

Government of India
Ministry of Shipping, Road Transport & Highways
(Department of Road Transport & Highways)

Transport Bhawan,
1, Parliament Street,
New Delhi – 110 001.

No. RW/NH/33044/2/88-S&R(B)

24th March, 2009

To

1. Secretaries of all State Governments /UTs dealing with National Highways.
2. Engineer-in-Chief / Chief Engineer of all States Governments/ UTs dealing with National Highways.
3. Secretary, Transport of all State Governments and UTs.
4. Chairman, National Highways Authority of India.
5. Director General (Border Roads).

Subject: Width of Bridges on 2-lane National Highways (with and without footpath).

Sir,

Instructions were issued vide this Ministry's letter of even number dated 9th May, 2000 regarding width of bridges to be provided on National Highways. The matter has been reconsidered in the light of concern for safety of vehicles/pedestrians using the bridges. The following revised guidelines are now issued in supersession of the earlier instructions for bridges on 2-lane NHs. These guidelines are applicable essentially to future cases.

2. GENERAL

The basic approach is that the width of carriageway of all bridges irrespective of their lengths or location / terrain (rural, urban, plain) shall be that:-

- a) for free flow of traffic from approaches to bridge, width of carriageway on bridge shall be equal to the carriageway width of immediate approaches plus paved shoulders even if presently not provided. For bridges on 2-lane NHs the carriageway width shall be 10.50m (paved shoulder and kerb shyness on either side taken as 1.50m and 0.25m respectively).
- b) Overall width of bridges will vary depending upon width of carriageway, footpath, safety kerbs, crash barriers, railings and provision for kerb shyness. Overall width of bridges for 2-lane NHs without footpath and with footpath are given in table in Annexure.
- c) Formation width of the immediate approaches shall be equal to overall width between outermost faces of the railing / crash barrier of the bridge. In case the formation width of approaches is different than the overall width of the bridge as stipulated in (b) above,

-1/6-

formation shall be increased to the overall width of bridge in at least for 90 m on either side of bridge followed by a transition of 1: 20.

3. Existing Narrow bridges on NHs:

3.1 Narrow Bridges having width of deck less than the width of approaches are potential source of accidents. It is necessary to provide positive guidance so that the drivers have sufficient information to safely negotiate the narrow bridges. For this purpose, the safety measures shall be adopted as per site requirement as spelt out in circular No. RW/NH/33044/2/88-S&R(B dated 31.10.2008 .

4. FOOTPATHS

4.1 Footpath to bridges located in urban and rural areas may be decided on the basis of expected pedestrian traffic. In case the pedestrian traffic is heavy, the width of the footpath can be suitably increased or a separate pedestrian bridge can be considered depending on site condition. However minimum width of footpath shall be 1.5m.

4.2 Provision of footpath for bridges in rural areas particularly for very long bridges shall be considered on case to case basis.

4.3 Typical cross section of bridges on 2-lane NHs without footpath and with footpath of 1.5 m width are at Figure.1 and 2 respectively.

4.4 In case provision for ducts for taking telephone wires, gas pipeline and electric cable is to be provided, then the shoulder shall be raised otherwise the footpath shall be at the same level as that of the carriageway on the bridge.

4.5 At the entrance to the footpath on either end of the bridge suitable barrier shall be provided so that two and three wheelers can't enter the footpath.

5. CRASH BARRIERS

5.1 Crash barriers shall be provided on all the bridges on National Highways to safeguard against the errant vehicles. The type & design for the concrete crash barrier may be adopted as per IRC: 5-1998 & IRC: 6: 2000.

5.2 For bridges without footpath, crash barriers shall be provided at the riverside.

5.3 For bridges with footpath, crash barrier shall be provided between footpath and carriageway as shown in Figure 2.

5.4 For bridges with footpath, having length more than 100m, half metre (0.5 m) wide opening in the crash barrier shall be provided at 50 m interval.

6. EXTRA WIDTH ON BRIDGES LOCATED ON CURVES:

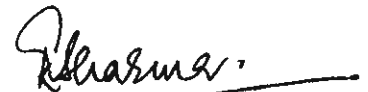
Extra carriageway width of bridge located on curves shall be provided as per IRC codal provisions applicable for road section on curves.

7. Road over bridges on National Highways

The above provisions shall also generally apply to all road over bridges except where any deviations have to be made due to specific site constraints.

