



ABSTRACT

Announcement – Announcement made by the Hon'ble Chief Minister on the floor of Legislative Assembly on 03.09.2015 under Rule 110 - Rural Roads - Approval of Tamil Nadu Rural Roads Maintenance Policy - Sanction of funds from the State Finance Commission devolution grants every year for routine maintenance of Village Panchayats and Panchayat Union roads – Orders – Issued.

Rural Development and Panchayat Raj (CGS.II) Department

G.O. (Ms) No.117

Dated: 03.09.2015

Read:

1. From the Secretary to Government of India, Ministry of Rural Development, D.O.No.P-17029/1/2006/ILO, dated 05.01.2015.
2. From the Director of Rural Development and Panchayat Raj D.O. letter No.15612/20185/TU4, dated 23.03.2015.
3. Hon'ble Chief Minister Announcement under Rule 110 on 03.09.2015.

ORDER:

Hon'ble Chief Minister made the following Announcement on the floor of Legislative Assembly on 03.09.2015 under Rule 110 of the Tamil Nadu Legislative Assembly.

“Rs.200 crore is allocated for maintenance of Rural Roads”.

2. The Secretary to Government of India, Ministry of Rural Development has stated that Pradhan Mantri Gram Sadak Yojana (PMGSY) is a huge Central investment in the State sector as part of a poverty reduction strategy which has created a substantial rural infrastructure asset base in our country to improve rural connectivity. This massive investment in essentially the “last mile Connectivity” is likely to be useful only if the rural road network, particularly, the Core Network is maintained in good condition, at all times. For this purpose, putting in place institutional measures to ensure systematic maintenance and providing adequate funding for maintenance of Rural Core Network is imperative.

3. The Secretary to Government of India has stated that all Pradhan Mantri Gram Sadak Yojana roads are covered by a 5-year maintenance contract, to be entered along with the construction contract with the same contractor, as per the Standard Bidding Document (SBD). Maintenance funds to service the contract are budgeted by the State Government and placed at the disposal of

State Rural Roads Development Agencies (SRRDAs) in a separate maintenance fund account. On expiry of this 5-year post construction maintenance, the Pradhan Mantri Gram Sadak Yojana roads are to be placed under Zonal Maintenance Contracts consisting of 5-year maintenance including renewal as per cycle.

4. The Ministry of Rural Development has repeatedly underlined the need for State Governments to evolve State Specific Rural Roads Maintenance Policy, at various forums including in the Empowered Committee meetings and Regional Review Meetings. The National Rural Roads Development Agency (NRRDA), in partnership with International Labour Organization (ILO) and World Bank, has strived to support maintenance management of rural roads in the States. As an outcome of this partnership, a Model Policy Framework for Maintenance of Rural Roads along with a Guidance Note has been finalized in close consultation with the States. The final version of these two documents were shared with all State Rural Roads Development Agencies (SRRDAs) and the states were requested to customize and evolve their Rural Road Maintenance Policies to suit State specific needs.

5. The Director of Rural Development and Panchayat Raj has sent a formal report with regard to preparation of State Specific Rural Roads maintenance Policy. He has informed that during the Empowered Committee meeting held on 13.08.2014, while considering the Pradhan Mantri Gram Sadak Yojana Phase IX proposal of Tamil Nadu, it was instructed by the Ministry of Rural Development, Government of India to prepare a state specific maintenance policy for rural roads. Further, the guidelines under PMGSY-II specify that the states have to develop, put in place and follow a scientific Rural Road Maintenance Management Policy.

6. The Director of Rural Development and Panchayat Raj has stated that, there are about 1.47 lakh km length of Village Panchayat and Panchayat Union Roads in the state. The major portion of these roads has been Black Topped. This has been achieved by successful implementation of various Rural Development programmes over the years. In the last 4 years, the Government has allocated about Rs. 6,633.32 crore for the improvement/maintenance of 39,232 Km length of Village Panchayat and Panchayat Union roads. He has further stated that in order to ensure that road access is provided across all seasons on a continued basis, and also to protect this important asset created with huge investment, it is imperative to put in place systematic maintenance of the rural roads and stated that the absence of maintenance will increase the life cycle cost of the road, lead to loss of assets and render the roads un-motorable during rains. If roads are not maintained properly, precious working time of the rural people will be lost in travel and transport, vehicle operating cost will increase and rehabilitation of the road will become costly. He has further emphasized that there is a huge backlog of periodic maintenance and this backlog should be removed in a phased manner.

7. Hence, the Director of Rural Development and Panchayat Raj has sent the draft policy called the "Tamil Nadu Rural Road Maintenance Policy", for the

maintenance of Village Panchayat and Panchayat Union roads for approval. He has also proposed a tentative requirement of Rs.208.90 crore for routine maintenance and Rs.300.00 crore for periodic maintenance of roads of Village Panchayat and Panchayat Union for the year 2015-16 from the State Finance Commission Devolution Grants.

