprises of three administrative heads namely, the Executive, the Legislative and the Judicial. Out of these, only Judicial Department is not having proper Building of its own. The present Court Building is purely Assam Type and was constructed during 1974. The Building was too small and could not accommodate the present staff strength of the Department. It is also too old and is in a dilapidated condition. Therefore, it is felt necessary to construct proper and long lasting RCC Building for the Judicial Department which may be utilised by the Court as well as the Department for which any available fund may be availed from DONER, Government of India.

3. Extension of LADC Secretariat Building (Rs. 80,80,000.00):

The LADC Secretariat or Main Office Building is constructed during 1990s with an estimated cost of Rs. 220.00 lakhs. The area of Building is 814 sq.mts. with four stories. Though the Building is relatively big, the present staff strength could not be accommodated by the Building. However, in order to construct a separate new building, it may entail more expenditure. Moreover, the council has no Conference Hall, Committee Room and some Officers and Staff are still having no proper rooms to perform their duties properly.

Therefore, it is felt necessary to extend the Main Office Building on the top floor with Steel roofing. Thus, fund for the same may be demanded from any available source for which DONER, Government of India may be approached to obtain financial help to executive this work.

Since the proposal are mainly for strengthening of the LADC, it will solve to some extend the problems of the day to day functioning of the District Council and thereby leading the way for a better and quicker development the area as a whole.

There is not any duplicacy with the ongoing initiatives taken by the State Govt.

The work shall be carried out through external agency and may be able to complete within a calendar year.

Operation and maintenance of this asset after completion of the project may be carried on by the Council's authority. Funds required for the same may be met from the Annual Plan Fund of the District Council.

No statutory clearances need to obtain from the State/ Central Govt. authorities for implementation of the project as all the needs for execution of works like land, etc, are under the control of the Council's authority.

The works will be carried out though Contractors by Departmental and may be able to complete within a span of one year.