

MEGHALAYA STATE PLANNING BOARD



Recommendations of The Meghalaya State Planning Board For Development of Roads in the State

YEAR: 2012



Acknowledgement

The Chairman, Co-Chairmen, Deputy Chairmen and Officers of the Meghalaya State Planning Board are very thankful to the Officers of the P.W.D. (R) for their dedicated and sincere efforts in the deliberations and in the preparation of this Report/Recommendation for development of Roads in the State.

This Document will help the State Government in the allocation of necessary funds for Roads and Bridges in the interest of overall economic development of the State.

It is also recommended that the State Government should update the list of priority roads periodically according to social and economic importance.

The Chairman places on record, appreciation to Shri C.W. Momin, Additional Chief Engineer, P.W.D., and his team of dedicated officers for their valuable inputs and contribution during the MSPB tour of the three Garo Hills Districts.

(Dr. Donkupar Roy, M.L.A)

4/6/12

Chairman,

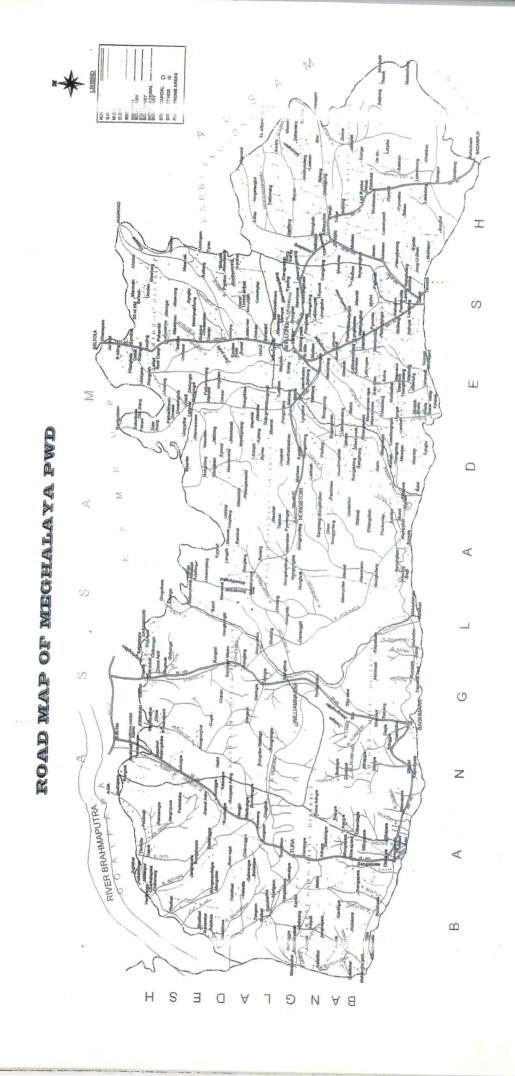
Meghalaya State Planning Board.

COMPOSITION OF THE MEGHALAYA STATE PLANNING BOARD

Name of Chairman etc. Date of Appointr		
Dr. Donkupar Roy, MLA Chairman, M. S. P. B.	21 st April, 2010.	
Shri P.N. Syiem, MLA Co-Chairman, M. S. P. B.	19 th October, 2010.	
Shri H.S. Shylla, Ex-MLA, Co-Chairman, M. S. P. B.	14 th June, 2010.	
Shri B.G. Momin, Ex-MLA, Co-Chairman, M. S. P. B.	26 th May, 2010.	
Shri Zenith Sangma, Ex-MLA, Co-Chairman, M. S. P. B.	19 th May, 2010.	
Shri Clement R. Marak, Ex-MLA, Co-Chairman, M. S. P. B.	19 th May, 2010.	
Shri John F. Kharshiing, Co-Chairman, M. S. P. B.	26 th May, 2010.	
Shri Fersen Ch. Momin, Co-Chairman, M. S. P. B.	14 th June, 2010.	
Dr. Manash Das Gupta, Deputy Chairman, M. S. P. B.	14 th June, 2010.	
Shri Polycarp K. Marak, Deputy Chairman, M. S. P. B.	14 th June, 2010.	
Shri Enbin K. Raswai, MDC, Deputy Chairman, M. S. P. B.	28 th September, 2010.	
Shri G. Arengh, Deputy Chairman, M. S. P. B.	17 th January, 2012.	
Shri B.M.Sangma, Deputy Chairman, M. S. P. B.	29 th March, 2012.	