8. The Government have examined the proposal of the Director of Rural Development and Panchayat Raj and decided to accept the proposal of the Director of Rural Development and Panchayat Raj and issue the following orders:

- a. The Government approve the draft policy for the maintenance of Rural Roads called the **Tamil Nadu Rural Roads Maintenance Policy** as annexed to this order. The policy shall cover all the Village Panchayat and Panchayat Union Roads in the state. The **Tamil Nadu Rural Roads Maintenance Policy** shall be the basis for the maintenance of all Village Panchayat and Panchayat Union Roads.
- b. The State Rural Roads Development Agency shall be the nodal agency for Planning, Implementation and Monitoring of maintenance activity in the State.
- c. District Rural Development Agencies shall monitor the maintenance of roads at District level. The Block Panchayats and Village Panchayats are responsible for implementation at the Block Level and Village levels respectively.
- d. For the implementation of this policy, sanction is accorded for the amount of Rs.200.00 crore for routine maintenance for the year 2015-16. Funds for the above shall be met from State Finance Commission devolution grants, 14th Finance Commission grants and the own funds of local bodies.
- e. The Government will not provide additional funds, if there is any budgetary gap.
- f. The Secretary to Government, Rural Development and Panchayat Raj Department is empowered to modify the **Tamil Nadu Rural Roads Maintenance Policy**, whenever necessary, in consultation with the Director of Rural Development and Panchayat Raj.

9. This order issues with the concurrence of Finance Department vide its U.O. No.46274/Finance (RD)/2015, Dated 19.08.2015.

(BY ORDER OF THE GOVERNOR)

GAGANDEEP SINGH BEDI
SECRETARY TO GOVERNMENT

To

The Director of Rural Development and Panchayat Raj, Chennai-15.
The District Collectors, All Districts

The Secretary to Government of India, Ministry of Rural Development,
Krishi Bhawan, New Delhi-1.

Copy to

The Hon'ble Chief Minister's Office, Chennai-9.

The Special Personal Assistant to Hon'ble Minister for Municipal

Administration, Rural Development, Law, Courts & Prisons, Chennai-9.

The Finance (RD /BG-I / BG-II/ FC IV) Department, Chennai-9.

The Highways and Minor Ports Department, Chennai-9.

The Planning Development & Special Initiatives Department, Chennai-9.

The Senior Private Secretary to Secretary, Rural Development and Panchayat
Raj Department, Chennai-9.

The Rural Development and Panchayat Raj (PR-I and B&C) Department,
Chennai-9.

The NIC, Secretariat, Chennai-9.

SC / SF.

//Forwarded by Order//

SECTION OFFICER

Annexure

Tamil Nadu Rural Roads Maintenance Policy

BACKGROUND

The Pradhan Mantri Gram Sadak Yojana lays special emphasis on routine maintenance so as to ensure sustenance of the assets created and also to ensure continued benefits to the rural community. The 12th and 13th Finance Commissions, while awarding funds for road maintenance, had also commented on the need for the maintenance management of Rural Roads. Tamil Nadu, being a progressive state has invested huge money in the development of the rural road network. The preservation of these assets has become imperative so that the benefits of the huge investment made by the state is enjoyed by the people for a longer period. With this background, it is proposed to lay out a policy framework for maintenance of Rural Roads in Tamil Nadu so as to ensure preservation of this vital infrastructure in the rural areas.

Introduction

Rural Road connectivity promotes access to economic and social services. Their absence will heavily impact access to basic services such as education, primary health care, water supply, local markets and will ultimately lead to denial of economic opportunities.

Rural Roads in India

Rural roads have suffered heavily due to lack of systematic planning. While rural road development plans provided for target lengths, connectivity requirements of individual settlements (villages/habitation) and issues of regional imbalances were not adequately addressed. This has led to multiple connectivity to the same village, resulting in redundancy, injudicious distribution of resources and development of a large unmanageable network of roads. While constructing rural roads, adequate care was not taken in adopting need based designs, parameters for pavement construction, quality assurance, and quality control.

PMGSY

Taking cue from this, GOI launched the Pradhan Mantri Gram Sadak Yojana in 2000 under the Ministry of Rural Development, as a 100 per cent centrally sponsored scheme. The primary objective of the Programme was to provide connectivity by way of All-weather roads to unconnected habitations with a population of 1000 and above by 2003 and those with a population of 500 and above by 2007 in rural areas. In respect of hilly/ desert/ tribal areas, the objective is to link habitations with a population of 250 and above. Up-gradation of selected rural roads to provide farm to market connectivity is also an objective of the scheme, though not central.

Though PMGSY brought many firsts in the process of construction of rural roads in the country like, proper design, technical support to the states, online monitoring, systematic QC mechanism, standardised procurement methodology etc, the most important was the mandatory provision for 5 year routine maintenance of the roads constructed under PMGSY. This is an important intervention to ensure that the roads constructed with huge investments are taken care of even after construction.

On the other hand, a state like Tamil Nadu which has traditionally invested huge sums of money for the development of rural roads has no system of maintenance. It is well known that the provision of road connectivity is not a onetime intervention and to sustain the facility created, the construction should be followed by a **systematic maintenance** effort. In the absence of such a mechanism, there is potential danger of these assets falling into disuse and eventual disintegration.

Hence, it is imperative to initiate steps to ensure that the rural road network is kept in a vibrant mode to ensure that the benefits of connectivity are sustained. With this objective, a policy framework on the lines advocated by GoI has been detailed out.

Title

This policy will be called the **Tamil Nadu Rural Roads Maintenance Policy.**

Scope

The scope of the policy shall be limited to the village roads in Tamil Nadu i.e. Panchayat Union Roads and Village Panchayat Roads.

Objective

- To ensure perennial connectivity to the rural people to have access to their socio economic needs.
- To put in place an efficient system for development and maintenance of rural roads for sustainable access.
- To ensure maintenance of assets, to the extent possible, in their original condition.
- To ensure that the Rural Roads are in motorable condition throughout the year.

- To create a web based road management system and to have continuous monitoring of the road network.
- To ensure proper allocation of funds for construction and maintenance.

