

GOVERNMENT OF MIZORAM
PUBLIC WORKS DEPARTMENT

NOTIFICATION

Dated Aizawl, the 16th June, 2017.

No.H.11018/8/2015-PWD(E) : In the interest of public service and as approved by the Meeting of Council of Ministers held on 8th June, 2017, the Governor of Mizoram is pleased to notify 'The Mizoram Rural Roads Maintenance Policy, 2017' on Sixteenth of June, Two Thousand Seventeen (i.e. 16th June, 2017).

Sd/-
LALRAM THANGA
Principal Secretary to the Govt. of Mizoram,
Public Works Department

Memo No.H.11018/8/2015-PWD(E) : Dated Aizawl, the 16th June, 2017.
Copy to :-

1. Secretary to Governor, Mizoram.
2. P.S. to Chief Minister, Mizoram.
3. P.S. to All Ministers/Ministers of State.
4. P.S. to Speaker/Deputy Speaker.
5. Sr.P.P.S. to Chief Secretary.
6. P.S. to all Ministers/Minister of State/Parliamentary Secretaries/Vice Chairman, State Planning Board, Mizoram.
7. All Principal Secretaries/Commissioners/Secretaries, Mizoram.
8. Controller, Printing & Stationery with 5(five) spare copies for favour of publication in the Mizoram Gazette.
9. All Administrative Departments.
10. All Heads of Department.
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Date 19/6/2017

(K. SANGTHUAMA)
Deputy Secretary to the Govt. of Mizoram,
Public Works Department

16.06.2017



**GOVERNMENT OF MIZORAM
PUBLIC WORKS DEPARTMENT
MIZORAM : AIZAWL**

**THE MIZORAM
RURAL ROADS MAINTENANCE POLICY
2017**

THE MIZORAM RURAL ROADS MAINTENANCE POLICY 2017

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MIZORAM RURAL ROADS MAINTENANCE POLICY - 2017

1. Preamble

Road networks are fundamental requirement for providing access to habitations in rural areas. With the launch of Pradhan Mantri Gram Sadak Yojana (PMGSY) on December 25, 2000, a coherent and standard policy for rural roads in the country was established and is now being under implementation by the States. Road connectivity has contributed medical facilities thereby making rural economy vibrant.

This huge asset thus created needs a tremendous effort to maintain in good shape. Poor and inadequate maintenance of roads is resulting in disruption of traffic, hampering economic growth and an increased maintenance cost of vehicles. For optimum utilization of road assets, timely maintenance is a must. The principal objectives of road maintenance are to keep roads open all the time, reduce rate of deterioration, extend life of the road network and improve the speed and frequency of public transport services. Maintenance for rural roads also generates local employment opportunities and additional market prospects for the local construction industry. Maintenance of rural roads provides an economic rate of return which is often in the range of 25 to 30 per cent. Maintenance and upkeep of roads requires huge amount of investment for the Government.

Any inadequacy in funding and implementation on the ground will result in the deterioration of the assets created. The state is committed towards ensuring adequate funds for maintenance of the entire rural road network within its jurisdiction. Under no circumstance shall maintenance be regarded as a secondary issue.

The Govt. of Mizoram intends to adopt a rural roads maintenance policy for the planning & execution of maintenance of rural roads under its jurisdiction and shall be called as "Mizoram Rural Roads Maintenance Policy 2016".

2. Purpose:

The purpose of the policy is to ensure that the planning, programming, directing and reporting of routine maintenance, periodic renewal and emergency maintenance operations are carried out consistently state-wide to keep the road network at an appropriate level of comfort and safety to the road users.

3. Objectives:

The roads that fail, crack, get deformed or disintegrate present a danger to road users. In addition, they impose the wear and tear on vehicles, increased consumption of POL, delays in travel and effect other various economic costs. There is a need for the concerned agencies and organisations to repair and restore the roads in a timely and systematic manner.

The objectives of the policy are to enable-

- (a) Adequate, timely and sound maintenance of roads to provide safe, convenient and efficient access and also to reduce vehicle operating cost and travel time and improve the speed and frequency of public transport service;
- (b) Judicious and optimal utilization of available funds and resources for the maintenance and repair of roads so as to keep the road open, reduce rate of deterioration, and extend life of the road network;
- (c) Efficient maintenance by using appropriate technology, State of the Art and effective repair treatments including by inducting new technology and equipment in road repair and maintenance work;
- (d) Capacity building and organizational development of the manpower and agencies engaged in road construction for efficient discharge of road development & maintenance function.

4. Implementation: Public Works Department, Gov't. of Mizoram shall be responsible for implementation of the Policy through the Mizoram Road Fund Board and as per the Rules and Acts. Apart from existing procedures in carrying out Road Maintenance Works, PWD may adopt various modalities including Performance Based Maintenance Contract, Public-Private Partnership and Concession Agreement for various kinds of arrangements including incorporation of tolls and distance based rates etc. to be paid by road users etc.

5. Evaluation & Prioritization of roads:

- (i) The PWD shall carry out evaluation of the existing road pavement and other structures in terms of its physical condition, structural capacity, roughness Road Condition Survey. Such survey shall assess type,

magnitude, location of the distressed roads and other physical parameters like roughness, skid resistance etc. It shall evaluate Road Condition Index (RCI) and take up prioritization of roads on the basis of the RCI.

- (ii) At least two condition surveys, one before and the other after the monsoon, should be conducted on each stretch of the road every year. The data collected should be recorded methodically road kilometre-wise.
- (iii) Traffic data on each road should be collected as per the procedure to be laid down by PWD. The traffic data should show classification of motorised, non-motorised, commercial vehicles etc. The traffic volume data should be used as an input in prioritization of maintenance works.
- (iv) The PWD shall identify different types of road maintenance activities and prepare a manual of technical practices to carry out the same.
- (v) The planning of various maintenance operations will be co-related and looked upon as a total system rather than each activity being considered in isolation. Based on the condition evaluation, the causes for various defects observed should be examined in detail and a decision taken whether to initiate a particular maintenance activity.
- (vi) The PWD shall establish a guiding rules for prioritization of road maintenance works, taking into account the evaluation carried out under this Policy.

6. Classification of Maintenance Operations:

The intervention and rectification standards for various maintenance activities shall be finalised for different categories of roads. Maintenance operations may be classified in four groups as under:

- (i) **Routine repair/maintenance:** includes work items such as filling of potholes and repair of cracks, cleaning of side drains and culverts, clearing of roadside bushes/vegetation, cleaning & repair of road signs and removal of petty landslips by the maintenance gang/staff almost round the year.
- (ii) **Periodic maintenance:** is a more extensive maintenance operations such as renewal of road surface/re-surfacing and or applying a seal coat and major repair to cross-drainage (C.D) works to be done periodically every four to five years.
- (iii) **Special Repairs:** involves major restoration & upgradation of the pavement through reconstruction or application of overlays, clearing of major landslides, repair/re-construction of retaining/breast walls, damaged drains and that of road damaged due to laying of public service utilities.

- (iv) **Emergency repair/maintenance:** refers to emergency conditions like collapse or severe damage of road or any other matter emergent in nature. It includes reconstruction/repair of CD works damaged due to floods, storm water and earthquakes and reconstruction/repair of road sections damaged due to washouts, floods, landslides and earthquakes.

7. Norms for Maintenance of Roads:

The State Government shall constitute a Committee comprising of senior level officers of technical, administrative and finance section of the state PWD to work out and frame road maintenance norms annually which should cover routine, periodic, emergency and special repairs/ maintenance. The Committee may comprise of:

- | | |
|---|-----------------------|
| (1) Secretary, PWD | Chairman |
| (2) Engineer-in-Chief, PWD | Vice-Chairman |
| (3) Chief Engineer, Planning, PWD | Member-Secretary |
| (4) Chief Engineer, Roads, PWD | Member |
| (5) Chief Engineer, Highways, PWD | Member |
| (6) Chief Engineer, Buildings, PWD | Member |
| (7) Joint Director of Accounts, PWD | Member |
| (8) Consultants/other Dept or organisation representatives as Member (if found necessary) | |

8. Annual Road Maintenance Operation Plan:

The Mizoram Road Fund Board or the Committee formed to work our maintenance norms shall prepare Annual Road Maintenance Operation Plan(ARMOP) covering all State Roads with due attention to management of the whole programme based on availability of fund for road maintenance. The guidance note on Mizoram Fund Board is attached as ANNEXURE – I. The plan shall be formulated and finalised by the end of April every year for implementation within the financial year. It will identify the maintenance works on the State road network for different classes of roads including roads within urban areas within the jurisdiction of PWD taking into account the conditions of roads, bridges, culverts, road signs and other road appurtenances.

