



ABSTRACT

State Schemes – Introduction of New Comprehensive Road Scheme called Tamil Nadu Rural Roads Improvement Scheme (TNRRIS) 2015-2016 – Orders - Issued.

Rural Development and Panchayat Raj (SGS.2) Department

G.O. (Ms) No.81

Dated: 24.05.2015.

மன்மத, வைகாசி – 10

திருவள்ளூர் ஆண்டு 2046

Read:

From the Director of Rural Development and Panchayat Raj D.O.Letter No. 14590/2015/TU1 Dated 06.03.2015.

ORDER:

The Director of Rural Development and Panchayat Raj has stated that the Government of Tamil Nadu have been giving top priority for the improvement of Rural Road network in the State. The surface details of the Village Panchayat and Panchayat Union roads in the State is as given below:

Sl. No	Type of Surface	Village Panchayat Road	Panchayat Union Road	Total
		Length in 'Km'		
1	Black topped	60,211	28,649	88,860
2	Cement concrete	2,569	273	2,842
3	Double layer WBM	2,468	330	2,798
4	Single Layer WBM	8,722	672	9,394
5	Gravel	6,874	352	7,226
6	Earthen	35,114	1,309	36,423
	Total	1,15,958	31,585	1,47,543

2. The Director of Rural Development and Panchayat Raj has stated that in the last 4 years, the department had taken up about 39,232 Km length of roads at a total cost of about Rs.6,982 crore under various Schemes. A three pronged strategy has been adopted to ensure that the roads are kept in motorable condition:

- (i) Upgradation of Non-BT roads into BT roads.
- (ii) Strengthening of the existing damaged BT roads.
- (iii) Maintenance of the existing BT roads.

The following broad parameters are being adopted for prioritisation of roads:

- (i) Roads connecting unconnected habitations, irrespective of the population, are given first priority.
- (ii) Next Priority is given for upgrading and strengthening of bus-plying and minibus-plying roads.
- (iii) Important link roads connecting market places, Educational/Health Services and roads which have any other good utility value are then selected.

3. The major funding for road development has been from the exclusive road schemes such as NABARD-Rural Infrastructure Development Fund (RIDF), Pradhan Mantri Gram Sadak Yojana (PMGSY), 13th Finance Commission Grants, Rural Infrastructure Scheme (RIS), Bus Plying Roads Improvement Scheme (BPRIS), and Rural Roads Maintenance Scheme (RRMS). Out of the above schemes, RIS, BPRIS and RRMS are sourced from the State Finance Commission Grants. The above schemes have been designed for specific purposes. For instance, under RIS, only Upgradation of Non-BT roads into BT roads can be taken up. Under BPRIS, only bus-plying roads are permitted to be taken up, and RRMS is meant for periodic renewal of slightly damaged BT roads. Though these schemes are in line with the strategy of the department, a careful analysis of the road network across the districts shows that these schemes cannot fully satisfy the requirements of the districts or blocks if seen on a case by case basis. Similarly, the surface condition of the road also varies from district to district. Hence, instead of having different smaller schemes such as RIS/BPRIS/RRMS with watertight criteria, an omnibus Scheme with higher budgetary allocation for improvement of roads with sectoral allocation for each category of road works is proposed which will provide enough flexibility for the districts to decide on the selection of roads based on the local needs. Providing a Comprehensive Scheme will also aid in better management and focused monitoring of the roads taken up.

4. **New Comprehensive Roads Scheme proposed:-**

The Director of Rural Development and Panchayat Raj has hence proposed that Government should, in 2015-16, launch a Comprehensive Rural Road Scheme namely "**Tamil Nadu Rural Roads Improvement**

Scheme (TNRRIS)''. This Scheme will enable a higher financial allocation to the Districts and flexibility to the Districts to choose the roads based on the local priorities and also facilitate a closer management and monitoring of the works. The Director of Rural Development and Panchayat Raj has sought the following orders from the Government:

- (i) Approval of draft guidelines for the **Tamil Nadu Rural Roads Improvement Scheme (TNRRIS)** 2015-16 as given in Annexure.
- (ii) According administrative sanction for taking the road works in two streams:

Stream-I- Upgradation of Non-BT roads to BT standard with a tentative allocation of Rs.400 crore.