Rural Roads in Tamil Nadu – Current Status and Issues

Tamil Nadu has an extensive road network. The State road network is about 161 km per 100 sq.km area, which is higher than the country's average road network coverage of 122 km per 100 sq km area. In Tamil Nadu, the Highways and Minor Ports Department is responsible for the construction and Maintenance of the National Highways (NH), State Highways (SH), Major District Roads (MDR), Other District roads (ODRs). The Rural Development and Panchayat Raj Department is entrusted with the development and maintenance of rural roads consisting of Panchayat and Panchayat Union Roads.

The category wise length of roads in Tamil Nadu is as given below:

Sl. No	Classification of roads	Length (in 'Km')	% of the Total	Ownership/ Department
1	National Highways (NH)	5,006	2%	Highways & Minor Ports Department
2	State Highways (SH)	11,531	6%	
3	Major District Roads (MDR)	11,677	6%	
4	Other District Roads (ODR)	33,271	16%	
5	Panchayat Union Roads	31,585	15%	Panchayat Unions (RD&PR Department)
6	Village Panchayat Roads	1,15,958	55%	Village Panchayats (RD&PR Department)
	Total	2,09,028	100%	

The surface wise classification of rural roads in the state is as given below:

Sl. No	Type of Surface	Village Panchayat Road	Panchayat Union Road	Total	% to the Total
		Length in 'Km'			
1	Black topped	60,211	28,649	88,860	60%
2	Cement concrete	2,569	273	2,842	2%

3	Double layer WBM	2,468	330	2,798	2%
4	Single Layer WBM	8,722	672	9,394	6%
5	Gravel	6,874	352	7,226	5%
6	Earthen	35,114	1,309	36,423	25%
	Total	1,15,958	31,585	1,47,543	100%

- The Rural Road network owned by the rural local bodies is about 70% of the entire road network in Tamil Nadu.

The district wise details of the rural road network is given in **Table – I**

Approach of the State Government

Tamil Nadu is a progressive state and the successful implementation of various Rural Development programmes has ensured this. The Development of the Rural Road Network in the state is an indicator. In the past decade, the Rural Road Network has increased from about 92,146 Km in 2004-05 to 1.47 lakh Km in 2015-16. Major portion of the road network is Black Topped. Almost 99% of the habitations have been provided All-Weather Road connectivity except in cases where the required land is not available for road construction. In the last decade, about Rs.10,000 crore has been spent on the rural road sector. Some of the schemes which provide funding for the road works are given in **Table -II**.

To ensure that road access is provided across all seasons on a continued basis, the Government has been adopting a three pronged strategy, as given below, in order to keep this vast network of rural roads in motorable condition:

- **Upgradation of Non-BT roads into BT roads**
- **Strengthening of the existing damaged BT roads**
- **Maintenance of the existing BT roads**

Considering the huge length of roads to be covered, the state has been focusing on the following priorities:

- Providing connectivity to unconnected Habitations
- Upgradation of Non-BT roads into BT roads based on various indicators like Length, Utility services connected, Habitations indirectly connected etc.
- Upgradation and strengthening of Bus Plying Roads.
- Periodic Maintenance of existing BT roads

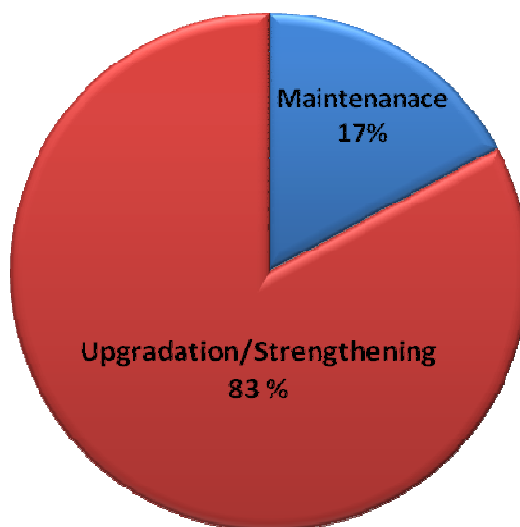
In the last 4 years about Rs. 6633.27 crore has been invested in the rural road sector for the improvement/maintenance of about 39,232 Km length of roads. The District wise details are given in **Table -III**.

The spending pattern, as given below, shows that only about 17% has been spent on maintenance, whereas, the majority of the amount has been utilized for Upgradation of Non-BT roads into BT roads or for strengthening of the existing damaged BT roads

Allocation of funds in the last 4 years

Sl. No	Year	Strengthening of Existing BT road		Upgradation of Non-BT to BT road		Maintenance of Existing BT road		Total	
		Length in Km	Amount Rs. in crore	Length in Km	Amount Rs. in crore	Length in Km	Amount Rs. in crore	Length in Km	Amount Rs. in crore
1	2011-12	885.38	130.58	1815.35	341.82	2148.25	173.14	4848.98	645.54
2	2012-13	1683.66	229.94	9235.00	1448.00	1998.35	188.92	12917.01	1866.86
3	2013-14	3032.20	905.68	5424.74	1247.53	4290.34	438.08	12747.28	2591.29
4	2014-15	2342.87	453.60	3401.38	741.01	2975.08	334.97	8719.33	1529.58
	Total	7944.11	1719.80	19876.47	3778.36	11412.02	1135.11	39232.60	6633.27

Utilisation of Funds For Maintenance and Upgradation & Strengthening



This clearly indicates that the spending on maintenance is not at the optimal levels, while the emphasis has been towards creating new assets.

In order to have a better understanding of the need for optimal spending, the asset value of the present road network is indicated in the table below, which is an indication of the amount of financial loss the Government might have to incur if these assets are not maintained periodically.