9. Environmental Sustainability:

In the process of road maintenance works, PWD shall make the best possible efforts to implement technologies that are environmentally friendly, have a low carbon footprint and provide access to all sections of society including the disabled in a safe manner.

10. Monitoring, Testing and Capacity Building:

- 10.1. The State PWD shall institute a simplified Asset Management System to prepare Annual Maintenance Plan based on scientific condition assessment of the road network.
- 10.2. The PWD shall regularly carry out technical and financial audit of sample stretches subjected to maintenance.
- 10.3. The condition of road shall be captured through photographs and videography and such detail shall be uploaded suitably on the government website so that they are in public domain.
- 10.4. Calendar of training programmes for its technical officers at various levels shall be formulated to enhance their skill in planning, procurement and supervision of maintenance works of roads. Outreach programmes in enhancing the training for contractors in implementation of maintenance works shall also be provided.
- 10.5. The PWD shall identify the cost effective technologies in maintenance operations. It shall undertake road user satisfaction surveys on its rural road network and put the results on website.
- 10.6. The PWD shall adopt Maintenance Management System(MMS) developed in house for management of maintenance of rural roads and shall conduct road condition survey using Pavement Surface Inspection Rating Procedure (PSIRP) and identify the needs for renewal priority of the pavement surface.

11. Budgeting and Financial Resources:

- 11.1. The Mizoram Government shall ensure allocation of adequate and timely availability of funds needed for maintenance of State Roads as per Annual Road Maintenance Operation Plan(ARMOP) prepared by the Mizoram Road Fund Board or PWD. The Executive Committee of the said Board shall chalk out and recommend the annual allocation of fund for different categories of roads with reasonable share for rural roads.
- 11.2. The State Government shall explore avenues for mobilizing additional fund for maintenance of roads by way of road transport related tax/cess.
- 11.3. Based on the data supporting the road condition, the annual renewal programme to be included in the ARMOP will be drawn up by the Board well in advance of the implementation period. A schedule of the maintenance operation to be taken up under the ARMOP should also be prepared. The ARMOP and the implementation schedule should be approved by the Board and sanction of available financial resources will be made in a timely manner.

11.4. The budgeting for maintenance expenditure under the ARMOP will also be done well in advance by the Board before the start of the relevant financial year along with allocation of resources to the different operations/ components under the Plan.

12. Removal of Maintenance Backlog:

12.1. The Mizoram Road Fund Board/the State PWD shall formulate an Action Plan for time bound removal of maintenance backlog of the road network so that the network is brought to an acceptable level of service. On the basis of Mizoram Road Statistics and Road Condition, the State PWD shall identify the backlog and remove it within a period of 5 years in a phased manner and the funds for the purpose will be made available by the Government.

12.2. Against the total area of 21087 Sq.Km, the total length of road network in Mizoram is 7669.235 Kms and the road density is 36.369 Kms/100 sqkm. The Road Statistics of Mizoram as on 17th August 2016 is as under:

Roads under State PWD		(in Kms)		
Sl.no		Black Top	Un surface	Total
1	National Highway	1205	260	1465
2	State Highway	170	0	170
3	Major District Road	601	0	601
4	Other District Road	770	209	979
5	Village Road	440	1470	1910
6	Road within Towns & Villages	509	196	705
7	City Road	254	44	210
Total of National Highways		1205	260	1465
Total of State roads		2744	+	4663
Total of NH and State Roads		3949	2179	6128
Road under BRO		610	287	897
Road under CPWD		176	0	176
Road under other Departments		0	433	433
Grand Total		4735	2899	7634

Total of Road maintained from State Maintenance Fund :-

(a) Black-topped	:	2744kms
(b) Unsurfaced	:	1919kms
TOTAL	:	4663kms

12.3. The Road Condition of the State Roads (maintained from State Maintenance Fund) as on June 2015 are as follows :-

Black- topped Roads

1.	Very Good and Good Roads	...	388 Kms
2.	Fair Roads	...	1134 Kms
3.	<u>Poor & Very Poor</u>	...	<u>1222 Kms</u>
	Total	:	2744 Kms

Non-Black-topped (un-surfaced) Roads

1.	Very Good or Good Roads	...	15 Kms
2.	Fair Roads	...	187 Kms
3.	<u>Poor or Very Poor Roads</u>	...	<u>1,717 Kms</u>
	Total	...	1919 Kms

12.4. *Periodic Renewal Requirement:*

Considering a periodic renewal cycle of 4 years, length required to be re-surfaced every year = $2744/4 = 686$ Kms

Requirement of funds @ 19 lakhs per Km = Rs. **13034 lakhs per year**
= **130.34 crores per year.**

12.5. *Backlog of Periodic Maintenance:*

As per road condition data, length of roads in fair, poor & very poor subject to Periodic Renewal = $1134+1222 = 2356$ Kms

Length of backlog $2356 - 686 = 1670$ Kms

Considering backlog to be cleared in 5 years, Kms required for renewal every year = $1670/5 = 334$ Kms Funds required to clear backlog of 334 Kms @ Rs.19 lakhs/year = Rs.6346 lakhs per year = Rs 63.46 crores per year.

12.6. *Requirement for Routine Maintenance:*

With the yard stick rates for routine maintenance @ Rs. 57,777/- per km per year for black-topped road and Rs 46,077/- for non-blacktopped roads, funds required for routine maintenance

= Rs. $2,744 \times 57,777 + 1,919 \times 46,077$

= Rs.15.85 Cr.+ 8.84 Cr.

= Rs. 24.69 Crores per year.

12.7. *Total requirement* for Periodic Renewal+ Backlog of Periodic Renewal+ Routine Maintenance:

$130.34+63.46+24.69 =$ Rs 218.49 crores per year= **Rs. 218.00 Crores per year.**

13. Dedicated Road Maintenance Fund and Other Actions required:

- 13.1. Mizoram Government has already established Mizoram Road Fund Board under the Mizoram Road Fund Act 2007 to maintain and manage dedicated road maintenance fund with money received/collected from various sources such as Central and State Governments grants, user charges and fees, cess, levies, tax revenue etc as may be considered appropriate by the State Government to provide fund on a sustainable and dependable basis for maintenance of state roads. This Mizoram Road Furniture Act 2007 was also gazetted by Govt of Mizoram on 19th 4. 2007 (ANNEXURE-II). The Mizoram Road Fund Rules 2010 has been approved by Govt of Mizoram (ANNEXURE-III).
- 13.2. Mizoram PWD shall simplify the existing Road Maintenance & Management System (RMMS) for State roads to prepare Annual Maintenance Plans for each Division based on scientific condition of the road network.
- 13.3. Mizoram PWD shall set up Special Task Force in each PWD Zone to deal with emergency situations arising due to natural disasters headed by concerned Chief Engineer and consisting of S.E(Plg & Works), Concerned S.E and E.E as members.
- 13.4. Some pilot works of maintenance shall be undertaken jointly by field Divisions and relevant NGO/Village Council and steadily move towards devolving maintenance responsibility in respect of rural roads to local authorities/community.
- 13.5. Mizoram PWD shall extend support in providing outreach programmes in enhancing the training facilities for Class III and Class IV Contractors in implementation of maintenance works. For this, the Contractors Associations may be associated to work out the details of training modules, training providers including on-the-job exposures in close association with road agencies. Such modules could be in the form of booklets/hand-outs in various maintenance operations as also in audio visual mode.
- 13.6. Mizoram PWD shall identify and pilot innovative maintenance models and technologies. These innovations may be in the form of piloting and adopting models of outsourcing maintenance works which could be in the form of Performance Based Maintenance Contracting (PBMC), Community Contracting or Hybrid System involving combination of PBMC and conventional Engineering, Procurement and Construction (EPC). The thrust on innovative technologies shall be on materials that can

be used in all weather conditions, reduce time and manpower required for repairs, thereby improving productivity. The technology shall be cost effective, easy to manage, off the shelf material for patch/pothole repair and application with simple tools with all maintenance items being accommodated in a small vehicle for speedy execution. Efforts shall be on environment friendly technologies.