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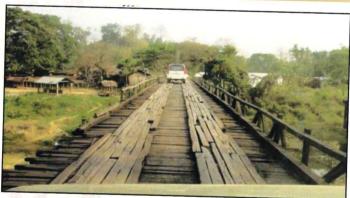
Chapter-1

Introduction

Road is the most important sector in a land locked State like ours. Almost all sectors of development in the State depend on this sector. Though road sector has been a priority sector in the different Five Year Plan periods, yet much more has to be done on this sector to meet the development needs in the State. Some of the important ones are:-

- Road connectivity to all unconnected villages,
- Areas along the international border and interstate border need to have a better road network,
- Many of the existing roads need to be improved, widened and blacktopped, to enable smooth plying of the commercial and heavy vehicles.
- N.E.C. roads need to be widened into 2 (two) lane roads.
- Timber bridges need to be replaced with permanent RCC bridges.
- New bridges, especially major ones, are to be completed on time.
- More new bridges are to be sanctioned some of the proposals are lying with the DONER Ministry awaiting approval.
- Proper maintenance of existing roads.

Bridges of these types need to be replaced by RCC Bridges



Ampati- Mahendraganj Road



Wooden Bridge on the verge of collapse along Maheshkola-Nongjri Road

The State is facing many constraints to meet the needs in this sector within a short span of time. The terrains, the weather condition, the land tenure system, the availability of fund and man power, among others have been the major constraints of the State.

Considering the various needs and the constraints facing the State, it is felt necessary that the Government prepare a **Priority List** of projects to be taken up during the next Five Year Plan period and thereafter. The Priority List has to be prepared based on well defined criteria – like population density, potentiality of growth, location of the area, economic and strategic importance.

The Planning Board while touring the different parts of the State, through



Heavy Rains eroded the existing blacktopped Roads (A challenge to P.W.D.)



Need for Metalling & Blacktopping



Umiam River Bridge: Connecting Umtrai Village-Marngar-Nongpoh



Shella-Balat Road

observation and interaction with the leaders of different areas, and the officers of the PWD, attempted to identify the important projects that insist immediate attention of the Government. Those projects, though not exhaustive, are given in Chapter-2. It is also felt that the PWD (and also other Departments in the State) should have at least one project which is comparable to the best in the country. It is suggested that the PWD may develop the Shillong -Cherrapunjee road (and other roads in-and- around Cherrapunjee leading to the tourist spots) as the best in the country. The details of roads are given in Chapter-3.

It is also observed that maintenance of existing blacktopped roads is far from adequate. Almost all blacktopped roads in the State are easily eroded by heavy monsoon rains, etc. To maintain the roads, huge amount of fund is required annually, which appears to be difficult for the Government. Therefore, it is suggested (Chapter- 4) that other alternatives already adopted in other parts of the country may be experimented in the State.

There are also other important issues associated with the road sector. The most important are: road connectivity to all unconnected villages, road formation, quality of works, delay in implementing the projects, delimitation and creation of new Divisions, Budget allocation and many others. These issues are briefly given in Chapter- 5.

The Public Works Department has also given a detailed presentation on the status of the various projects in the State.

Important Projects

1. State High Ways & National High Ways: The State Government should include all important economic and strategic roads in the State either as State High Ways or National High Ways. It may be mentioned that the Shukla Commission (1997) has recommended the Shillong(Umtyngar) — Cherrapunjee — Shella (Bhallaganj) road be included in the National High Ways. This is yet to be materialized. It is recommended that this road be taken as a priority for inclusion as a National High Way. It is noted that the Prime Minister of Bangladesh has recently declared the Sylhet Bhollaganj (Bangladesh) road as a National Highway.

