

The Odisha Gazette

EXTRAORDINARY
PUBLISHED BY AUTHORITY

No. 1241 CUTTACK, WEDNESDAY, JULY 26, 2017 / SRAVANA 4, 1939

No. 28585301292015/RD

DEPARTMENT OF RURAL DEVELOPMENT
RESOLUTION

Dt. 26.07.2017

Sub: Odisha Rural Roads Maintenance Policy, 2017.

1. Introduction

1.1 Rural road network in Odisha

Odisha has a geographical area of 1,55,707 lakh sqm Kms. and population of about 4.2 crores as per the census data of 2011. Approximately, 83% of population of Odisha live in villages. Rural Roads play an important role for the socio-economic development of rural people.

The road network of Odisha comprises different categories of roads such as National Highway (NH), State Highway (SH), Major District Roads (MDR), Other District Road (ODR) and Village Road (VR). The total road length in Odisha is 2,49,570 Kms. Other District Roads (ODR) and Village Roads (VR) are classified as rural roads.

The length of different category of roads along with name of the Govt. Departments owning and maintaining them as on 31.03.2016 are given below:

SI. No.	Classification	Length (in Km.)	Owning & maintaining Deptt.
1	NH	2131	NHAI
2	NH	1536	NH Organisation (Works Deptt)
3	SH	3664	Works Deptt.
4	MDR	3973	Works Deptt.
5	Urban Road	18591	H & UD Deptt.
6	ODR	6653	Works Deptt.
7	Gram Panchayat Road (Village roads)	134876	PR&DW Deptt.
8	Panchayat Samiti Road (Village Roads)	25703	PR&DW Deptt.
9	Rural Roads (ODR & Village roads)	38906	Rural Development Deptt.
10	Forest Road (Village roads)	7515	Forest & Environment Deptt
11	Irrigation (Village roads)	6022	WR Deptt.
	Total	249570	

Majority of rural roads are borne in the books of Panchayati Raj & Drinking Water Department, Rural Development Department, Water Resources Department and Forest Department. The total length of such rural roads is 2,19,675 Kms. which is 88% of entire road network in Odisha.

1.2 Need for rural road maintenance policy.

The objective of road maintenance is to prolong the life period of the road by reducing the rate of deterioration, reduce the cost of vehicle operation and sustain socio-economic benefits of improved road access. Maintenance of roads is a continuous process after construction or improvement. Considering average construction cost of Rs.40 lakh per Km (excluding land cost), the current asset value of rural roads of Odisha is Rs.87,870 Crore. However, 160,579 Kms. of PR&DW Deptt. roads may have lower per Km. Cost. There is a need to protect these assets along with assets to be developed in future by formulating and implementing a suitable maintenance policy.

The Govt. of Odisha 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 “Odisha Rural Roads Maintenance Policy, 2017”.

2. Policy notes

2.1 Objective:

Continuous maintenance and renewal as per requirement of all the rural roads of the state as per the predetermined parameters and specifications by optimal utilisation of resources.

2.2 Definition:

i) State: - means State of Odisha

ii) Rural road: - All the roads of the state, which are not defined under the category of National Highway (NH), State Highway (SH), Major District Road (MDR), Urban roads are considered as rural roads or the roads as defined by Indian Roads Congress (IRC).

iii) Classification of maintenance activities.

In line with national practice, maintenance operations in the State are classified under the following sub-heads:

- Routine maintenance
- Periodic maintenance
- Special repairs
- Flood damage repairs / emergent repairs

iv) Routine maintenance

Routine maintenance includes the following types of works:

- upkeep of road pavements and side shoulders;
- upkeep of the roadside drainage system;
- upkeep of culverts and bridges, and earth retaining structures and parapets;

- keeping signboards, KM stones and other traffic aids and furniture in good condition;
- maintenance of roadside arboriculture, and
- upkeep and maintenance of inspection bungalows and gang huts.

v) Periodic maintenance

This involves periodic renewals to the road carriageway, whether gravelled, metalled or blacktopped, to ensure that adequate level of service for users is maintained.

vi) Special repairs

Special repairs are urgent works required to prevent further deterioration of roads and structures and to ensure safety.

vii) Flood damaged repairs/emergent repairs

Flood damage repairs/emergent repairs involve works to restore traffic on roads affected by severe weather and other natural events, e.g. heavy rains, floods, cyclones, landslides and sand dunes.