- 13.7. Detailed guidelines for execution of maintenance policy is finalised. The essential methods & procedures to assist in implementation of Annual Maintenance Plans have been incorporated in these guidelines and attached as "*Standard Operating Procedures for Maintenance of Rural Road Network in Mizoram*" The objectives & expectations from the maintenance work, utilization of resources, responsibilities & functions of staff at different levels, procedure for contract management, quality assurance, technical specifications, maximum response time have been explained in these guidelines.
- 13.8. Necessary amendments may be made in the provisions of the guidelines by the Mizoram Public Works Department on the basis of experiences.

ANNEXURE-I

STANDARD OPERATING PROCEDURES

FOR

MAINTENANCE OF RURAL ROAD NETWORK

IN

MIZORAM

2017

CHAPTER ONE INTRODUCTION

- 1.1. Being the only means of transport within the State, Roads occupy an important position in the transportation system of Mizoram. Road infrastructure is directly related to economic growth and social development. Maintaining these roads in serviceable condition is crucial to agricultural and industrial growth on the one hand and affording means of access to the public.

- 1.2. The continued extension and improvement of the road network does however create new and growing challenges in terms of an increasing maintenance burden. In order to sustain the benefits of the investments made in building and improving roads, there is a need to boost capacity in terms of providing adequate maintenance.

- 1.3. More emphasis needs to be placed on the maintenance of already existing infrastructure assets. This implies that an increasing proportion of funds and managerial capacity needs to be allocated for protecting the investments made earlier in building the road network.

- 1.4. From a technical point of view, there is no shortage of technical guidance on how the works should be carried out. The challenge seems to be more related to how maintenance should be organised and when it should be carried out. There is, however, a need to define requirements at operational level which ensure that technical means are secured in order to actually carry out the required maintenance. Therefore, it has been felt necessary to put in place a Standard Operating Procedure for maintenance of the roads at operational level for securing adequate and timely maintenance of the rural road network.

CHAPTER TWO STAFFING

2.1 Organisational Setup

2.1.1 Mizoram Public Works Department shall be responsible for the operation and maintenance of the entire road network under its jurisdiction. The administrative control of the department shall rest with the Secretary to the Government of Mizoram. The Engineer-in-Chief would be overall in-charge of the Department. The construction and maintenance of the network comprising State Highways, Major District Roads and Rural Roads shall be supervised by the concerned Chief Engineers who have control over the field Circles with each circle headed by a Superintending Engineer. These circles are further divided into field Divisions each headed by an Executive Engineer. Similarly, these field Divisions have a number of Sub-Divisions headed by a Sub-Divisional Officer. The SDOs are assisted by a number of Junior Engineers each of whom is in-charge of a section. The Junior Engineers are in turn assisted by Section Assistants.

2.1.2. A dedicated Planning, Budgeting and Monitoring (PBM) Unit in the PWD and headed by a Chief Engineer(Planning) shall be responsible for Planning, Budgeting and Monitoring of all maintenance works of the road network under the overall guidance of the Engineer-in-Chief. This unit shall comprise of one Superintending Engineer (Planning), one Executive Engineer (Planning), two Assistant Engineers and other Support Staff. The Joint Director of Accounts shall assist the Chief Engineer (Planning) of the PBM Unit in all financial matters.

2.1.3. Technical audit of sample stretches as well as the quality inspections shall be conducted by the Quality Control Division of the PWD.

CHAPTER THREE PLANNING AND DESIGN

- 3.1. Maintenance Works will include all works of routine maintenance, periodic maintenance, road rehabilitation including pavement strengthening, special repairs and emergency maintenance.
- 3.2. The **PBM** Unit shall initiate action on maintenance activities as under:
 - (i) Exercise for **review of Yardstick Norms for routine maintenance** shall commence in October every year and the process completed by 30th November. The norms as finalized shall be notified by 31st December and shall be applicable for the next financial year beginning 1st April. Even in case the norms do not require any change the existing norms shall again be notified by this date.
 - (ii) A **yearly review of the rates of individual items** involved in maintenance activities shall be carried out by considering the prevailing market rates as on 1st October of that year and the review shall be completed by 30th November. The rates so finalized shall be notified by 31st December.
- 3.3. Being a hilly and heavy rainfall area, a **Periodic Renewal Cycle** of 4 years shall be adopted for all types of roads in Mizoram.
- 3.4. The **Specifications** to be adopted shall be MoRT&H Specifications as adopted for State works and Ministry of Rural Development (MoRD) Specifications for PMGSY works. In case specification for a particular item in State Works are not available MoRD specifications for Rural Roads shall be followed and vice-versa.
- 3.5. The **Field Units**, namely, the Divisional Offices shall be responsible for carrying out the Road Inventory and Road Condition Surveys as per prescribed procedures.
- 3.6. The **Road Condition Data Survey** at every 100 m interval shall be carried out by the Junior Engineers in charge of the respective sections. They may take the assistance of their Section Assistants/Mates. Their work shall be supervised by their SDOs and physically checked to the extent of 15% and accordingly certified. The road condition data shall be collected through visual inspection. The Assistant Engineers (Maintenance Monitors) posted in the circle offices shall simultaneously carry out 10% test check of the road condition data collected by the field units.

3.7 **The Schedule for the above activities** shall be as under:

- (i) The surveys shall commence immediately after the cessation of monsoons in October and completed by 1st week of November.
- (ii) Data from the survey shall be uploaded on the Road Maintenance Management System {RMMS}/ Road Management System {RMS} by the Divisional Offices by 2nd week of November.
- (iii) Results of the entire road network shall be generated by the Headquarters staff by 1st week of December.

3.8. PWD HQ shall finalize the priority list for Annual Maintenance Plan {AMP} and disseminate the same to all field offices by the 3rd week of December. The field Executive Engineers on receipt of the approved AMP shall have another verification carried out to confirm that the roads appearing in the AMP with respect to their jurisdiction actually qualify for Periodic Renewal and revert back to the HQ by 1st week of January with full justification in case any substitution is required. Annual Maintenance Calendar shall be hoisted on departmental website by March.

3.9. Field offices shall initiate action for preparing estimates and inviting bids for works proposed to be contracted out for the approved chainages of various roads immediately and works shall be awarded latest by last week of January.

3.10. Implementation shall commence latest by 10th February

3.11. The Annual Calendar of Road Maintenance Activities shall be as given in Table 1

Table 1
Annual Calendar of Road Maintenance Activities

<i>Sr. No.</i>	<i>Item of Work</i>	<i>Intervention</i>	<i>Response Time</i>	<i>Frequency</i>	<i>Re-remarks</i>
1	2	3	4	5	6
1.	<i>Cleaning/desilting of road side</i>			Thrice i) February ii) May and June iii) August and September and as and when required i.e. blockade more than one-fourth	
	Water diverted out of drain onto roadway	Causing a hazard to traffic	Immediate		
	Obstruction or Siltation impeding flow	Blocked by more than one-fourth of the size of the drain	14 days and prior to monsoon		

2.	Pothole Filling			
	Collection of patch repair material for Bituminous roads			i) January and February ii) July and September
	Collection of patch repair material for WBM repair			i) January and February ii) July & August
	Pothole filling in Bituminous and rigid pavement with maximum dimension more than 200mm, cracks, edge breaks, ruts and depressions	All potholes =75mm depth Cracks >5mm in width Edge Breaks >150mm in width Ruts >50mm in depth Depressions	21 days	Immediate on their occurrence
	Pothole filling in WBM with maximum dimension	Depth > 75mm	21 days	
	Pothole filling in Gravel/ Kutcha surface	Depth >50mm Width >300mm	45 days	
3.	Filling edges of bituminous surfaces and replenishing/ lowering earthen/ hard shoulders	Difference more than (-) 50mm/ (+) 0mm		Before and after monsoons and as and when required i. e. when the requirements as specified are exceeded as per Col.3
4.	Dressing of berms			Before and after monsoon and once in between i.e. February/ March, June, August and September
5.	Restoration of rain cuts and side slopes			September and as and when required