Asset Value of Village Panchayat and Panchayat Union Roads

Sl.No	Type of Surface	Length in Km	Unit Cost (Rs. in lakh/Km)	Value of Asset (Rs. in crore)
1	Black topped	88,860	32.00	28,435.20
2	Cement concrete	2,842	40.00	1,136.80
3	Double layer WBM	2,798	18.00	503.64
4	Single Layer WBM	9,394	13.00	1,221.22
5	Gravel	7,226	9.00	650.34
	Total	1,11,120		31,947.20

If the above roads are not maintained properly, there will be huge erosion in the value of asset.

Life cycle of a road

The sequence of construction and maintenance cycle of a road is as under:

- After the construction/Improvement/Upgradation of a road in a particular year, the road will be under "Routine Maintenance"(pot hole filling, filling of the cracks etc. round the year) from the 1st year upto the 5th year
- The road will be taken up for "Periodic maintenance" (BT Renewal) in the 6th year.
- After renewal of BT in the 6th year, the road will again be under "Routine maintenance" for the next 5 years.

The Maintenance cycle indicated above is an ideal situation. However, as of now there is no separate allocation either for routine maintenance or for periodic maintenance (except for grants under 13th Finance Commission and Rural Roads

Maintenance Scheme) and hence roads are being taken up for Upgradation beyond a point of serviceability, warranting additional capital investment. The absence of a definitive maintenance Policy has pushed the life cycle cost of the roads, besides making it difficult for the public to use the road during the period of non-maintenance. Hence it is important to put in place a proper maintenance mechanism with adequate funding.

Life cycle cost comparison

A simple comparison of life cycle cost of a road with and without maintenance is shown below:

Activity	Tentative Cost/Km (Rs. in Lakh)	
	Road with Maintenance	Road without Maintenance
Construction	32.00	32.00
Routine maintenance (for 5 years Rs 40,000 per year)	2.00	Nil
Periodic Maintenance (Renewal with BT after the 5 year maintenance period-during the 6 th year)	12.00	--
Upgradation (For want of Routine maintenance, the road becomes unserviceable warranting reconstruction) beyond 6 th year	--	22.00
Total	44.00	54.00

It is seen that about Rs.44.00 lakhs per Km is roughly required for construction and maintenance of a road in good condition. In the present situation, with no maintenance mechanism or separate maintenance funding, the life cycle cost of the road increases by about 22%, i.e. from Rs. 44.00 lakhs to Rs 54.00 lakhs. Moreover the life of the properly maintained road will be about 10 years, whereas, the road without maintenance will have to be rebuilt prematurely.

Taking into consideration the huge network of Black topped Panchayat and Panchayat Union roads in the State running for a length of 88,860 Km, huge outlay could be notionally saved if proper maintenance mechanism with requisite funding is put in place.

Maintenance Back-log

To further emphasize the point that the present funding for maintenance is inadequate, it is important to assess the status of maintenance of bituminous roads, which is given under:

Sl. No	Details	Length of Roads (in Km)
1	Length of Black topped PU and VP roads as on date	88,860 (A)
2(i)	Length of Roads newly constructed/upgraded to BT standards in the last 5 years	24,317(B)
(ii)	Length of BT Roads taken up for upgradation in the last 5 years	9,063 (C)
(iii)	Length of BT Roads taken up for periodic Maintenance in the last 5 years	11,893 (D)
	Sub Total (B+C+D)	45,273 (E)
3	Length of BT roads constructed before 5 years which need to be maintained (88,860-45,273) (F=A-E)	43,587 (F)
4	Length of BT roads proposed to be taken up for upgradation/maintenance during 2015-16	4,363 (G)
5	Balance Length of Roads to be maintained (H=F-G)	39,224 (H)

As indicated in the above table, there is a Maintenance Backlog of about 39,224 Km length of roads. This huge back-log is a result of unbalanced funding favouring construction of new roads, while the allocation for maintenance of the existing Black Topped roads was not given adequate focus. This trend has resulted in the deterioration of assets created with huge investments.

Funding for Maintenance

The basic issue of funding for road maintenance is linked to the ownership of the road. In Tamil Nadu, the village roads are owned by the Rural Local Bodies and all the other roads like ODRs, MDRs, SHs and NH are owned by the Government (Highways & Minor Ports Department). Hence, Government provides budgetary support for maintenance of SHs, ODRs, MDRs etc., whereas, as per Tamil Nadu Panchayats Act, the maintenance of the Panchayat Union roads and Village Panchayat roads is the responsibility of the concerned Block Panchayats and Village Panchayats respectively. Hence, the funds for maintenance of these roads have to be met either from their own revenue or through the devolution Grants. The following issues are to be considered in this regard:

- Many of the Rural Local Bodies do not have sufficient revenue to

provide for the maintenance of the roads.

- These Rural Local Bodies are responsible for provision and maintenance of essential basic amenities such as drinking water, street lights, sanitation, maintenance of internal streets, drains etc. Hence, there is little or no money available for road maintenance.
- The distribution of SFC grants is based on Population, whereas, the road network is dependent on various other factors such as utility services to be connected, no. of habitations, proximity to urban centres etc. A simple analysis indicates that districts like Ariyalur, Karur, Tiruvarur, Sivagangai, Tiruppur have road density of more than 5.00Km/1000 population whereas in terms of rural population these districts are at the lower end. This essentially means that these districts will not receive funds proportionate to their road network. The District wise details of Road Density and Population are given in **Table-IV**.
- It may also be taken note that a portion of the SFC grants are set apart for various Rural Development schemes. Apart from SFC grants, the only specific allocation for road maintenance is the Grants-in-Aid for Maintenance of Road and Bridges under the Central Finance Commission Grants. These funds are also apportioned in the ratio 2:1 between Highways and RD Department. Except for these grants, there are no specific grants for maintenance of rural roads under the control of RD Department.