Stream-II- Strengthening of existing Damaged BT roads and Maintenance of existing Damaged BT roads with a tentative allocation of Rs. 400 crore.

- (iii) To provide sanction for meeting Rs. 800 crore from out of the State Finance Commission grants devolution to the Rural local bodies and authorizing the Director of Rural Development and Panchayat Raj to draw the amount of Rs. 800 Crore from the State Finance Commission Grants in the ratio of 60:32:8 from the share of Village Panchayats, Panchayat Unions and District Panchayats respectively.
- (iv) Permitting allocation of 50% of the funds to the districts based on population and the remaining 50%, based on the length of road network in the districts.
- (v) Authorizing the Director of Rural Development and Panchayat Raj, to permit inter-component flexibility for allocation of funds, on a case by case basis, based on the specific request of the District Collectors with proper justifications, under intimation to the Government.

5. The Government after careful examination of the proposal of Director of Rural Development and Panchayat Raj in para 4 above issue the following orders:-

- (i) Sanction is accorded for the introduction of New Comprehensive Scheme called Tamil Nadu Rural Roads Improvement Scheme. The guidelines for the new Scheme are approved and annexed to this Government Order.
- (ii) According administrative sanction for taking the road works in two streams:

Stream-I- Upgradation of Non-BT roads to BT standard with a tentative allocation of Rs.400 Crore.

Stream-II- Strengthening of existing Damaged BT roads and Maintenance of existing Damaged BT roads with a tentative allocation of Rs. 400 Crore.

- (iii) Sanction is accorded for meeting Rs. 800 crore from out of the State Finance Commission grants devolution to the Rural local bodies and authorizing the Director of Rural Development and Panchayat Raj to draw the amount of Rs. 800 crore from the State Finance Commission Grants in the ratio of 60:32:8 from the share of Village Panchayats, Panchayat Unions and District Panchayats respectively.
- (iv) Permission is accorded to allocate 50% of the funds to the districts based on population and the remaining 50% based on the length of road network in the districts.
- (v) The Director of Rural Development and Panchayat Raj is authorized to permit inter-component flexibility for allocation of funds, on a case by case basis, based on the specific request of the District Collectors with proper justifications, under intimation to the Government.

6. This order issues with the concurrence of Finance Department vide U.O. No.1799/FS/P, Dated 24.05.2015.

(BY ORDER OF THE GOVERNOR)

GAGANDEEP SINGH BEDI
SECRETARY TO GOVERNMENT

To
The Director of Rural Development and Panchayat Raj, Chennai – 15.
All District Collectors (Except Chennai),
All Project Directors, District Rural Development Agency
(through the DRD & PR, Chennai – 15).
The Accountant General, Chennai – 18/35.

Copy to:

Chief Minister's Office, Chennai-9,
Senior P.A. to Hon'ble Minister (M.A., R.D., Law, Courts and Prisons).
Finance (RD) Department, Chennai – 9.
RD&PR (B&C) and (O.P.II) Department, Chennai-9.

/Forwarded/By order/

SECTION OFFICER

Guidelines for **Tamil Nadu Rural Roads Improvement Scheme (TNRRIS)**

1. Introduction

The rural road network is an integral part of any rural development programme. **Planning and optimal use of funds** is critical to strike a balance between the ever growing clamour of the rural people for new roads and the pressing demand for the improvement of existing roads. Considering that the status of rural road network varies from district to district, there is need for having flexibility so as to have better approach towards improvement of rural roads. For this purpose, the Government has proposed to introduce a comprehensive scheme called **Tamil Nadu Rural Roads Improvement Scheme (TNRRIS)**.

2. Objective

The objective of the scheme is to ensure optimal allocation of funds for Upgradation, Strengthening and Maintenance of Panchayat Union and Village Panchayat roads.

3. Allocation of funds to the Districts

50% of the funds will be allocated to the districts based on population and the remaining 50% based on the length of road network.

4. Components of TNRRIS

Tamil Nadu Rural Roads Improvement Scheme (TNRRIS) will be implemented in two streams. **Under Stream-I**, Upgradation of the Non-BT roads to BT standards shall be taken up and **under Stream-II**, Strengthening and Maintenance of Existing damaged roads shall be taken up. 50% of the funds allocated shall be earmarked for Stream-I and the balance 50% for Stream-II. From out of the allocation under stream-II, atleast 50% shall be allocated for Bus-Plying roads and not less than 25% of the amount should be earmarked for roads requiring periodic renewal.