6.	Cleaning of Cross-Drainages			
	Debris and silt reducing effectiveness of structure, broken or cracked structure causing instability, under mining or not functioning properly	Blocked by more than one-fourth of the size of the culvert opening	14 days	Twice (May and October) and as and when required i.e. blockade more than one-fourth of the opening
Deformation of culvert, its invert and alignment	45 days and prior to monsoon			
7.	White washing of Parapets, Guide Stones, Tree Trunks etc.			Twice (April and October)
8.	Re-fixing disturbed caution boards, other signage etc.			Once and as and when required
9.	Re-fixing displaced Km.stones, 200m stones, guard stones, guard rails			Once and as and when required
10.	Cutting of branches of trees, pruning shrubs			Once (October)
11.	Removing wild seasonal growth on berms and from road side structures			Twice (March and September)
12.	Painting of Km. stones, Numbering of culverts, Road markings etc. Including history of road on Km. Stones			Once (April / November)
13.	Maintenance of T & P	All round the year		
14.	Removal of encroachment	All round the year		

- 3.12. The Superintending Engineers in-charge of field circles shall closely monitor the progress of the above activities in respect of their jurisdictions.
- 3.13. The Junior Engineer shall prepare monthly Maintenance Plan of the roads and forward it to the Sub-Divisional Officer one week before the commencement of the respective month for approval.
- 3.14. In case of Divisions having labour in excess of the norms the Executive Engineer shall, in consultation with the Superintending Engineer, prepare a list of works such as construction of side drains, culverts, parapets, retaining/breast walls etc. that could be entrusted to such surplus labour. The quantum of works thus identified should be commensurate with the prescribed norms for tasks for labour. This list shall be prepared and finalized within the first three months of the calendar year so that these works are taken up from the start of the next financial year.

CHAPTER FOUR

INSPECTION

4.1 Duties

4.1.1 Attention of all officers/officials of the Department is drawn to the imperative necessity for the maintenance of the roads under their jurisdiction. In order to maintain the roads efficiently and economically, officers/officials in-charge of the roads must exercise the greatest care to see that money and materials are used with caution and financial prudence. To achieve this, frequent inspections are necessary and in this connection the following broad principles are laid down:

- (i) The Section Assistant shall keep a strict watch on the condition of the entire stretch of road under his beat and cover the same daily.
- (ii) The Junior Engineer in-charge shall inspect the entire road length under his jurisdiction at least once every week. He shall simultaneously verify at site the contents of the Daily Progress Report as maintained by the Section Assistant in his diary and initial the same.
- (iii) The Sub-Divisional Officer in-charge of the road shall ordinarily travel at the rate of 30 Km. per day and inspect the entire length under his jurisdiction at least once every month. He shall invariably be accompanied by the Junior Engineer in-charge to whom he can give the necessary directions for repairs.
- (iv) The Executive Engineer shall also arrange to travel only moderate distance each day and shall be accompanied by the SDO in-charge. He shall inspect all the roads under his jurisdiction once every three months.
- (v) The Superintending Engineer shall, whenever possible, accompanied by the Executive Engineer, shall plan his visit through alternate routes rather than following only the regular and direct route while proceeding/coming back from tour. This is necessary to ensure that alternate routes/interior roads get inspected even when the purpose/destination for the tour may be different. It may, therefore, be ensured that the officer does not undertake to and fro journey through the same route. He shall travel on alternate route on one or another journey.
- (vi) Every effort should be made to issue instructions verbally and with

personnel consultation supplemented by notes in the notebook of the person to whom orders are given. This procedure will save time in writing long inspection notes. Site-Order Books should be maintained properly for every road projects.

- (vii) Superintending Engineer should be able to supplement the notes given in the notebooks with more precise orders.
- (viii) From the point of view of safety of traffic, as well as from the point of view of safety of road structures, it is essential to pay special attention to the maintenance of road berms. The Inspecting officers should make special note of the condition of the berms and their improvement since the last inspection and record the same in the notebook of the Junior Engineer and the Sub-Divisional Officers.
- (ix) The Superintending Engineer shall also inspect the roads from overall road safety considerations and give appropriate directions.

4.1.2 Duties of Mate

- (i) To report to Work Inspector/Junior Engineer.
- (ii) To mark daily attendance of labour working under him.
- (iii) To help in the layout, marking, checking the quality and quantity of work done by the labour and get the work executed as per instructions.
- (iv) To assist the Work Inspector/Junior Engineer in taking out the measurement for daily work done by labour.
- (v) To display necessary caution boards for safety point of view as per standard layout.
- (vi) To report to his senior about any casualty, accident, encroachment of Government property or any type of serious damage to the Government property within his beat.
- (vii) To maintain T & P and sign boards under his charge.
- (viii) To carry out jobs of semi-skilled nature connected with his trade along with his gang.
- (ix) General supervision over un-skilled labour.
- (x) To get cement/composite mortar prepared in his presence as per instructions of Junior Engineer/Work Inspector.
- (xi) To report about damages to structures, kilometer stone etc. and keeping them in position.
- (xii) To comply with any instruction given by his immediate superior.
- (xiii) To maintain Daily Labour Report (DLR).
- (xiv) To ensure adequate quantum of work being done by gang and that it

conforms to norms.

(xv) To keep account of permanent articles, for example direction boards, trees, drums etc. in his beat.

(xvi) To ensure providing and proper upkeep of diversions

4.1.3 Duties of Work Inspectors :-

(i) To report to Junior Engineer.

(ii) To maintain daily diary of the work done and to put up to the Section Incharge every alternate day.

(iii) To maintain daily receipt/daily consumption of material consumed.

(iv) To help in preparing estimates for minor works and repairs.

(v) To ensure execution of work according to specifications and drawings.

(vi) To take round of various bridges and roads under his charge on regular basis and report to section incharge about repairs to be done. He shall also assist to plan out a programme for such repairs in advance and ensure their execution through the department labour within the specified period.

(vii) To assist Junior Engineer in taking out measurement and distributing work to labour daily and checking their attendance.

(viii) To estimate and indicate rough quantities of materials required.

(ix) To take measurement of daily work done.

(x) To ensure adequate quantum of work being done by gang and that it conform to norms.

(xi) To maintain material at site account and account of traffic signs.

(xii) To report about unauthorized constructions and encroachments on government premises.

(xiii) To comply with the instructions given to him by his immediate officer.

(xiv) To ensure submission of daily report.

(xv) To see that log books are filled daily for machinery and that machinery are parked properly.

(xvi) To maintain details of land width and check encroachments.

(xvii) To ensure proper maintenance of speed humps and caution boards Including their painting.

4.1.4 Duties of Junior Engineers :-

- (i) Inspection and supervision of works as per prescribed norms.
- (ii) Recording the progress of both casual and regular labour in the Measurement Book (MB) and ensuring that the output of labour matches with the norms for task for labour.
- (iii) No work should be entered in the MB as 'unsusceptible to measurement' and progress of all activities be recorded.
- (iv) Reporting observations to higher authorities.
- (v) Preparing estimates for repairs after conducting condition survey of roads.
- (vi) Reporting about closure of road/obstructions due to any of the following reasons;
 - (a) Overtopping/breach;
 - (b) Landslides;
 - (c) Earth quakes;
 - (d) Accident;
 - (e) Any other reason (specify);
- (vii) Arranging for removal of obstructions such as dead animals, trees and other debris lying on road.
- (viii) Enumerating safety measures and restoration works in case of flood damages and breaches and reports on opening of traffic/ completion of restoration.

4.1.5 Duties of Sub-Divisional Officers :-

- (i) Inspection and supervision of works as per norms.
- (ii) Reporting observations which suggestion for remedial action to higher authorities.
- (iii) Getting estimate prepared and checked after conducting surveys and site investigations.
- (iv) Reporting about heavy rain fall in the area and consequent rain damage.
- (v) Enumerating action on the report of Engineering subordinates regarding obstructions, accidents etc.
- (vi) Enumerating safety measures and restoration of (both temporary and permanent) works in case of flood damages and breaches.