Here, it is appropriate to indicate the following:

- Both ODRs and Village Roads are classified as Rural Roads
- Both these types of roads serve as end mile connectivity to the rural areas
- The specifications and standards governing these roads are common
- Both these category of roads carry similar traffic and serve similar road users.
- This being the case, **ODRs as they are being owned by Government**, receive budgetary support for maintenance from Government and also receives major share of the Central Finance Commission Grants for Maintenance of Roads and Bridges.

Though there are several schemes for taking up of construction and strengthening of roads, maintenance is in the negative list in all these schemes. Considering this perilous situation, the Government announced a dedicated scheme called the Rural Roads Maintenance Scheme (RRMS) during 2013-14. However, it is to be noted that the funds for RRMS is also met from out of the SFC grants. **Table-V** gives indicative amount of Maintenance funding required in a year. This is a tentative assessment based on the current status and exact maintenance funding

shall be worked out based on more scientific data and appropriate norms.

Definition and Classification of Maintenance

The Indian Road congress defines road maintenance as 'routine work performed to upkeep pavement, shoulders and other facilities provided for road users, as nearly as possible in their constructed conditions under normal conditions of traffic and forces of nature'. Maintenance is essential to get optimum services from the pavement structure during its life period.

Types of maintenance works:

i) Routine maintenance: Routine Maintenance comprises of small-scale works regularly undertaken which aims **"to ensure the daily passability and safety of existing roads in the short-run and to prevent premature deterioration of the roads"**. Typical activities include clearing of roadside margin and grass cutting, cleaning of silted ditches and culverts, patching and pothole repair.

ii) Periodic maintenance: Periodic Maintenance covers activities on a section of road at regular and relatively long intervals, which aims **"to preserve the structural integrity of the road"**. These operations tend to be large scale, requiring specialized equipment and skilled personnel. They cost more than routine maintenance works and require specific identification and planning for implementation and often even design. Activities can be classified as preventive, resurfacing, overlay, and pavement reconstruction. Resealing and overlay works are generally undertaken in response to measured deterioration in road conditions.

iii) Emergency Maintenance: Emergency Maintenance is undertaken in response to occasional, unforeseen events such as landslides, washouts, large trees or debris on the road, broken drainage structures and collapsed bridges.

Impact of Poor Maintenance

- The impact of poor maintenance will lead to loss of assets created with huge investments.
- Poorly maintained roads become un-motorable during rains and there will lead to loss in agriculture output due to lack of access for reaching the agriculture produce to the markets.
- Precious working time of the rural people is lost in travel and transport.
- Poor or deferred maintenance has engendered a huge backlog of

roads, besides increasing the cost of restoration and rehabilitation by 4 to 6 times the cost required for maintenance.

- The premature restoration of badly maintained roads will not only lead to depletion of natural resources, but will also be a cause for pollution.
- The Vehicle operating cost goes up in roads which are in poor condition. This also leads to deterioration of the life of vehicles.
- Bad roads are considered as reflection of Poor governance and do not present a good image of the implementing agencies

Policy Frame Work

Considering the above it is decided to develop a comprehensive policy for the maintenance of rural roads as given below. The Policy will address various issues like lack of specific funding, lack of implementation methodology etc.

- (a) *An annual maintenance plan will be prepared for each block and district. This shall be approved by the Government.*
- (b) *The Government will set up an Empowered Committee Chaired by the Secretary, RD&PR, Director of RD&PR, DS (Budget) representing Finance Secretary, Additional Director of Rural Development (Roads and Bridges), Additional Director of Rural Development (Panchayat Raj), Additional Director of Rural Development (MGNREGS) Superintending Engineer (RD), Financial Advisor cum Chief Accounts Officer, DRD&PR to monitor the maintenance of rural roads. This committee will approve annual maintenance plan.*
- (c) *The funding for routine maintenance will be from the devolution grant to Rural Local Bodies. A sum of Rs.200.00 crore is allocated for routine maintenance every year from the devolution grants.*
- (d) *The State Rural Road Development Agency will be made the nodal agency for Planning, Implementation and Monitoring of maintenance activity in the State.*
- (e) *District Rural Development Agencies will monitor the maintenance of roads at District level and the Block Panchayats and Village Panchayats will be responsible for implementation at the Block Level and Village levels respectively.*

- (f) *It is planned to remove the maintenance back log in 5 years by providing adequate funding for periodic maintenance.*
- (g) *An extensive capacity building drive will be undertaken to improve the skill levels of the field officials and the Panchayat Raj Institutions (PRIs) in planning and implementation of maintenance of roads.*
- (h) *A spatial and attribute database of the rural road inventory will be created in GIS Platform. Technology support including necessary hardware and software will be provided at the state, district and block levels for effective use of this system.*
- (i) *The norms for estimating maintenance, frequency of inspection, items of works under maintenance etc will be adopted as prescribed by NRRDA, MoRD, GoI.*
- (j) *Routine Maintenance will be contracted out along with construction of roads under all major schemes.*
- (k) *Performance based maintenance contract will be adopted on Pilot basis.*
- (l) *The routine maintenance activities like Clearing/re-shaping of road side rains, Pothole filling (WBM & BT), Filling up of edges of asphalt surface, dressing of berms, rain cuts, will be done in convergence with MGNREGS.*
- (m) *The locally available materials including industrial waste, C&D waste, Fly ash etc will be used for temporary restoration, pot hole repairs, restoring berm cuts etc.*
- (n) *Alternate technologies like use of cold mix for patch repairs, ready-to-use products etc will be adopted wherever feasible.*
- (o) *The use of appropriate advanced automated equipments will be encouraged on pilot basis and later scaled up based on suitability.*
- (p) *Quality Control through third party inspection will be an integral part of maintenance activities.*

- (q) *A dedicated online system will be created for monitoring the maintenance of roads. Mobile applications will be developed exclusively for Real Time Monitoring of Maintenance activities and also to update the status of the roads.*
- (r) *Performance evaluation of Maintenance will be done through independent third party organisations.*

**GAGANDEEP SINGH BEDI,
SECRETARY TO GOVERNMENT.**

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Section Officer.