The Department may also take steps to include the following important roads either in the National High Ways or State High Ways:-

- 1) The Jowai Nartiang Mawlasnai- Tyrso- Mawhati- Umsohlait- Umsaw Nongbri Nongpoh road,
- 2) The Shillong Mawphlang Mawsynram Ranikor road,
- 3) The Mendipathar Songsak Williamnagar road. It is also observed that many portions of highways in the State need to be improved.

For example,

- 1) The NH- 62: Dainadubi Baghmara Dalu needs widening of many portions, strengthening of payement
 - strengthening of pavement and construction of permanent bridges.
- 2) The NH 40: Jorabat-Shillong-Dawki-Tamabil needs widening of the road from Shillong to Umtyngar, improvement of geometrics and construction of parking places or bye-lanes at 7th mile(Upper Shillong)
- 2) Roads Along the Indo-Bangla Border: It is felt necessary that for the overall development of the border areas in particular and the State in general, a double lane road under National Highways programmes or a road with a national high way standard be constructed along the Indo-Bangla Border to connect NH 62 (Bagmara) with NH-40(Dawki) and NH-44(Jaliapur).



N.H-62: Collapsed culvert along Maheshkola -Nongjri-Ranikor Road



International Export with Bangladesh at Gasuapara (ASIDE)

The Government should also take steps for construction of commercial roads connecting the important trade centres located in the border areas of the State with the important business centres of Bangladesh.

Initiative is also necessary to be taken up by the State Government for opening of more land routes/ river routes for export purposes with Bangladesh. There are many points/routes along the Indo- Bangla border where such routes may be opened with little effort from the State Government.





Commercial Roads needed in Meghalava

Nongjri-Ranikor Road

3) Important roads connecting important towns/ centres located along the Indo-Bangla Border: It is necessary that all important roads leading to the border towns and trade centres be widened and pavement be strengthened to enable the heavy vehicles to ply on these roads. The following roads are identified as the most important roads which need to be widened, with a 2- lane formation and MBT of intermediate lanes:-

EAST KHASI HILLS

- 1) Phlangtyngur Nongjri Bhollaganj Road.
- 2) Mawsynram Hat Mawdon Road.
- 3) Pynursla Nongjri Bhollaganj Road.

WEST KHASI HILLS

- 1) Mawkyrwat Rangthong Nongnah Ranikor Road.
- 2) Nongstoin Maheshkhola Road.
- 3) Phlangdiloin Ranikor Road.

SOUTH GARO HILLS

- 1) Chockpot Baghmara Road.
- 2) Chockpot Gasuapara Road.
- 3) Construction of a road from Williamnagar to Chockpot.







Borato-Lapangap-Khanduli Road

4) Roads along/ in the Inter-State Border: Where ever possible, roads be constructed along the interstate border with preference to those areas where border pillars are yet to be constructed.

Special efforts are taken for widening, Metalling and Blacktopping, etc of the following important roads:

- 1) Widening, MBT, etc of Kharkutta Badaka Adokgre road including a bridge at Ildek river in East Garo Hills.
- Widening, etc of Bajengdoba –
 Resulbelpara- Mendipathar –
 Damra road in East Garo Hills.
- 3) Widening into 2 (two) lane etc of Umsning –Jagi Road.
- 4) Construction of a double lane road from Lailad to Pilangkata via Umtyrnga village in Ri Bhoi.
- 5) Widening into double lane of Baridua Pilangkata road in Ri Bhoi.

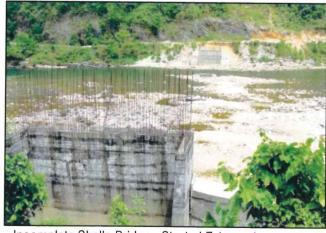


Tynnai Village Area- Mawkyrwat

- 6) Improvement/construction including MBT, etc of Borato Lapangngap Khanduli road in Jaintia Hills.
- 7) Improvement including MBT. etc of a road from Langja to Mawsikar village in West Khasi Hills.
- 8) Construction of a road from Langja to Tynghor- Athiabari village in West Khasi Hills.
- 9) Construction of a road from Langpih to Kyrshai village in West Khasi Hills.
- 10) Construction of Sohphoh Jair Lamalang Korhadem Umlangphlang Lymphuit-Amjong road in Ri- Bhoi District.