4.1.6 Duties of Executive Engineers :-

- (i) Inspection and recording of observations as per prescribed norms.
- (ii) Planning and finalization of nature of maintenance activities e.g. surface repair, prepare to CD works etc.
- (iii) Arranging men, materials and machinery in advance as per requirements.
- (iv) Finalizing action on reports of SDO and also on safety measures, diversion in case of breaches and flood damages.
- (v) Coordination with various agencies like Traffic Police, Local Administration, Publicity Media etc., in case of emergent repair, interruption to traffic by road blockage, etc.
- (vi) Initiate steps for finalizing permanent restoration works.

4.2 Action to be taken in case the road is Breached or Blocked

4.2.1 Action to be taken by the Mate/Work Inspector

- (a) Immediate report of the road breached/blocked will be made to Junior Engineer and Sub-Divisional Officer. The following points will be included in the reports:
 - (i) Name of the road
 - (ii) Location of the breach/blockade
 - (iii) Length and nature of the breach/blockade
 - (iv) Date and time of occurrence
 - (v) Assessment of the assistance in the form of men and material required.
- (b) "Road closed" boards and "Diversion" boards shall be fixed on both sides at 60 m distance in advance of the hazard.
- (c) Arrangements for red lights to be done in case of darkness.
- (d) Labour shall be deputed to guide the traffic to prevent any accident.
- (e) Construction of diversion, if possible.

4.2.2 Action to be taken by the Junior Engineers

- (a) He will at once visit the site of the hazard and shall ensure that:
 - (i) Road has been closed by means of barricading with empty drums or any other means available at site.
 - (ii) That caution and diversion boards have been fixed on both sides.
 - (iii) Arrangements made to guide the traffic by posting gang men having red flags.
 - (iv) Arrangements made for red lights and chowkidar etc.

- (v) Steps to stop further damage to the road are taken as per site requirement.
 - (vi) Possibilities of construction of diversion to be explored. If possible the diversion should be constructed with available resources.
- (b) He shall immediately report to the Sub-Divisional Officer, Executive Engineer and Superintending Engineer through fax and or WhatsApp regarding the road breach, duration of blockade of the traffic followed by a detailed report containing:
- (i) Name of the road.
 - (ii) Location of the breach/blockade.
 - (iii) Length and average depth of the breach.
 - (iv) Date and time of occurrence.
 - (v) Duration of suspension of traffic.
 - (vi) Requirement of men and material for restoration of traffic and road and the approximate cost.
- (c) All arrangements and efforts shall be made for restoration of traffic.
- (d) He will intimate the details of any losses and injuries to the public, if any, including the extent of compensation if payable.

4.2.3 Action to be taken by the Sub-Divisional Officer

- (a) He shall at once inspect the site of the hazard.
- (b) He shall inspect all safety measures taken by the Junior Engineer.
- (c) He shall ensure that the restoration of traffic is done at the earliest.
- (d) He shall send a detailed report regarding the breach/blockade enumerating all the points given under 2 (b) above. In addition to these he will also include the following points:
 - (i) The causes of the breach/blockade.
 - (ii) Forecast estimate for restoration of traffic and road.
 - (iii) Remedial measures to avoid any future occurrence with forecast estimates.
 - (iv) Any other information which he wants to include.

4.2.4 Action to be taken by the Executive Engineer

- (a) He shall at once visit the site of breach. In case of multiple occurrences, he will inspect them in order of priority and importance.
- (b) He shall ensure speedy restoration of traffic.
- (c) He shall send a detailed report to the Superintending Engineer and Chief Engineer about the road damage indicating:
 - (i) Nature and cause of damage with location.
 - (ii) Proposals for remedial measures with financial implications.
 - (iii) Nature and course of consequential damages to public properties etc.
 - (iv) Action taken for restoration of traffic and restoration of damages with financial implications.
- (d) He shall be fully responsible for all the action taken for the protection and safety of traffic and the road.

CHAPTER FIVE

EXECUTION OF MAINTENANCE OPERATIONS

5.1 Safety of Workers :-

- (i) In the implementation of maintenance operations, the road user and personnel involved in the work shall not be exposed to hazards. Besides, delay and inconvenience to the traffic should be reduced to the minimum.
- (ii) Traffic hazard and inconvenience be minimized by use of temporary road signs and controlling/guiding of the traffic.
- (iii) Maintenance operations should at a time be confined to small lengths say 30m in half the pavement width, leaving the other half for use by traffic.

5.2. Output of Labour :-

- (i) There should be no ambiguity regarding duties assigned to the supervisory staff so that there is full coordination while identifying jobs and giving direction to the labour. In this connection, the duties of Mates/Work Inspector have been spelt out elsewhere in this document.
- (ii) The gang men must fully know the tasks they are to carry out and the expected output.
- (iii) There should be regular checking whether the task assigned and output achieved are as per norms.
- (iv) All works (no work to be recorded as unsusceptible to measurements) executed by the labour both casual and regular shall be measured and entered in the Measurement Book (MB) and if the progress is less than the norms then proportionate recovery shall be made or the wages shall be reduced accordingly by the Assistant Engineer responsible for making payment.
- (v) The recommended tasks for labour are given as under

TABLE-2

Sr. No	Task	Norms
1.	Earth work such as in berms, de-silting of drains	
	(a) Ordinary soil	2.5 Cum/person/day
	(b) Hard soil	1.75 Cum/person/day
2.	Dressing of berms	75 Sqm/person/day
3.	Jungle clearance	100 Sqm/Person/Day

4.	Patching with premix carpet	0.75 Cum/Person/Day
5.	WBM patching	0.30 Cum/Person/Day
6.	Blinding of WBM surface	150 Sqm/Person/Day
7.	Edge covering	60 m/Person/Day
8.	Side slope/shoulder repair	2.0 Cum/Person/Day
9.	Maintenance of drains	125 RM/Person/Day
10.	White washing of parapets, tree trunks, breast walls etc.	30 Sqm/Person/Day
11.	Other items as per norms worked out from Schedule of Rates (SOR)	

Note: The quantity mentioned is that of grit and blast used for patch repairs.

- (i) For the purpose of monitoring the progress of these works the Mate/Work Inspector incharge in that section shall be accountable. The Junior Engineer will exercise 100% test check in each work and Sub-Divisional Officer/Executive Engineer respectively upto 30% and 10%.
- (ii) Instead of deploying labour in a scattered manner, deployment shall be made in gang who will take up work from one station and move progressively towards the other ends.
- (iii) In order to ensure continuous maintenance of roads and availability of some labour even on Sundays to attend to any emergent job, it shall be expedient to stagger week-end holidays to them, whereas casual daily wage workers shall be allowed weekly rest on Sundays and Work Charged/regular labour shall be given weekly holiday on Mondays.

5.3. Material Procurement :-

- (i) Material used for maintenance of paved roads is bitumen/emulsion and aggregate.
- (ii) Bitumen/emulsion shall be procured and stored centrally along with cement required for other repairs
- (iii) Aggregate and sand shall be collected at site of work as per requirement.
- (iv) The procurement of above materials shall be made as per the Annual Calendar of Road Maintenance Activities shown elsewhere in this document.

5.4. Mechanical Equipment :-

- (i) Arrangement for mechanical equipment such as road roller, Mini Hot Mix Plant, if proposed, to be deployed shall be made well in time keeping in view the Annual Calendar of Road Maintenance Activities.