5. Type of Works

i) Stream-I

Upgradation of Non-BT roads to BT standard

- Under Stream-I, Earthen, Gravel and WBM roads of the Panchayat unions and Village Panchayats should be taken up for upgradation as Black Topped roads.

ii) Stream-II

I. Strengthening of existing Damaged BT roads

- Under Stream-II, existing, damaged BT roads with a pavement condition Index (PCI) value of 2 and below only should be selected.
- Damaged BT roads, requiring one or more layers of WBM + BT alone should be proposed under this scheme.

II. Maintenance of existing Damaged BT roads

- Damaged BT Roads, which require periodic Maintenance/Renewal, should be selected.
- Worn out BT roads, requiring pothole filling/patch work and relaying of BT surface alone should be proposed under this scheme.

(In case if a portion of a road is in good condition or has been improved / maintained recently then that portion of the road should not be proposed)

6. Prioritisation and selection of works (common for both the Streams)

- (i) Roads connecting unconnected habitations, irrespective of the size of population, should be given first priority.
- (ii) Next Priority should be given for upgradation of non-Black Topped bus- plying and mini-bus plying roads.
- (iii) Important link roads connecting market places, Educational/Health Services and roads leading to other utility services.
- (iv) The entire stretch of a road should be taken up for improvement irrespective of the length. Roads with a length of less than 1 Km should not be taken up.
- (v) **The roads should be selected only from the list of updated Village Panchayat and Panchayat Union roads which are available in the tnrd website, and roads without the 'road code' are not permitted to be taken up under this scheme.**
- (vi) In cases where only a portion of a long stretch of road is damaged, then only such damaged portion should be selected.
- (vii) Roads already proposed in other schemes should not at all be proposed under this scheme.

- (viii) Roads passing through/on PWD Channel, other water bodies like ooranies, Kanmai and Tank bund should not be proposed. Roads under litigation/involving Patta land, even if it is a small stretch, should not be proposed. It should also be ensured that the proposed road does not fall in Forest land, irrespective of the length of the stretch.
- (ix) Road works should be selected based on joint inspection of the BDO (Block Panchayat) and the Assistant Engineer (RD) concerned. The concerned Assistant Engineer (RD) should ensure that the roads are prioritized based on the present condition of the surface and the time lag after the previous maintenance in the case of existing BT roads. The BDO (BP) and the Assistant Engineer (RD) will select and prioritize the works to be taken up strictly as per the guidelines.
- (x) Roads that have been improved by Panchayat Unions or Village Panchayats **under any of the Rural Development Schemes within the last 5 years or nearing the timeline shall not be taken up. (Under extraordinary circumstances, if the road is heavily damaged warranting immediate renewal/maintenance due to act of natural forces, such roads can be proposed after due verification and certification by the Collector after inspection which will also verified by the ADRDs, SE and EEs from the Directorate. The estimates of such work will be technically approved by the SE(RD) irrespective of the value of work)**

7. Specifications and Project Preparation

Roads taken up under this scheme shall conform to specifications and standards laid down in **IRC-SP-20 Rural Roads manual, MoRD specifications on Rural Roads or MoRTH specifications as the case may be. Geometric standards shall be maintained as per IRC SP 20 Rural Roads Manual, such as**

- i. Carriage way width should be 3.75m for single lane.***
- ii. Roadway width should be 7.5m in case of Plain & Rolling terrain and 6.0m in case of Mountainous and steep terrain.***
- iii. Right of way should be 15 m for plain and 12m for Steep terrain.***
- iv. Ruling Gradient should be 1 in 30 for Plain and 1 in 20 for Steep terrain.***

- v. Camber should be 3 to 3.5 % for Bituminous pavement.**
- vi. Super elevation should be 7% for plains and 10% for hilly areas and Minimum super elevation should not be less than percentage of the camber.**

In case of upgradation or strengthening of roads, where the traffic is more than 2msa (million standard axles) strengthening of flexible pavements by using Wet Mix Macadam (WMM), Bituminous Macadam (BM) and Bituminous Concrete (BC) as per traffic intensity and strength of the soil should be done as per IRC-37-2012, (Guidelines for Design of Flexible pavements). Use of Automatic Paver Finisher and other equipments are permitted for laying of Bituminous layers.