- 11) Construction of a road to Lapangap via Sanaro in Jaintia Hills.
- 12) Construction of Dunaidubi Nagapa road via Simsangchiren in East Garo Hills.
- 13) Widening of Kharkuta Wagesi road in East Garo Hills.
- 14) Construction of a road from Malangkona to Adogre in East Garo Hills.
- 15) Construction of a road from Byrnihat to Umsen in Ri- Bhoi District.
- 5) Other important roads: The following important schemes may be taken up by the Department during the next Five Year Plan period:-
 - 1) Construction of Mawkliaw –Mawlatang- Sohkmie- Kutmadan– Sohra road in East Khasi Hills including a major bridge at Wah Rew.
 - 2) Construction of remaining length including MBT, etc of Laskein Borato road in Jaintia Hills.
 - 3) Construction of 2 (Two) Lane Mawkynrew Jatah- Nohron Nongrynkoh Nongkwai Mawpran Pynursla road including a bridge at Umsong river in East Khasi Hills.
 - 4) Construction of Nongkrem –Nongkrem Nongkyndong-Nongkynrih Road including a bridge at Wah Umniew river in East Khasi Hills.
 - 5) Construction of Nongkrem-Nongkrem lewpamtiah-Umsaw-Mawpynthih Road.
 - 6) Construction of a road from Tynnai village to Syiedbah M.B. road via Pyndensohlang, Pynden Lyngdoh, Manad, Mawbidong, Nongnam, Mawbrei, Lumpyngngad and to connect M.B. road at Syiedbah (approximate length 20 Km.) in West Khasi Hills.
 - 7) Construction of a road from Wahbamon village to Mawpud village. (Length 3 Km. approx. missing link road) in West Khasi Hills.

The construction of the above roads is necessary in order to reduce the distance of the villages to the Block and Sub-Divisional headquarters. For instance, the present road distance from Suktia village to Sohra is almost 100 kms. If the road proposed above is constructed, the distance between Suktia and nearby villages to Sohra will be reduced to about 25 kms only. Similarly is the case with Borato, Laskein, Mawkynrew, Pynursla etc .



Incomplete Shella Bridge: Started 7 (seven) years ago



Sahsniang Bridge: Jaintia Hills

6) Major bridges: It is observed that construction of major bridges in the State could not be completed on time. This has resulted delay in deriving benefits from the road projects and inconvenience to the public, besides unnecessary revision of estimates due to cost escalation.

The Department should work out a strategy how to handle this problem. The Department may also examine the possibility of combining more than one project into





Incomplete Badaka (Ildek Bridge) East Garo Hills

Urgent need of a Major Bridge over Khasi Mara –Border Hat Mawdon

a single package and renowned contractors/ companies be engaged for construction of major bridges in the State.

The following important bridges need special attention of the Government for early completion:-

On-going works

- 1) Dawki bridge
- 2) Shella bridge
- 3) Borkhat bridge
- 4) Myntang bridge (Sahsniang)
- 5) Khalaipara (Ampati) bridge.

Retained by DONER Ministry

- Tharia bridge
- 2) Khasimara bridge
- 3) Kalatek bridge (Patharghat)

Others

- 1) Badaka/Ildek bridge.
- 2) Simsang bridge (Williamnagar).

The Shillong - Cherrapunjee road

The Planning Board recommends that the Shillong – Cherrapunjee (Sohra) road is to be developed as an Express Way - a two-lane road, free of unnecessary curves, pot holes, safe and easy to drive even during the foggy weather. This road should be developed as one of the best roads in the country. The portion from Laitryngew to Sohra needs to be re-aligned to do away with un-necessary curves. Express way is important if Cherrapunjee is to be promoted as a global tourist destination. An express way would certainly attract inflow of tourists to Cherrapunjee and also may influence the development of other sectors like hotels, way-side restaurants, motels, educational institutions, etc in the area.

