

ANNEXURE – 'A'
(परिशिष्ट- 'A')

**PART I : TECHNICAL GUIDELINES FOR
FINANCIAL RURAL ROADS AND BRIDGES**

1. INTRODUCTION

The purpose of these guidelines is to inform the executing agencies, i. e., State Governments about the general principles and procedures which should be observed in carrying out the NABARD financed Rural Road and Bridge projects. These guidelines apply with regard to availing financial assistance from NABARD under RIDF.

Transport has been termed as a de facto barometer of a region's socio-economic progress. Among the different mores of transport, road transport has got a special place as it carries major share of passenger and goods traffic. However, the efficiency of the road transport system depends on prevailing conditions of roads. In the area of integrated rural development. Rural roads have an added significance.

For purpose of these guidelines, the term Rural roads is extended to include “Other District Roads (ODRs) village road (VRs) and Major District Roads (MDRs), connecting villages to growth centres”

For examining the benefits from the investments made on construction and improvement of Rural Roads, a systematic and scientific approach has to be adopted.

2. CRITERIA FOR RURAL ROAD & BRIDGE PROJECTS

Specific criteria for planning design and construction and socio-economic impact of the project are to be established for Rural roads and Bridges to be financed under the rural infrastructure Development Fund (RIDF-II). Therefore, Rural Roads & Bridges, would have to be designed, constructed and completed in accordance with the following criteria :

The Road and Bridge works which are eligible for assistance from NABARD under RIDF, are categorized below : These should be primarily in the category of Public Roads possessed by Mandal/Block, the State Government, Zilla Parisha, Panchayat Raj Department of Revenue Department, for such assistance.

**Category A : Ongoing works**

New formation, black topping the existing earthen & WBM Roads, River Bridges, Culverts and causeways, widening of Single Lane to Double Lane, etc.

All such works which were taken up by the respective agencies but could not be completed for want of funds, are eligible for assistance.

Category B : New Works

These include new formations, strengthening the existing roads including black topping, construction of bridges, culverts and causeways etc.

Priority at present is for Category A (ongoing works). However, category B (new works) are not excluded from eligibility. Road and Bridges works which can be completed before March 1999 only will be considered for the present. Projects should satisfy the following criteria

2.1 For ongoing road works, mainly strengthening up to black topping and bridge works, which could not be completed for want of funds in the normal course. The works stopped due to contract litigation or land acquisition problems should not be included.

2.2 The ongoing works proposed shall satisfy the design in sub clauses below.

2.3 For the ongoing road works also geometric improvements satisfying the design criteria shall be proposed by acquiring land, if necessary, The cost estimate of such portions which cannot be taken up immediately, may be indicated as Part – II

2.4 For ongoing Bridge Works the hydraulic data, geotechnical details of foundations and design details including drawings shall be furnished. The design of these bridges shall be in accordance with the design criteria of a IRC Bridge Code. Report shall clearly indicate the reason for stoppage of works, problems faced during the execution should be taken into account determine whether the balance work can be expected to be completed before the target date.

2.5 Similar report as noted in sub clause 2.4, shall be furnished about ongoing road works.

2.6 For part A and B, the estimated should consist of two parts.

Part - I : It consists of items which do not involve Land Acquisition

Part - II : Items like Geometric Improvements etc, which involve Land Acquisition.

2.7 The following documents should be enclosed ;

i) Details project report covering all aspects, like necessary and nature of work, route selection, condition of existing road, traffic and soil data, design standards, specifications adopted, hydraulic data, materials specification, cost estimates, schedule of construction etc. as stipulated in chapter 9 of IRC SP 20-1979, shall be furnished.

ii) For new road works, socio-economic benefits such as connectivity to villages, access

to service centres like schools, hospitals, growth centres, market yards, industrial centres etc. shall be indicated.

iii) For bridges, design shall be as per IRC standards for two lane carriage way.

3. DESIGN CRITERIA

The design standards as laid down in Indian Road Congress, Special Publications 20 of 1979 & IRC 73 of 1980 are to be adopted by the implementing department in State Government.

3.1 The location of the road proposed under RIDF – II to be indicated in district map duly indicating existing road network of Z.P. & M.P.P./Block and R & B roads.

3.2 Nature of the terrain, type of soil, if agricultural area. Nature of crops grown in the area of project, details of population, service centres like Hospitals, Schools etc. & vehicle growth (categorize), Truck Tractor, Buses & Light Vehicles etc. have to be furnished in the report ; Bullock cart and its share in the agriculture produce movement also to be indicated.

3.3 Geometric Design Standards

The layout and other geometric features of a road have direct influence on the critical cost of its construction and the efficiency and economy of its use by traffic. The safety of the operation is also significantly affected by geometric design. The deficiencies in geometrics should be kept in view initially even were stagewise development is envisaged.

3.3.1 Design Speeds

Choice of design speeds depends on the function of the road as also terrain conditions. Design speed is criterion which determines a number of geometric design features. Design speeds for various classes of roads, i. e. Village Roads (VRs), Other District Roads (ODRs) and Major District Roads (MDRs), as recommended by IRC is given in table;

Table for Design Speeds

S.No.	Road Classification	Plain Terrain		Design Speed, Km/h				Steep Terrain	
				Rolling Terrain		Mountainous Terrain			
		Ruling	Minimum	Ruling	Minimum	Ruling	Minimum	Ruling	Minimum
1	2	3	4	5	6	7	8	9	10
1	Major District Roads	80	65	65	50	40	30	30	20
2	Other District Roads	65	50	50	40	30	25	25	20
3	Village Roads	50	40	40	35	25	20	25	20

3.3.2 Land Width

Road land width (also termed as right of way) is the land acquired for road purposes. Desirable land width for VRs, ODRs & MDRs as per IRC recommendation is indicated in table below.

Table for Recommended Land Width for Different Classes of Road

S. No.	Road Classification	Plain and Rolling Terrain				Mountainous and Steep Terrain	
		Open Areas		Built- up Areas		Open Areas	Built- up Areas
		Normal	Range	Normal	Range	Normal	Range
1	2	3	4	5	6	7	8
1	Major District Roads	25	25 -30	20	15-25	18	15
2	Other District Roads	25	15-25	15	15-20	15	12
3	Village Roads	12	12-18	10	10-15	9	9

3.3.3 Roadway Width

The width of the roadway for single and two lane roads in plain and rolling terrain should be as given in table below :

Width of Roadway for Single Lane and Two Lane roads in Plain and Rolling Terrain

S. No.	Road Classification	Roadway width (in m)
1.	Major District Roads (Single and two lanes)	9
2.	Others District Roads	
	i) Single lane	7.5
	ii) Two lane	9.00
3.	Village Roads	
	i) Single lane	7.5

Table for Width of Roadway for Single Lane Roads in Mountainous and Steep Terrain

S. No.	Road Classification	Roadway width (Meters)
1.	Major District Roads and Other District Roads (Single lane)	4.75
2.	Village Roads (Single lane)	4.00

3.3.4 Width of Carriageway

Width of the carriageway should be as indicated below

For Single Lane Roads

S. No.	Road Classification	Roadway width (Meters)
1.	Major District Roads	4.75
2.	Other District Roads	3.75
3.	Village Roads	3.00/3.75

Carriageway width of more than 3.00 metre may be used judiciously depending upon the type and intensity of traffic, cost and other related factors.

3.3.5 Pavement camber or Cross fall :

The camberfall on straight sections of roads should be as recommended in IRC Code for various type of surface. For a given surface type, the steeper value in the table 6 may be adopted in area having high density of rainfall and the lower values, where the intensity of rainfall is low.