5.5 Tools and Plants

- (i) The requirements of tools and plants in good condition for one gang for 20 Km. beat having 5 Gang men and one Mate shall normally be as shown in Table-3:

Table-3

Sr. No.	Item	Essential Quantity (With Gangs)	Option with J.E. incharge (Nos.)
1.	Spades	3	
2.	Pan (para!)	3	
3.	PickAxes	2	
4.	Axe	1	
5.	Wheel barrow	3	
6.	Tar Sprinklers (Jhamas)		1
7.	Tar Buckets		1
8.	Tar boiler (mini)		1
9.	Brushes		
	(a) Wire	5	
	(b) Coir	5	
	(c) Hair	5	
10.	Hammer	1	
11.	Rope		
	12 mm	1	
	6mm	1	
12.	Cross Slope Template for berms	1	
13.	Tar thermometer		4
14.	Spring Balance		1
15.	Tape 15 mtr.	1	
16.	Measuring wooden boxes (35cm x		2
17.	G.l. Bucket	1	
18.	Straight edge		1
19.	Caution board		2

**CHAPTER SIX
MONITORING**

- 6.1. In order to ensure the desired progress in terms of physical and financial targets, it is essential to keep a close watch through monitoring of returns as well as through online monitoring.
- 6.2. Superintending Engineer in charge of field circle shall ensure that there is proper monitoring of all maintenance activities. He shall monitor the physical and financial performance through quarterly returns to be submitted to him by the Executive Engineers in the format as per Table-4 (Routine Maintenance), Table-5 (Periodic Renewal) and Table-6 (Special Repairs/Flood Damage Repairs) by the 15th day of the calendar month immediately succeeding the quarter under report:

Table-4
Financial Progress of Routine Maintenance

Name of Division :						
Name of Sub-Division :						
Name of Road	Length of Road (Km)	Budget Allotment (Rs,Lacs)	Routine Maintenance (All in lacs)			Remarks
			Expenditure upto last quarter	Expenditure during the quarter under review	Cumulative expenditure during the year	
1	2	3	4	5	6	7

Note: The Executive Engineer shall certify that financial figures given are as per the Register of Works (CPWA-41) corresponding to Works Abstract (CPWA-34)

Table-5

Physical and Financial Progress of Periodic Maintenance

Name of Division :-											
Name of Sub-Division :-											
Name of Road	Job No	Sanction Length (in Km)	Sanction Amount (Rs. Lacs)	Achievement upto last financial Year		Target for current Financial Year		Achievement during the year upto last quarter		Achievement during the quarter	
				Physical (in Km)	Financial (Rs. Lacs)	Physical (in Km)	Financial (Rs. Lacs)	Physical (in Km)	Financial (Rs. Lacs)	Physical (in Km)	Financial (Rs. Lacs)
1	2	3	4	5	6	7	8	9	10	11	12

Cumulative Achievement during the year		Overall upto date Achievement		Likely date of Completion	Remarks
Physical (in Km)	Financial (Rs. Lacs)	Physical (in Km)	Financial (Rs. Lacs)		
13	14	15	16	17	18

Note : The Executive Engineer shall certify that financial figures given are as per the Register of Works (CPWA-41) Corresponding to Works Abstract (CPWA-34)

Table-6

Physical and Financial Progress of Special Repairs/Flood Damage Repairs

Name of Division :-											
Name of Sub-Division :-											
Name of Road	Job No	Type of Repair	Sanction Amount (Rs. Lacs)	Achievement upto last financial Year		Target for current Financial Year		Achievement during the year upto last quarter		Achievement during the quarter	
				Physical (Km./%age/No.)	Financial (Rs. Lacs)	Physical (Km./%age/No.)	Financial (Rs. Lacs)	Physical (Km./%age/No.)	Financial (Rs. Lacs)	Physical (Km./%age/No.)	Financial (Rs. Lacs)
1	2	3	4	5	6	7	8	9	10	11	12

Cumulative Achievement during the year		Overall upto date Achievement		Likely date of Completion	Remarks
13	14	15	16		

Note : The Executive Engineer shall certify that financial figures given are as per the Register of Works (CPWA-41) Corresponding to Works Abstract (CPWA-34)

CHAPTER SEVEN FINANCIAL MANAGEMENT

- 7.1. The rules for keeping and rendering accounts and dealing with financial transactions made in respect of works under State Head shall be as per Public Works Accounts Code.
- 7.2. The Executive Engineer shall maintain cash books in respect of all financial transactions.
- 7.3. All financial transactions made during the month shall be posted monthly in the Register of Works from Works Abstract.
- 7.4. Before submission of the monthly account to the Accountant General's office, the Register of Works (CPWA 41) shall be completed, reviewed by the Executive Engineer and date initialled by him in token of his having examined the entries and found to be correct.
- 7.5. The Register of Works shall serve as authentic record of expenditure being made every month and finally the yearly expenditure of maintenance incurred on each road as this Register is to be maintained with a separate page devoted to each road.
- 7.6. Works executed under the PMGSY programme would in addition to above, be governed by the PMGSY Accounts Manual of Maintenance Fund, by opening a separate Bank account for the Maintenance Fund as per the provisions of this manual.
- 7.7. The demand for funds/Bank Authorization shall be made for routine maintenance and periodic maintenance on separate requisition forms devised by the Budget Controlling Authority for these maintenance activities.
- 7.8. The funds shall be released to these accounting centres/Divisional Officers by the competent authority through the system of Bank Authorization/Letter of Credit.
- 7.9. Year wise and Package wise ledger accounts shall be maintained for accounting of routine maintenance and periodic maintenance separately.
- 7.10. The funds shall be demanded by the Divisions on the basis of actual bills.
- 7.11. Funds received for renewal and routine maintenance shall be shown separately in the monthly accounts.
- 7.12. The Year wise, Phase wise and Package wise schedule of expenditure shall be prepared separately for periodic, renewal and routine maintenance.

CHAPTER EIGHT QUALITY ASSURANCE

8.1. The Quality Assurance activity, in order to be truly effective has to ensure a progressively improved and uniform quality of the finished work. Maintenance of quality has to be imbibed in the minds of the contractor as well as the officials of the Department.

8.1.1 The direct responsibility for ensuring proper quality of work as per approved specifications for achieving the intended performance rests with the field team of Executive Engineer, Sub-Divisional Officer and Junior Engineer. The Superintending Engineer shall be overall responsible for management of Quality System and Procedures for the works under his charge.

8.2 Responsibilities of the field staff

8.2.1 The broad responsibility of the staff and the Engineer-in-charge will be as under:-

- (i) To ensure that materials duly approved by the competent authority are used in the work.
- (ii) Wherever necessary the Executive Engineer shall approve the sources for respective materials.
- (iii) Samples of materials shall be approved by the Executive Engineer.
- (iv) To ensure that all the mandatory field and laboratory tests as laid down in the specifications are carried out at appropriate time and materials failing to conform to the required specifications are promptly rejected and removed from site.
- (v) As far as practicable all tests on materials shall be carried out at the construction site in a field/Divisional laboratory, which shall be set up under the control of the Executive Engineer. A Junior Engineer of the Division with aptitude for testing shall be selected by the Executive Engineer for manning the laboratory. He shall be given training in the Central Laboratory to familiarize with the various tests, and then placed in charge of the field laboratory.
- (vi) It will be incumbent upon the Executive Engineer to keep a watch over regular testing of materials before making payment at the stage of each running bill.
- (vii) Samples for tests shall be taken mostly by the Junior Engineer, or some by the Sub-Div. Officer. Samples for 10% of mandatory tests shall be collected by the Sub-Div. Officer. 10% of the field tests shall be got done by the Executive Engineer in his presence.

- (viii) A guard file shall be maintained at all work sites, with copies of all inspection reports to-date.
- (ix) Inspection Register, Site Order Book, Record of tests, Hindrance Register, etc. shall be put up for entries and review to every inspecting officer.
- (x) The inspecting officers of the rank of Superintending Engineer and above shall not confine themselves only to review of progress, co-ordination and general matters, but shall also inspect the work from quality Assurance aspects.
- (xi) The Executive Engineer and Superintending Engineer shall invariably review and sign the guard file of earlier inspections, Inspection Register, Site Order Book, Register of tests carried out, Hindrance Register etc.
- (xii) The Executive Engineer shall ensure that the SDOs and Junior Engineers, as well as the contractors' supervisors in-charge are fully aware of the specifications and method of execution of any new/fresh item of work to be taken up in the next 2 weeks. The SDO/Junior Engineer/ Supervisor shall ensure that this important aspect is not overlooked.

8.3 **Quality Assurance set up at Circle Level**

8.3.1 The Quality Assurance team with the Superintending Engineer of the Circle as its head will comprise the Assistant Engineer (along with his Junior Engineer for laboratory work), whose main job is quality assurance. In order that the role of the Assistant Engineer (QA) is effective in the process of Quality Assurance, the following points are essential:

- (i) The periodicity of visit of works should be such that the process control at various stages is possible.
- (ii) There should be minimum delay between inspection of work and communication of inspection report to the field formation.
- (iii) The Assistant Engineer (QA) shall carry out his tasks in a manner that relates operationally to the quality specifications and standards laid down for the work, and to the control actions that can be applied to the construction process. Thus the Assistant Engineer (QA) should assess those aspects which are important to the overall quality of the finished work.