After the selection of roads, detailed estimates shall be prepared by the engineers concerned after thorough field inspection. Only after the actual estimates are prepared, the proposal should be put up by the Project Director, DRDA to the District Collector for Administrative Sanction.

Transect walk with photographs at every 100m should be prepared while submitting proposal. The details of transect walk should be part of the Detailed Project Report.

Estimates should be prepared after carrying out detailed topographical and soil surveys and the proposed thickness of the road should be based on existing sub- grade CBR, traffic intensity and existing crust. **Approximations based on physical observations are not at all permitted.**

Improvement of berms and widening of shoulders to the required standards is mandatory and the Geometric standards indicated in para 7 above shall be followed. The typical cross section of a rural road is given in the annexure to these guidelines for reference.

Cross drainage and protective works should be taken up along with the road, without omission, wherever necessary. In cases where bridge works of more than 15m length are required, they should be taken up under any other suitable scheme at the District level. **However, the road and bridge works should be taken up concurrently.** Drainage (Earthen/masonry) must be provided as per site condition.

In case of Maintenance of existing roads, Repairs/Reconstruction of the existing Cross drainage works may be taken up along with the Road

works to ensure proper drain of rain water. **However, construction of new CD works is not permitted under maintenance component.**

The following are the Non-negotiable of these guidelines:

- a) Roads less than 1Km length shall not be taken up under this scheme.***
- b) Construction of Berms shall be undertaken simultaneously along with the construction of each component of carriageway. Construction of berms after the laying of BT will be viewed seriously and will lead to appropriate disciplinary action.***
- c) Construction of CC pavements shall be taken up in the residential areas and the CC pavements have to be designed as per IRC SP-62, 2014, Guidelines for Design and construction of CC pavements for low volume roads.***

8. Road Safety Measures

The purpose of Road Signs is to promote road safety and efficiency by providing for orderly movement of road users on the roads. **Road Signs** notify road users of regulations and provide warning and guidance needed for reasonably safe, uniform and efficient operation. Hence, the location and the type of road signages, road markings etc should be identified during transect walk and necessary provisions should be made in the estimate.

Cautionary, mandatory, informatory signs using road markers, reflectors, delineators etc are to be provided depending on the site requirement in accordance with IRC: 67-2012 guidelines for Road Signs. In the case of road markings, the Code of Practice for Road Markings, IRC: 35-1997 has to be adopted. For safe and easy access of differently-abled persons, informative signs indicating the international wheelchair symbol shall be installed at appropriate places especially at important junctions, busy traffic zones, school zones etc. Similarly, engraving on the surface of the zebra crossing for blind or for persons with low vision shall also be provided. Construction of curb cuts and slopes in the pavements for easy access of the wheel chairs is also to be provided mandatorily, wherever required. Road safety measures like road signs should not exceed 5% of the total cost of the work.

9. Avenue Plantation

Raising of avenue plantations will be an integral component under this scheme. Fruit bearing trees, shade trees, timber trees etc should be planted along the roadside beyond the outer periphery of the berms so as

to avoid cutting of trees in future during widening/improvement in convergence with MGNREGS. Avenue Plantation shall be done as per IRC-SP-103-2014 (Guidelines for Tree Plantation along Rural Roads) Avenue plantations need not be done from this scheme's fund. The same can be done either under general Fund or MGNREGS or in co- operation with the Forest Department under the special scheme for massive tree plantation in non – forest areas.

10. Technology Initiatives

In order to promote cost-effective and fast-track construction technologies in the construction of rural roads, it has become imperative to mainstream the technologies already developed through R&D in the past.

Following Technologies may be adopted based on the requirement and need:

- Soil stabilization Techniques
- Use of Innovative new additives (List of Materials accredited by IRC is available on the Website of IRC and NRRDA)
- Use of fly ash
- Cold mix technology using bitumen emulsions for bituminous wearing coat (premix carpet, surface dressing) – IRC: SP: 20: 2002 (Rural Roads Manual)

The above list is indicative and the choice of technology is not limited to the above and appropriate technology can be adopted based on field conditions. Selection of technology shall be done in consultation with and approval of the Superintending Engineer (RD) and the State Technical Agency, NIT, Trichy. The guidelines on technology initiatives issued by NRRDA may be referred for this purpose.