Table I**Road Statistics-PUR and VPR**

S. No	District Name	No. of Roads	Length in KM						Total
			Earthen	Gravel	WB-II	WB-III	BT	CC	
[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
1	KANCHEEPURAM	2086	323.25	69.48	175.94	48.64	2073.03	218.31	2908.64
2	TIRUVALLUR	4584	749.81	112.22	368.42	175.63	2576.75	223.36	4206.18
3	CUDDALORE	5049	1252.74	201.23	534.41	375.88	3048.13	183.09	5595.47
4	VILLUPURAM	6884	2337.89	629.01	800.34	85.84	3879.58	268.09	8000.75
5	VELLORE	5175	985.45	391.26	203.09	90.68	4109.73	178.01	5958.22
6	TIRUVANNAMALAI	4289	1023.43	153.57	448.78	162.84	3456.68	237.15	5482.45
7	SALEM	7189	2113.36	343.71	719.93	359.53	4564.05	26.30	8126.88
8	NAMAKKAL	4780	1706.10	258.10	152.31	68.90	3193.91	16.47	5395.79
9	DHARMAPURI	3563	1365.92	149.20	170.38	16.55	2868.39	21.64	4592.08
10	KRISHNAGIRI	3563	1806.69	45.70	137.49	25.89	2535.73	40.52	4592.02
11	ERODE	4163	1129.42	113.09	180.99	25.35	3178.61	6.82	4634.28
12	TIRUPPUR	4134	2367.22	228.93	97.24	35.47	3695.11	8.51	6432.46
13	COIMBATORE	2728	1321.72	35.38	68.13	17.57	2259.38	35.36	3737.53
14	THE NILGIRIS	819	168.55	46.42	105.20	100.54	566.79	30.35	1017.84
15	THANJAVUR	9514	2280.00	118.78	605.06	52.70	4811.01	285.24	8152.79
16	NAGAPATTINAM	5395	936.35	195.50	338.58	199.35	3666.19	190.21	5526.17
17	TIRUVARUR	7018	1865.97	120.99	592.16	137.19	3910.74	198.16	6825.21
18	TIRUCHIRAPPALLI	4067	1501.74	211.11	349.91	160.54	3881.62	30.08	6135.00
19	KARUR	2779	1562.68	265.50	119.31	8.10	2657.69	9.44	4622.72
20	ARIYALUR	2202	757.27	324.93	360.57	63.76	1694.25	23.72	3224.49
21	PERAMBALUR	1154	640.88	220.03	214.91	27.80	846.71	0.00	1950.33
22	PUDUKKOTTAI	9101	2049.05	974.04	1122.73	139.06	4864.59	103.73	9253.20
23	MADURAI	2047	549.43	112.96	89.44	32.51	1763.08	25.12	2572.54
24	THENI	1010	408.00	27.20	87.64	25.25	1111.48	3.40	1662.96
25	DINDIGUL	3685	1600.63	584.56	83.51	53.66	3404.57	16.34	5743.27
26	RAMANATHAPURAM	3858	764.11	200.67	419.58	71.07	2827.96	90.92	4374.30
27	VIRUDHUNAGAR	2129	490.73	348.28	103.12	38.19	1808.62	13.46	2802.39
28	SIVAGANGAI	4528	1024.62	324.38	281.63	85.95	3366.29	49.46	5132.34
29	TIRUNELVELI	3147	847.84	208.29	199.77	58.93	2940.96	57.42	4313.22
30	THOOTHUKKUDI	2491	339.50	202.06	199.77	40.48	2061.87	57.50	2901.18
31	KANNIYAKUMARI	2345	152.68	8.66	64.33	14.27	1236.78	193.75	1670.46
Total		125476	36423.03	7225.24	9394.67	2798.12	88860.28	2841.93	147543.16

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Table - II**Schemes for Improving Roads**

1. PMGSY-Pradhan Mantri Gram Sadak Yojana
2. NABARD-RIDF
3. SCPAR- Scheme Component of Pooled Assigned Revenue
4. SFC- State finance Commission Grant
5. RIS- Rural Infrastructure Scheme
6. THAI-Tamil Nadu Habitations Improvements Scheme
7. RRMS- Rural Road Maintenance Scheme
8. MLACDS
9. MPLADS
10. Waste plastic mixed bituminous roads
11. 13th Finance Commission Grants
12. Others (IGFF, BRGF, SSS, SBGF, General Fund of Block Panchayats and Village Panchayats etc.)