- 8.3.2 The functions of the Quality Assurance team at Circle level are to check the compliance of Quality Assurance system by the field units and to guide the field engineers in quality related aspects of the work. For this purpose:
- (i) The Assistant Engineer (QA) shall carry out a minimum of 2 visits to works every month.
 - (ii) The Assistant Engineer (QA) shall prepare his program and seek approval of the Superintending Engineer. The program shall be sent to site in advance of inspection.
- 8.3.3 Such inspections by the QA team shall, however, not absolve the responsibility of the Junior Engineer/Sub-Divisional Officer/ Executive Engineer for accepting only quality work from the contractor.
- 8.3.4 On the basis of his observations with regard to the quality of works, general adherence to the quality assurance procedures and the standard of progress, the Assistant Engineer (QA) shall submit an overall assessment report to the Superintending Engineer of the Circle. The Superintending Engineer shall comment on the report with minimum delay. The Assistant Engineer (QA) will then send the report to the Executive Engineer concerned for compliance.

8.4 Quality Assurance set up at Zonal Level

- 8.4.1 Quality Assurance in Zones shall be looked after by the Zonal Quality Assurance (QA) unit headed by the Superintending Engineer (Plg.&Wrk).
- 8.4.2 The Zonal QA unit shall follow the guidelines and norms relating to quality systems and procedures as laid down by the Engineer-in-Chief/Chief Engineer (QC) from time to time. These Zonal QA units shall function under the control of Zonal Chief Engineer who shall be fully responsible for effective quality assurance in his Zone.

CHAPTER NINE

MAINTENANCE OPERATIONS THROUGH CONTRACT

9.1. EPC(Engineering, Procurement and Construction) Contracts

The Standard Operating Procedures as outlined in the previous chapters shall be applicable for maintenance of the rural road network in situations where maintenance works are outsourced through EPC (Engineering, Procurement and Construction) contracts.

9.2 Performance Based Maintenance Contracts

9.2.1 The contractor shall follow the Annual Calendar of Routine Maintenance activities as per Para 3.11 unless a different calendar to be adopted has been specified in the Contract document.

9.2.2 The inspections to be conducted by the contractor or by his authorized representative shall ensure that the Intervention Period for undertaking maintenance measures to control defects for adherence to the Performance Criteria for Defects shall be strictly observed as per the Contract Agreement.

9.2.3 Junior Engineer/Sub-Divisional Officer shall immediately report the closure of road/obstruction due to any of the following reasons

- (a) Overtopping/breach
- (b) Landslides
- (c) Earthquakes
- (d) Accident
- (e) Any other reason such as dead animals, trees etc.

9.2.4 In case road is breached or blocked the contractor shall take following action

(a) Immediate report of the road breached/blocked will be made to Junior Engineer/ Sub-Divisional Officer. The following points will be included in the reports:

- (i) Name of the road
- (ii) Location of the breached/blockade
- (iii) Length and nature of the breach/blockade
- (iv) Date and time of occurrence
- (v) Assessment of the assistance in the form of men and material required.

(b) "Road closed" boards and "Diversion" boards shall be fixed on both

sides at 60 m distance in advance of the hazard.

- (c) Labour shall be deputed to guide the traffic to prevent any accident till such time that alternate arrangements are made by the department.

9.3 **Safety of Workers and Road Users during Maintenance**

9.3.1 In the implementation of maintenance operations the contractor shall ensure safety of workers and road users as outlined in Para 5.1

Annexure – II

MIZORAM ROAD FUNDS RULES AND REGULATION



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NOTIFICATION

No.H.12018/179/07-LJD, the 8th September, 2016. The following Act is hereby published for General information.

The Mizoram Road Fund (Amendment) Act, 2016

(Act No.7 of 2016)

{ Received the assent of the Governor of Mizoram on the 31st August, 2016 }

THE MIZORAM ROAD FUND (AMENMENT) ACT, 2016

AN

ACT

to amend the Mizoram Road Fund Act, 2007

It is enacted in the Legislative Assembly of Mizoram in the sixty sixth year of the Republic of India as follows :

CHAPTER-I Preliminary

1. Short title, Extent and Commencement :

- 1) This Act shall be called “The Mizoram Road Fund (Amendment) Act, 2016.
- 2) It shall have the like extent as the Principal Act.
- 3) It shall come into force from the date of its publication in the Official Gazette.

2. Definitions :

In this Act, unless the subject or context otherwise requires-

- a) “Administration” means the Mizoram Road Fund Administration;
- b) “Board” means the Mizoram Road Fund Board constituted under this Act;
- c) “Bye-law” means a bye-law made by the Board under this Act;
- d) “Collecting Agent” means any person or agency entrusted with the collection of a user fee or toll;
- e) “Core Roads Network” means road notified by the Government from time to time as roads of economic or social importance to Mizoram.
- f) “Fuel” means petrol, diesel, gas and like products to be used in the propulsion of motor vehicles;
- g) “Fund” means the Mizoram Road Fund established by this Act;
- h) “Government” means the Government of the State of Mizoram.
- i) “Member Secretary” means the Member Secretary of the Board.
- j) “Minister” means the Minister of the Government responsible for the public works;
- k) “Motor vehicles” means a vehicle propelled along a road by mechanical power;
- l) “Notification” means an instrument published in the official Gazette and “notified” has a corresponding meaning;
- m) “NGO” means a Non-Government Organization;
- n) “Prescribed” means prescribed by Rules;
- o) “PWD” means the Public Works Department;
- p) “Rehabilitation” means improving or strengthening a road without substantially changing its standard or classification;
- q) “Repair and Maintenance” means works to bring a road up to standards previously specified for it by the road agency;
- r) “Road” means a place in Mizoram, other than a national highway declared under the national Highways Act 1956 (Central Act No. 48 of 1956), that is open to or used by the public for passage with vehicles, and includes bridges, culverts, drains and other things that facilitate such passage;
- s) “Road Agency” means a person or body responsible for carrying out repair and maintenance;
- t) “Rules” means rules made by the Government under this Act;

3. PURPOSES OF THE ACT :

The purposes of the Act are to contribute to the social and economic advancement and safety of the people of Mizoram by –

- a) establishing the Mizoram Road Fund to make better provision for the rehabilitation, maintenance and repair of roads, giving priority to the core network; and

- b) providing for the appointment of a Road Fund Board to administer the Fund, formulate and co-ordinate road planning, approve the road funding program and make recommendations to the Government on road network, road safety and traffic management policies and strategies for the State.

CHAPTER – 2

Road Fund Board

4. INSTITUTION AND COMPOSITION OF THE BOARD :

- 1) After the commencement of this Act, the Government shall, by notification, constitute a Board to be called “the Mizoram Road Fund Board.”

- 2) The Board shall be a body corporate –
 - a) having perpetual succession and a common seal;
 - b) being capable in law of –
 - i. suing and being sued in the name of the Board;
 - ii. purchasing taking, holding, selling, leasing, taking on lease, changing or disposing of real or personal property for the purposes of this Act; and
 - iii. doing or suffering all other acts or things” which a body corporate may be law do or suffer.

- 3) The office of the Board shall be located in Aizawl at the place to be decided by the Board.

- 4) The Board shall consist of the following members, namely-

<u>MEMBERS</u>	<u>DESIGNATION</u>
a) The Minister, PWD	Chairman
b) Chief Secretary	Vice Chairman
c) Principal Secretary/Secretary/ Commissioner, PWD	Member Secretary
d) Financial Commissioner/ Secretary	Member
e) Prin. Secretary/Commissioner, Planning	Member
f) Secretary, Law & Judicial Deptt.	Member
g) Secretary, Transport Department	Member
h) Secretary, Land Revenue & Settlement Deptt.	Member
i) Engineer-in-Chief, PWD	Member
j) Commissioner, AMC	Member
k) Inspector General of Police	Member
l) CE/Road, PWD	Member
m) CE/Highway, PWD	Member
n) CE/Building, PWD	Member
o) Director, Transport Department	Member
p) Commissioner Taxation	Member
q) 3 Representatives from stake holders	Nominated members
r) 4 Representatives from NGOs	Nominated members”

- 5) The Chairman of the Board shall, by notification, identify the stake holder organizations and NGOs and invite them to nominate a representative to be a member of the Board.
- 6) Nominated members of the Board shall hold office for a period of three years or during the pleasure of the Government.
- 7) Any nominated member may, at any time resign by submission of a letter of resignation to the Chairman of the Board and shall cease to be a member upon his death or upon withdrawal of his nomination by the organization that nominated him.
- 8) The Board shall meet at such time and place as the chairman may decide and shall observe such rules of procedure in regard to the transaction of business at its meetings, including the quorum, as may be prescribed.
- 9) At the discretion of the Chairman, the Board may adopt a resolution under an out of session procedure if a copy of a document containing the resolution is circulated to all members and a majority of them provide a signed and dated acceptance of the resolution to the Member Secretary.
- 10) The Board may, subject to the rules (if any), associate with itself any person whose assistance or advice the Board may desire to have in performance of any of its functions under this Act; but such a person shall have no right to vote on matters at a Board meeting.
- 11) The Board shall be assisted by a Secretariat consisting of staff deputed from road agencies and with responsibility for carrying out administrative and technical tasks for the Board and Executive Committee, as may be directed by the Executive Committee from time to time.