11. Test verification of list of works and the estimates

The District Collectors shall, on getting the proposals for Administrative Sanction under **Tamil Nadu Rural Roads Improvement Scheme (TNRRIS)**, depute officials to test check the need and genuineness of the works identified and correctness of the estimates prepared. The District Collector shall himself inspect at least 2% of the works before according Administrative Sanction. **The Project Director, DRDA and EE (RD), will super-check atleast 10% of the works each and the AEEs (R&B) & AEE (RD) and other Assistant Director level officers shall each inspect at least 20% of the works independently and check the correctness of the estimates.** Thus, the District Collectors should ensure 100% super-check of the roads proposed under the Scheme.

12. Administrative Sanction

The District Collector will accord Administrative Sanction to the works after completing 100% test-verification as prescribed in Para 11 above. The District Collectors shall have the right to amend the list of works, if need arises after consultation with the Director of Rural Development & Panchayat Raj.

13. Technical Sanction

Technical sanction will be accorded by the competent authority as per G.O. (Ms) No.203, RD&PR Department, and dt.20.12.2007, amendment to the Tamilnadu Panchayats (preparation of Plans and Estimates for works and mode and conditions of Contracts) Rules 2007 and G.O.No.54, RD & PR (PR.1) 22.5.2014.

14. Tendering

- (i) **The works under Tamil Nadu Rural Roads Improvement Scheme will be executed following the Tamil Nadu Transparency in Tenders Act, 1998 and Rules, 2000.** Table-II of Notification-II in the Tamil Nadu Panchayats (Preparation of Plans and Estimate of works and mode and conditions of contracts) Rules, 2007 vide G.O. (Ms) No.203, RD&PR Department, dt.20.12.07 will be followed for tendering.
- (ii) The Project Director, DRDA shall be the tender inviting authority. The District Collector/ Chairman, DRDA shall be the Tender Accepting Authority.
- (iii) e-submission of bids shall be followed for the works under TNRRIS.

15. Execution of works

The measurements will be recorded by the Union Engineer/Assistant Engineer and the Check Measurement will be done by the concerned Assistant Executive Engineer(R&B). **The Executive Engineer (RD) shall super check the works as per the norms indicated in G.O. (Ms) No. 54, RD&PR (PR.1) Dept., dt. : 22.05.14.**

The instructions of the National Green Tribunal regarding onsite compliance during construction of roads shall be strictly followed.

16. Quality Control

- All the mandatory Quality control tests before, during and after execution of the works shall be carried out as per the Quality Control Handbook Vol. I and II published by NRRDA. These shall include, but not limited to,
 - i. Sieve Analysis, Atterberg limit, Proctor Density, Field Density for Earth work.***

ii. Atterberg limit, Gradation, Aggregate Impact value, Proctor Density, Field Density, Thickness for sub base and base course.

iii. Rate of spread for prime and tack coat.

iv. Gradation, Aggregate Impact value, Binder Content, Thickness and surface regularity for bituminous surface.

v. Compressive strength of concrete for cross drainage works.

- A separate QC register should be maintained for each work and the record of tests shall be entered by the Assistant Engineer and verified by the Assistant Executive Engineer (R&B) and Executive Engineer (RD).
- QC register shall be submitted along with the bills and the same shall be verified before release of payment.
- The details of the QC tests conducted, observations made etc shall be entered in the online QC module in tnrd.gov.in website.

17. Monitoring

The execution of the works taken up under **Tamil Nadu Rural Roads Improvement Scheme (TNRRIS)** will be monitored through the **Real Time Monitoring System developed by NIC, Chennai** in order to ensure continuous monitoring and for expeditious completion of works.

18. Documentation

Proper documentation of the works should be done capturing various processes in the implementation of the scheme. Photographs of the site before undertaking the work, during execution of the work and after completion of the work should be taken and properly documented.

The Secretary to Government, Rural Development and Panchayat Raj Department is empowered to modify the guidelines of this Scheme, whenever necessary, in consultation with the Director of Rural Development and Panchayat Raj.

GAGANDEEP SINGH BEDI
SECRETARY TO GOVERNMENT

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SECTION OFFICER