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Table - III**DETAILS OF ROAD WORKS TAKEN UP IN THE LAST 4 YEARS**

Sl. No	Name of the Scheme	2011-12		2012-13		2013-14		2014-15		Total	
		Length in Km	Amt Rs. in crore	Length in Km	Amt Rs. in crore	Length in Km	Amt Rs. in crore	Length in Km	Amt Rs. in crore	Length in Km	Amt Rs. in crore
1	Ariyalur	42.49	5.84	198.23	29.97	308.66	73.67	141.18	28.88	690.56	138.35
2	Coimbatore	107.05	11.40	384.35	65.49	346.68	66.82	197.55	38.63	1035.63	182.34
3	Cuddalore	284.66	29.59	450.05	66.26	477.19	72.79	369.25	53.93	1581.14	222.57
4	Dharmapuri	113.18	11.13	419.26	55.04	387.37	84.45	313.46	49.21	1233.27	199.83
5	Dindigul	137.10	16.18	569.04	86.22	664.94	114.39	275.52	49.24	1646.60	266.03
6	Erode	183.97	20.47	397.74	50.22	453.01	72.59	306.20	45.31	1340.91	188.59
7	Kancheepuram	107.59	10.62	425.52	58.40	548.81	116.66	211.97	38.93	1293.88	224.60
8	Kanniyakumari	72.46	8.82	218.51	30.60	264.14	29.01	146.28	32.46	701.38	100.88
9	Karur	159.42	17.15	371.65	57.75	395.56	83.09	232.00	49.19	1158.62	207.18
10	Krishnagiri	217.01	23.82	449.68	60.21	357.74	62.37	252.05	38.27	1276.47	184.68
11	Madurai	114.79	11.31	280.21	37.02	298.25	44.71	167.18	28.24	860.42	121.29
12	Nagapattinam	214.28	10.39	468.16	49.78	479.90	164.53	238.22	30.21	1400.56	254.91
13	Namakkal	189.29	19.29	483.21	71.87	352.19	77.15	295.03	54.49	1319.71	222.80
14	Perambalur	15.46	1.22	159.81	24.42	230.28	42.69	67.49	16.88	473.03	85.21
15	Pudukottai	201.80	21.69	660.27	98.91	543.28	88.85	470.54	76.27	1875.90	285.72
16	Ramnad	140.44	17.24	477.73	75.26	494.44	122.88	229.99	42.31	1342.61	257.69
17	Salem	158.01	129.54	514.43	135.02	545.69	112.54	449.57	124.67	1667.70	501.77
18	Sivagangai	186.53	18.94	413.97	59.97	325.57	67.97	411.40	74.95	1337.48	221.84
19	Thanjavur	250.96	29.51	563.66	74.17	449.19	69.81	445.36	71.91	1709.17	245.40
20	The Nilgris	30.73	3.87	65.48	16.31	162.64	34.33	31.81	9.28	290.66	63.78
21	Theni	42.86	4.41	190.12	26.58	176.07	35.28	73.28	14.32	482.34	80.58
22	Thirunelveli	110.76	7.79	487.88	63.63	389.82	61.34	282.28	47.10	1270.74	179.86
23	Thiruppur	162.94	16.01	460.30	67.43	353.08	60.37	241.76	42.52	1218.08	186.33
24	Thiruvallur	210.39	23.84	387.62	50.59	387.61	163.87	288.33	44.72	1273.94	283.01
25	Thiruvannamalai	258.90	25.59	538.15	63.17	591.20	143.52	302.51	45.79	1690.75	278.07
26	Thiruvarur	234.97	23.49	493.00	59.25	416.85	79.93	492.92	67.73	1637.74	230.40
27	Thoothukudi	89.43	10.15	275.81	40.68	283.01	68.50	190.26	32.69	838.51	152.02
28	Trichy	169.92	24.20	489.52	64.04	449.00	83.03	306.08	49.53	1414.52	220.80
29	Vellore	324.76	52.60	704.88	86.03	587.13	87.59	486.69	65.34	2103.46	291.56
30	Villupuram	251.43	31.47	613.74	92.61	665.79	146.64	572.84	118.75	2103.79	389.46
31	Virudhunagar	65.43	8.00	305.06	49.94	362.19	59.94	230.34	47.87	963.02	165.75
TOTAL		4848.98	645.54	12917.01	1866.86	12747.28	2591.29	8719.33	1529.58	39232.60	6633.27

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Table-IV

Details of Rural Population, Length of Rural Roads & Allocation under SFC Grants

Sl. No.	District	Total Length (in 'Km')	Rural Population	Road Density (Length in Km/1000 persons)	Grant for 2013-14 (Rs. in Crore)	Allocation/ Km (Rs. in Lakhs)
[1]	[2]	[4]	[5]	[6]	[7]	[8]
1	KARUR	4622.72	6,68,360	6.92	41.10	0.89
2	PUDUKKOTTAI	9253.2	13,41,111	6.90	90.53	0.98
3	TIRUVARUR	6825.21	10,06,482	6.78	70.83	1.04
4	TIRUPPUR	6432.46	11,39,466	5.65	69.73	1.08
5	SIVAGANGAI	5132.34	9,52,610	5.39	69.68	1.36
6	NAMAKKAL	5395.79	10,87,895	4.96	70.75	1.31
7	THANJAVUR	8152.79	16,67,809	4.89	110.49	1.36
8	ARIYALUR	3224.49	6,71,100	4.80	42.79	1.33
9	NAGAPATTINAM	5526.17	12,61,288	4.38	83.11	1.50
10	RAMANATHAPURAM	4374.3	10,09,270	4.33	71.21	1.63
11	TIRUCHIRAPPALLI	6135	14,71,945	4.17	92.28	1.50
12	PERAMBALUR	1950.33	4,68,017	4.17	28.84	1.48
13	SALEM	8126.88	19,57,105	4.15	115.60	1.42
14	ERODE	4634.28	11,30,722	4.10	67.65	1.46
15	DINDIGUL	5743.27	14,57,412	3.94	86.77	1.51
16	COIMBATORE	3737.53	10,21,359	3.66	62.13	1.66
17	DHARMAPURI	4592.08	12,90,530	3.56	74.52	1.62
18	KRISHNAGIRI	4592.02	14,65,743	3.13	87.28	1.90
19	CUDDLALORE	5595.47	18,00,133	3.11	120.97	2.16
20	THOOTHUKKUDI	2901.18	9,71,273	2.99	68.46	2.36
21	THENI	1662.96	5,75,394	2.89	35.45	2.13
22	VILLUPURAM	8000.75	29,12,960	2.75	195.71	2.45
23	TIRUVANNAMALAI	5482.45	20,39,049	2.69	142.26	2.59
24	TIRUVALLUR	4206.18	15,85,250	2.65	103.56	2.46
25	TIRUNELVELI	4313.22	16,45,509	2.62	102.85	2.38
26	KANNIYAKUMARI	1670.46	6,46,441	2.58	37.32	2.23
27	VELLORE	5958.22	24,82,556	2.40	157.60	2.65
28	VIRUDHUNAGAR	2802.39	12,86,543	2.18	85.07	3.04
29	MADURAI	2572.54	13,00,481	1.98	84.84	3.30
30	KANCHEEPURAM	2908.64	18,61,789	1.56	121.32	4.17
31	THE NILGIRIS	1017.84	6,71,100	1.52	17.30	1.70
		1,47,543.16	4,08,46,702	3.61	2608.00	1.77