3. Guiding Principles:

- a. Ownership of the roads:** Construction of rural roads in the state is done by various departments, namely, Panchayati Raj & Drinking Water Department, Rural Development Department, Works Department, Department of Water Resources and Forest & Environment Department. The responsibility of maintenance & the ownership of the road lies with the department which have constructed the roads or taken over on transfer from other department for upgradation & maintenance.
- b. Ownership Transfer:**
- (i) As per the need, the rural roads constructed by any department can be transferred to another department with the mutual consent of both the involved departments.
 - (ii) If any road is owned by two or more departments partly, the department owning the major portion of the road will take over entire road on mutual consent.
 - (iii) If due to increase of traffic and other consideration, there is necessity of transfer of rural roads for upgradation to higher category of road like Major District Road (MDR), State Highways or National Highways etc, the same can be transferred to the concerned Department.

- c. **Need for NOC:** For some reason if the maintenance of road is done by any other department without ownership transfer, then it will be necessary to obtain a “No Objection Certificate” (NOC) from the parent department.
- d. **Nodal department for road maintenance policy for the state for rural roads:** Responsibility of preparing maintenance policy of rural roads and its timely amendments will be with the Rural Development Department, Govt. of Odisha as Nodal Deptt.

A Committee under the Chairmanship of Secretary of Rural Development Department with senior level officers from Works Department, R. D. Department, Department of Water Resources, Forest & Environment Department and Panchayati Raj & DW Department will examine the maintenance policy and suggest amendments as and when required, which will be finally approved by Govt.

- e. **Use of rural road in other development works :**

(i) Rural roads are likely to be used for transportation of minerals and materials for construction works in heavy vehicles by other Govt. departments and may, therefore, get damaged. In such cases, the concerned Govt. department will deposit the cost of repair to bring the road to its original condition with the concerned rural road owning department.

(ii) Rural roads are also likely to be used in transportation of materials through heavy vehicles for/by industries run by private or public sectors. This may cause damage to rural roads. The concerned industry will deposit cost of upgrading the said road to cater their needs and maintenance cost based on the estimate prepared by the road owning department. The owning department will improve and maintain the road.

- f. **Dedicated Planning, Budgeting and Monitoring (PBM) Unit :**

A dedicated Planning, Budgeting and Monitoring (PBM) Unit will be established in each of Rural Road owning Administrative Departments.

4. Road maintenance management system:

There is a growing need to make a comprehensive road database to carry out the maintenance work in a planned and efficient way. The database will consist of road inventory details, road section inventory and road condition index report for every rural road. The road condition index of each rural road will be updated every year by all concerned departments. The sample format for road inventory & road condition survey is at *Annexure-II*. An Annual Maintenance plan should be prepared by each owning department of rural roads based on Road Condition Index. Database of all rural roads

with inventories will be created by respective department. A GIS based rural road network map will be prepared and shared by Nodal Department i.e., Rural Development Department to all user departments.

4.1 Annual Maintenance Plan:

Annual Maintenance Plan will be made at the beginning of each financial year by the respective Administrative Department, consisting the details about the maintenance works to be carried out in that particular year for proper utilisation of funds available. Road condition index and population served will be given weightage in making the Annual Maintenance plan. Annual Maintenance plan will include the roads requiring:

- i) Routine Maintenance
- ii) Periodic Maintenance
- iii) Special repairs
- iv) Flood damage repairs /emergent repairs.

5. Yearly assessment of road assets:

As per the data base, the replacement value of each road will be assessed and updated in the road management system every year in the month of July by the respective Administrative Departments.

Sr. No.	Type of road	Unit Cost * □ Lakh/Km	Total Length Km	Total Value □ Lakh
1	Newly constructed			
2	Upgraded			
3	Renewed			

*At prevailing rates.