5. Powers, duties and functions of the Board :

1. The Board shall have the following powers, duties and functions, namely –
 - a. To administer and manage the road fund;
 - b. To recommended collection of such fees and charges including toll fees for services and benefits in relation to the use of roads vested in or entrusted to it at such rates and in such manner, as may be prescribed;
 - c. To formulate integrated annual programme for rehabilitation, repair and maintenance of the road giving priority to core road network;
 - d. To provide funds to the road agency for such rehabilitation, repair and maintenance of the roads;
 - e. To formulate road safety and traffic management policies and strategies for the State of Mizoram;
 - f. To co-ordinate road sector agencies where the implementation to Government road policy involves more than one agency;
 - g. To develop and monitor key performance indicators for the core road network;
 - h. To approve road programme proposals from road agency seeking funding from the Road Fund, subject to the agency prioritizing its programmes on a cost-benefit basis;

- i. To recommended improvement of arrangements for collecting road user charges to minimize avoidance and evasion;
 - j. To recommended to the Government from time to time, appropriate levels of road user charges, fines, penalties, levies or any other sums to be collected under this Act and paid into the Fund;
 - k. To undertake any other activities entrusted by the Government in furtherance of the objectives for which the Road Fund Act is established.
 - l. To approve Core Road Network to be maintained.
2. The Board may form an Executive Committee to perform such functions as may be determined by the Board, and, unless the Board decides otherwise, the Executive Committee shall –
- a) have a majority of members with experience in road financing or management;
 - b) carry out the following functions-
 - i. the seeking of proposals from road agencies;
 - ii. the receipt and review of submissions from road agencies;
 - iii. recommending to the Board of the programme for rehabilitation and maintenance of roads and variation to that programme;
 - iv. advice to road agencies of the programme and variations approved by the Board;
 - v. the monitoring of the delivery of the Board approved programmes by the road agencies;
 - vi. the provision of annual and periodic reports as required by the Board.
 - vii. recommending the Core Road Network proposed by the Road Agencies for approval to the Board;

CHAPTER – 3 THE ROAD FUND

6. Establishment of Fund :

- 1) As soon as may be after constitution of the Board, there shall be established a Fund to be called “The Mizoram Road Fund”.
- 2) The Fund shall consist of the following :
 - a) grants received by the Government from Government of India for the rehabilitation or repair and maintenance of roads.
 - b) fees, fines and other amounts collected by the Government under the Mizoram Highways Act, 2002 and any other funds collected by PWD.
 - c) an amount to be appropriated from the Consolidated Fund of the State within one month from the commencement of this Act, and thereafter in accordance with the Appropriation Acts, shall be an amount equal to any cess on diesel and petrol, any road and road transport related taxes and fees collected under this Act at the end of the preceding year. The rates or amount of collections under this Act shall be decided by the Government from time to time.

- d) toll fees on bridge or busy roads as may be notified by the Government.
- e) any grant, aid, bequest, subsidy, donation, gift, subscription, loan or other sums lawfully received by the Board.

7. Accounts and Audit :

- (1) All moneys mentioned in sub-section (2) of section 6 above and forming part of the Fund shall be deposited in any Scheduled Bank or State Co-operative Bank as may be decided by the Board and the said account shall jointly be operated by the Vice-Chairman and Member Secretary of the Board in such manner as may be specified by the Board.
- (2) The Board shall maintain such books of accounts and other books in relation to its accounts and prepare annual statement of accounts which shall be audited by the Auditor appointed by the Board with prior approval of the Government.

8. Collecting Agent :

The following Departments or Agencies shall be entrusted as collecting agents for collecting user fees, taxes/ surcharges, tolls, fines etc., as may be decided by the Government or the Board from time to time as shown against their name.

- | | |
|---|--|
| 1) Transport Department including Road | Road based fees & taxes

Tax, driving license fees, vehicles Registration fees, wheel Taxes, national and tourist permit fees. |
| 2) Taxation Department | Cess on diesel and petrol. |
| 3) Public Works Department roads and | Toll fees on selected bridges and fines. |
| 4) Home Department | Fees from Traffic fines. |
| 5) Environment, Forest & Climate Change Dept. | Royalty on forest products |
| 6) Geology & Mineral Resources Dept | Royalty on Minerals |
| 7) Aizawl Municipal Corporation | Fees from vehicle parking |

CHAPTER – 4
Miscellaneous

9. Protection of acts done in good faith : No suit, prosecution or other legal proceedings shall lie against the Board or any member of the Board for anything which is done or intended to be done in good faith in pursuance of the provision of this Act or any rules and bye-laws made thereunder.

10. Removal of difficulties : if any difficulty arises in giving effect to any provision of this Act, the Government may, as the occasion may require, by order, do anything not inconsistent with this Act or the rules made thereunder, which appears to them necessary for the purpose of removing the difficulty.

11. Delegation of power : The Board may, by notification, delegate any of the powers conferred on it under this Act, to the Executive Committee, except this power of delegation.

12. Power to make rules :

1. The State Government may after publication the intention of making such rules in the Official Gazette, make rules for the regulation of the rehabilitation, maintenance and repair of roads and generally for carrying into effect the purposes of this Act.
2. Without prejudice to the generality of the foregoing power, such rules may provide for :-
 - a) The term of office and other conditions of service of the members of the Board,
 - b) The powers and duties of the Chairman, the Member Secretary and other members of the Board,
 - c) Appointment, remuneration, facilities and conditions of service of the employees of the Board,
 - d) Modality to be followed in carrying out the Board's activities, accounts, and fiscal administration and road repairs, maintenance and other activities,
 - e) Any other related necessary matters,
3. Every rule made under this Act shall be laid, may be after it is made, before the Mizoram Legislative Assembly while it is in session for a total period of seven days which may be comprised in one session or in two sessions and if before the expiry of the session immediately following the session aforesaid, the Mizoram Legislative assembly agree in making any modification in the rule or the said Legislative Assembly agree that the rule should not be made, the rule shall thereafter have effect only in such modified form or be of no effect, as the case may be, so, however, that any such, modification or amendment shall be without prejudice to the validity of anything previously done under that rule.

13. Power to frame bye-laws :

1. The Board may frame bye-laws not inconsistent with the provision of this Act and the rules made thereunder for enabling it to discharge its functions under this Act.
2. In particular and without prejudice to the foregoing powers, such bye-laws may provide for all or any of the following matters, namely:
 - a) the time and place of meetings of the Board and rules of procedure to be observed by the Board in regard to transaction of business at its meeting under this Act.
 - b) any other matter which is, or may be, necessary to be prescribed for the efficient conduct of the affairs of the Board.

14. Annual Report :

1. The Board shall, during each financial year, prepare an annual report giving a true and full account of its activities in the previous financial year and copies of such report shall be forwarded to the State Government.
2. The State Government shall cause every such report to be laid before the State Legislature as soon as may be after receipt of the same.

15. Acts and proceedings of the Board presumed to be valid :

No acts or proceedings of the Board shall be invalid merely by reason of –

- a) any vacancy therein or any defect in the constitution thereof.
- b) any defect in the appointment of a person acting as a member of the Board, or
- c) any irregularity in its procedures not affecting the merit of the case.

P.Chakraborty,
Secretary to the Govt. of Mizoram
Law, Judl. & Parl, Affairs,
Aizawl