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Table-V**Annual Fund Requirement for Maintenance**

Sl. No	Details	Length of Roads (in Km)
1	Length of Black topped PU and VP roads as on date.	88,860
2	Length of BT roads proposed to be taken up for upgradation during 2015-16	2,800
	Length of BT roads to be maintained	86,060
3(i)	Length of Roads newly constructed/upgraded to BT standards in the last 5 years which are under routine maintenance	24,317
(ii)	Length of BT Roads taken up for upgradation in the last 5 years	9,063
(iii)	Length of BT Roads taken up for periodic Maintenance in the last 5 years	11,893
	Total Length of BT Roads which are under Routine Maintenance (A)	45,273
4	Length of BT roads constructed before 5 years which need to be taken up for Periodic Renewal (86,060-45,273)	40,787
5	Length of roads normally taken up for Periodic Renewal every year	2,500
	Balance (B)	38,287
6	Total Length of BT Roads which are to be taken up for Routine Maintenance (A+B)	83,560
	Funds Requirement for routine maintenance	Amount (Rs. in crore)
7	Tentative amount Required for routine maintenance of 83,560 Km length of roads at Rs.25,000 /Km	200.00

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Table –VI-1**Various Items under Routine Maintenance**

- i. Clearing/re-shaping of road side drains.
- ii. Pothole filling (WBM & BT).
- iii. Filling up edges of asphalt surface.
- iv. Dressing of berms, earth work on berms, rain cuts and dressing of earthen embankments, Turfing whenever necessary.
- v. Refixing displaced guard stones, White washing guard stones, parapets of CD works.
- vi. Fixing disturbed caution board / Village Name board / Speed limit board, etc.
- vii. White washing and Geroo painting of trunks of trees.
- viii. Cutting of branches of trees etc obstructing flow of traffic and line of sight, and cleaning wild growth on berms.
- ix. Topping of W.B.M. blindage including picking of loose metal.
- x. Maintenance of catch water drains.
- xi. Clearance and desilting of cross drains.
- xii. Making up the loss of profile (for gravel roads).
- xiii. Rectifying Corrugated Surface (for gravel and WBM Roads).
- xiv. Filling up local depressions, ruts, potholes and erosion control (for gravel and WBM Roads).
- xv. Regravelling (for gravel roads).
- xvi. Repairing damaged edges (for WBM).
- xvii. Rectifying relevelled surface (for WBM).
- xviii. Periodic surface renewal (for WBM).
- xix. Painting of Km & Hecto stones, Logo & Sign Boards

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Table -VI-2**Periodicity of Routine Maintenance Activities**

Sl. No.	Name of Item/ Activity	Frequency of operation in one year
1.	Restoration of rain cuts and dressing of berms as per clause 1902 of the Specifications.	Once generally after rains (In case of areas having rainfall more than 1500 mm per year, as and when required).
2.	Making up of shoulders as per clause 1903 of the Specifications.	As and when required.
3.	Maintenance of Bituminous surface road and/ or gravel road and/or WBM road including filling pot holes and patch repairs etc as per clause 1904, 1905 and 1906 of the Specifications.	As and when required.
4.	Maintenance of drains as per clause 1907 of the Specifications.	Twice (In case of hill roads as and when required)
5.	Maintenance of culverts and cause ways as per clause 1908 and 1909 of the Specifications	Twice (In case of hill roads as and when required)
6.	Maintenance of road signs as per clause 1910 of the Specifications.	Maintenance as and when required. Repainting once in every two years.
7.	Maintenance of guard rails and parapet rails as per clause 1911 of the Specifications	Maintenance as and when required. Repainting once in a year.
8.	Maintenance of 200 m and Kilo Meter stones as per clause 1912 of the Specifications.	Maintenance as and when required. Repainting once in a year.
9.	White washing guard stones	Twice
10.	Re-fixing displaced guard stones	Once
11.	Cutting of branches of trees, shrubs and trimming of grass and weeds etc as per clause 1914 of the Specifications.	Once generally after rains (In case of areas having rainfall more than 1500 mm per year, as and when required).
12.	White washing parapets of C.D. Works	Once

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