6. Maintenance norms:

An Empowered Committee (EC) will be constituted under the Chairmanship of Development Commissioner-cum-Addl. Chief Secretary with Finance Secretary, Secretary of F & E Department, Rural Development Department, Panchayati Raj & Drinking Water Department, Water Resources Department, Works Department, E.I.C (Civil), E.I.C, Rural Works & E.I.C, Water Resources as members to finalise the funding norms for maintenance of different category of roads of different departments. This Committee will review & revise norms as and when required for better maintenance of rural roads. A senior officer of the concerned department will be the member convenor.

7. Annual budget for maintenance:

Administrative Departments will assess the requirement of funds basing on the funding norms decided by the Committee & propose the same to Finance Department every year during preparation of annual budget for necessary budget provision.

For implementation of this policy, Administrative Department will prioritize the rural road maintenance within the budgetary allocation. Government will not create a dedicated fund for maintenance of rural roads. The rural roads maintenance may also be taken up through convergence of budgetary and extra budgetary resources.

8. Action Plan for time bound removal of maintenance backlog:

Administrative Departments shall formulate an Action Plan for time bound removal of maintenance backlog of rural roads network for bringing the network to an acceptable level of service within a period of 3 years. The road condition data and the report generated through the proposed road maintenance management system shall be used to identify the backlog and remove the same in a period of 10 years in a phased manner and funds for the same shall be made available.

9. Adoption of Innovative Methods :

The concerned department shall identify and pilot innovative maintenance models and technologies. These innovations shall be in the form of piloting and adopting different models of outsourcing maintenance works which could be in the form of Performance Based Maintenance Contracting (PBMC), Community Contracting or a Hybrid system involving combination of PBMC and conventional contracting method. 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.

10. Performance Evaluation/Technical Audit:

To ensure effective maintenance of roads, technical audit will be conducted by independent team of engineers or through consulting firms having expertise in the area of road maintenance. This will be done on sample basis by rural roads owning departments every year. This report will be examined by the concerned Department of State Govt. and action for remedial measures/improvement will be taken accordingly.

The scope of technical audit will cover the following points:

- (i) Adequate frequency of inspection by department officers.
- (ii) Quality of works.
- (iii) The prioritisation of maintenance with reference to guidelines of the policy.
- (iv) Technical analysis of work executed with reference to damages.
- (v) Observation on maintaining State rural road assets value.

11. Training & development programme:

The administrators and engineers of the state at various levels in order to have exposure in construction and maintenance of roads to keep pace with the technological developments will be sent on study tours & training programmes within the country & abroad from time to time.

12. Implementation of Rural Road Maintenance Policy:

The maintenance work will be executed by the concerned Department following established procedure as defined in OPWD Code. The specification, determination of priority for maintenance activities will be adopted from time to time as per IRC specification & guidelines. The present specification & guidelines are enclosed at *Annexure-I & Annexure-II*.

ORDER

It is ordered that the resolution be published in the Extra ordinary Gazette of the Odisha Government for the general information and copy be recommended to all the Departments of Government/Heads of Department and other concerned.

By order of Governor

Bishnupada Sethi
Commissioner-cum-Secretary to Govt.

Enclosure:

1. Annexure-I in 2 pages.
2. Annexure-II in 4 pages.

1. Specification for maintenance of rural roads:

IRC guidelines will be followed for the maintenance activities.

- IRC:82:2015 - Code of Practice for Maintenance of Bituminous Surface of Roads.
- IRC:SP:83:2008 - Guidelines for Maintenance, Repairs & Rehabilitation of Cement Concrete Pavements.
- IRC:SP:35:1990 - Guidelines for Inspection and Maintenance of Bridges
- IRC:SP:77:2008 - Manual for Design Construction & Maintenance of Gravel Roads
- IRC:SP:17:1977 - Recommendations About Overlays on Cement Concrete Pavements
- IRC:116:2014 - Specifications for Readymade Bituminous Pothole Patching Mix using Cut-Back Bitumen.
- IRC:SP:20:2002 - Rural Roads Manual
- IRC:SP:40:1993 - Guidelines on Techniques for Strengthening and Rehabilitation of Bridges.
- IRC:SP:48:1998 - Hill Road Manual
- IRC:SP:52:1999 - Bridge Inspector's Reference Manual
- IRC:SP:74:2007 - Guidelines for Repair and Rehabilitation of Steel Bridges.
- IRC:SP:80:2008 - Guidelines for Corrosion Prevention, Monitoring and Remedial Measures for Concrete Bridge Structures.