In addition to construction of express way, it is also recommended that all roads in and around Cherrapunjee leading to the tourist spots are to be widened and properly maintained. These roads are:

- 1) Approach road to Dainthlen and Laitduh,
- 2) Approach road to Nohkalikai view point.
- 3) Approach road to Mawsmai cave.
- 4) Approach road to Thangkharang Park.
- 5) Approach road to Mawblang.
- 6) Approach road to Flashing Park (Laitkynsew).
- 7) The Mawmluh Mawshamok Laitkynsew road.



Shillong-Cherrapunjee Road



Deep Ridges of Wah-Rew River divide Mawkliaw from Cherrapunjee Area

Plastic Roads and Concrete Roads

The heavy rainfall in the State is the main factor for creation of pot holes and damage of black topped portion of the roads .Taking into consideration the in-adequacy of fund available with the Department for maintenance of roads and the high cost of maintenance of roads, the condition of roads in the State will continue to be in a bad shape. This is most true for all roads located in the southern belt of the State, the region which experience very heavy rainfall and long duration of rainy season.

The Board recommends the Department to examine the possibility of adopting other alternatives already prevalent and adopted in other parts of the country, to ensure the State has better roads and less maintenance cost.

These are:

- 1) **Concrete Roads:** There are many instances in the country where concrete roads are found to have more advantages over bituminous roads. Some of these advantages are:
 - **Fuel Saving:** Concrete roads are rigid pavements which, unlike bitumen pavements, do not deflect under load. Hence load carriers require less energy when traveling on concrete roads. Trials carried out by the Central Road Research Institute have shown that laden goods carriers consume 15 20 % less fuel on concrete roads as compared to bituminous roads. This implies that the cost of transportation will be much lower in concrete roads than in bituminous roads.
 - Long Maintenance Free life: Concrete roads have a life of 40 years or more compared to about 10 years for bituminous roads. In addition, concrete roads require almost no maintenance whereas bituminous roads need frequent repairs due to damage by traffic, weather, etc.
 - Resistance to weather, etc: Concrete roads are neither damaged by rain nor softened and distorted by heat. They also do not lose their binder due to leakage of oil from vehicles. Hence they remain damage free under most adverse conditions.
- Plastic roads: It is told that the Plastic Road concept as propounded by Dr.R. Vasudevan, Dean and Head of the Chemistry Department, Thiagarajar College of Engineering, Madurai is an ideal option for roads that bear the brunt of torrential rains. It serves the twin purpose of increasing quality of roads and also solves the problem of plastic disposal.

The benefits of this concept are:

- Low cost using less bitumen
- Simple technology
- Spot use of waste plastic
- Doubling the road strength
- Almost zero maintenance
- No cracks or potholes.
- 3) **Pilot Projects:** The Board recommends that some projects may be selected for



Plastic Road: Madurai, Tamilnadu

trial in the State. Some concrete roads may be selected from the southern belt of the State where rains are heavier and the rainy season is longer. Plastic roads may be tried in the urban areas like Shillong and Tura where the supply of plastic is in plenty.

In case, the whole length of the roads may not be taken up either for concrete or plastic road, at least some stretches, especially those stretches where the water-falls directly hit the road pavement may be taken up as an experiment.



The following roads located in the southern belt of the State are recommended to be taken up for construction of concrete roads:

- 1) The Mawmluh Mawshamok- Mawlong road.
- 2) The Nongnah Ranikor road.
- 3) The Mawsynram Hat Mawdon road.

Other Issues

effort should be taken to ensure that all villages in the State are connected by all weather roads. A time-frame and planning should be worked out by the Department for this purpose. It may also be mentioned that around 2564 villages are yet to be connected by road. Of this 1776 are villages with a population of less than 250.



Maheshkola-Nongjri-Ranikor Road: No Road Connectivity

Efforts may be taken to link these villages through different road programmes in the State. Maximum villages of less than 250 population may be connected through cluster approach under PMGSY Scheme.

Government of India may be moved to relax the norm/ criteria for road connectivity (PMGSY) for villages located in the border areas – both international and State border.

2) Road formation: It is felt necessary that in future, the road formation or the width of the State roads should be two lane or intermediate lanes. However, the width of the Metalling and Blacktopping will depend on traffic needs of the road. In case of N.E.C. roads, the formation should be at least 2 (two) lane roads.