2. Procedure to determine Road Condition Index for assessment of Maintenance condition:

The condition of road will be evaluated on different parameters and marks are given accordingly. The marks obtained for different parameters are added and then total marks obtained are used for deciding priority for maintenance works of roads. Such road indexing will be done every two years in the state. The predefined format is attached. Road condition index will be used for assessment for renewal and special maintenance need.

3. Determination of priority for maintenance activities:

In case of inadequate fund availability for maintenance, prioritisation of maintenance work will be done. For this purpose road condition index, population served by the roads will be considered. Priority will be decided as per following:

- First : road condition index,
- Second : population served by the roads.

Need for maintenance work will be classified according to road condition index of roads as per following:

Road Condition Index

Road Condition Rating	< 230	230-400	400-600	600-800	800-900	900-1000
Road condition	Very good	Good	Fair	Bad	Very bad	Extremely bad
Maintenance required*	Routine maintenance	Routine maintenance with top priority	Renewal	Immediate Renewal	Special repair	Up-gradation

**Annexure-II
Form No.1**

Road Inventory

Dept. Code	Dist. Code	Road Code	Block Name	Vidhan Sabha	Road class	Road Name	Origin	Destination	Road Length	Road width	No. of CD structure	Name of Habitation	Habitation Code	Habitation population	Year of Construction	Design traffic Density (evpd)	Remarks
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

Annexure-II Form No.2

Road Section Inventory

Dept. Code	Dist. Code	Road code	Block Name	Road Name	Section Number	Chainage From	Chainage To	Section Length	Carriage type	Carriage width	Thickness of sub-grade	Thickness of sub base course	Thickness of base course	Thickness of bituminous layer				Thickness of CC Pavement (if CC pavement)	Sub-grade CBR %	Special condition of area (black cotton/ water logging area) mention changes			
														B	DB	SD	OG						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		

**Annexure-II
Form No.3**

Bridge, Culverts and Cause way Inventory detail

Dept Code	Dist. Code	Block code	Road Code	Structure type	Structure No.	Structure Chainage	Structure length	Constn. Type	No. of Spans / Vents	Total Clear Span	Type of Foundation	Pier Type	Structure Condition	Joints and riding quality	Repairable or Not	Rema rks

**Annexure-II
Form No.4**

Road Condition Survey (Bituminous / Gravel road)

Dept. Code	Dist. Code	Road code	Block Name	Road Name	Section Number	Chainage From	Chainage To	Condition of carriage way (800 marks)				Condition of Shoulder (200 Marks)		Total marks obtained	Date of construction / last renewal	Remarks	
								Pot Holes	Patches and Cracks	Rutting & Depressions	Edge break	Camber	Matching with carriage way surface				
1	2	3	4	5	6	7	8	250	250	200	100	100	1000				
								9	10	11	12	13	14	15	16	17	

Pot holes

< 2% - Upto 65 Marks
2 to 5% - Upto 125 marks
5 to 7% - Upto 190 marks
more than 7% - Upto 250 marks

Shoulder Camber

Camber upto 5% - Upto 25 marks
Camber 5 to 7.50% - Upto 50 marks
No/negative/excessive camber - upto 100 marks

Patches and Cracks

< 5 % - Upto 65 marks
5 to 10% - Upto 125 marks
10 to 20 % - Upto marks
more than 20% - Upto 250 marks

Rutting & Depressions

< 10 % - Upto 55 marks
10 to 20 % - Upto 110 marks
20 to 30 % - Upto 160 marks
more than 30% - Upto 200 marks

Edge break

<10% - Upto 25 marks
10 to 20% - Upto 50 marks
20 to 40% - Upto 75 marks
more than 40% - Upto 100 marks

Matching with carriage way surface

Depression upto 2.5 cm - Upto 25 marks
Depression 2.5 to 5 cm - Upto 50 marks
Depression more than 5 cm - Upto 100 marks