It is also required that boundary pillars/ stones be erected in all PWD Roads

in the State. This is required to avoid any encroachment to the PWD land, which is causing great problem for widening of roads in the State.

3) Delay in implementing the roads schemes: There is an undue delay in inviting tenders of the sanctioned schemes and allotment of



Need for Road formation: Width should be Double lane or intermediate Lanes

works to the contractors in the State. This is causing delay in implementing the works and perhaps, the main reason for the need to revise the estimates of many road schemes. A mechanism is to be worked out by the Department to ensure that the process of inviting tenders, allotment of works to contractors, etc be completed within a period of less than 3 months from the date the scheme is sanctioned. The payment of Bills of contractors on time will ensure speedy implementation of any work.

4) Monitoring & Quality of work:

Quality of work should be strictly adhered to by the Department in any project. To some extent, the quality of work in any project could be improved if all officers and staffs are made compulsory and mandatory to stay/ present in their place of posting. The services of the work charged and muster roll workers should also be efficiently utilized by the Department.



I.B. Nongjri-Bholaganj altitude

- 5) Delimitation and creation of new Division: The PWD Divisions are to be delimited to ensure easy access by the Division. Big Division like Nongstoin may be bifurcated by creating a new Division at Mawthengkut in West Khasi Hills. Similarly, Tura North Division maybe bifurcated by creating a new division in Dadengiri. While creating such Divisions, care has to be taken to see that no Divisions should fall under the jurisdiction of two Administrative Districts. This would avoid one Executive Engineer coordinating with more than one Deputy Commissioner/ S.E.
- 6) PWD Rest Houses: It is recommended that initiative be taken by the P.W.D. for construction of Rest Houses in some important locations, such as:-
 - (1) Langpih in West Khasi Hills, (2) Pilangkata in Ri-Bhoi, (3) Baridua in Ri Bhoi and (4) Khanduli in Jaintia Hills.

Upgradation of existing Rest House/Inspection Bungalows is also recommended.



P.W.D.Sonidan I.B., Ri-Bhoi District

- 7) Road Cess: The Government may examine the possibility of passing an act to enable the PWD to collect Cess or fees/ toll from the vehicles plying on the highways and major district roads (MDR) solely for raising fund to meet the maintenance costs of the State High Ways, economic important roads and major district roads (MDR). Funds collected should be deposited in a new Head of Account to be created/ utilized for the purpose only.
- 8) Easy Disbursement of contractors Bill in the Financial Year end: Full Financial Power equivalent to that of the Chief Engineer is recommended for Additional Chief Engineer, Garo Hills Zone or upgradation of the Additional Chief Engineer's post to full-fledged Chief Engineer for Garo Hills for easy disbursement of payment during the financial year end. At present, Additional Chief Engineer Garo Hills has to depend on Chief Engineer Shillong for disbursement of contractors Bills.
- 9) Budget Allocation: Road is still the most important sector in the State. It will continue to be so for the next 10-15 years. All development sectors depend on road sector for

takeoff. Therefore it is necessary to allocate more funds in this sector. It should be a priority sector no.1 in the State.

Preference for road sector may also be given for NLCPR, RIDF, NEC etc in the State.

However, it is equally important that every effort is taken by the Department to make their



activities more transparent both in physical and financial terms. The people would appreciate to know how much fund is released to each Division quarterly / yearly and where the money is spent.

- **10)** Discretionary Funds of all engineers from Sub Divisional Officer above is recommended for the purpose of emergency works.
- 11) Need for E-Governance: There is an urgent need for introduction of E-governance in the P.W.D. which will cover right down to the sub-divisional level.

List of National Highways in Meghalaya

1. NH - 40

: Jorabat - Shillong - Dawki - Tamabil

2. NH - 40

: (Extension) Dawki - Jowai - Amlarem

3. NH - 44

: Shillong - Jowai - Malidhar

4. NH - 44

: (Extension) Shillong - Nongstoin

5. NH - 51

: Paikan - Tura - Dalu

6. NH - 62 ····

: Dainadubi - Baghmara - Dalu