It is requested that the contents of this circular be brought to the notice of all officers in your department concerned with National Highways and other centrally sponsored schemes.

Yours faithfully,



(Arun Kumar Sharma)

Chief Engineer (S & R) B

For Director General (Road Development) & S.S

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Annexure : Width of bridge on two lane National Highway with and without footpath

ANNEXURE

Width of bridge on two lane National Highway without and with footpath
(Reference para 2 and fig. 1, 2 & 3)

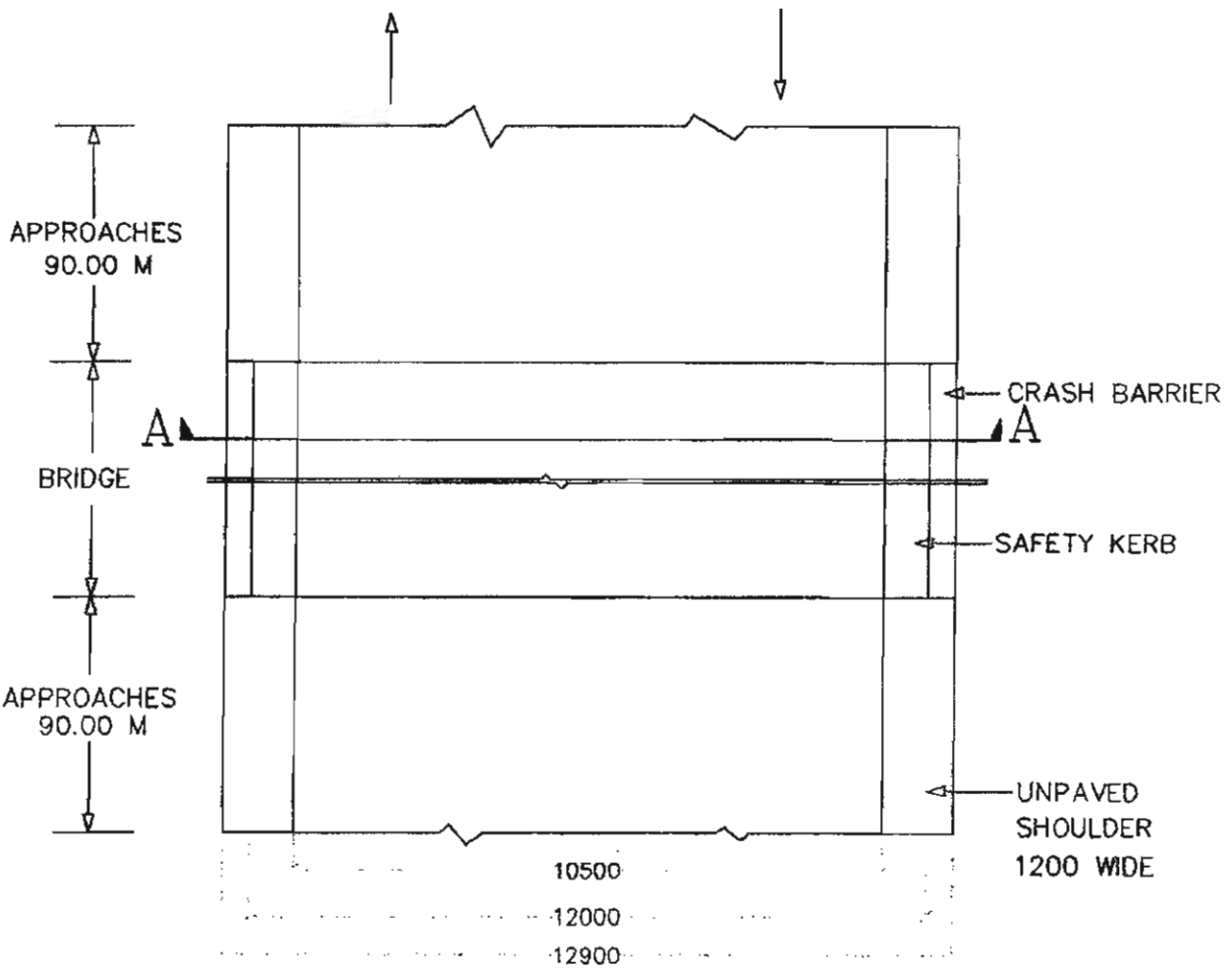
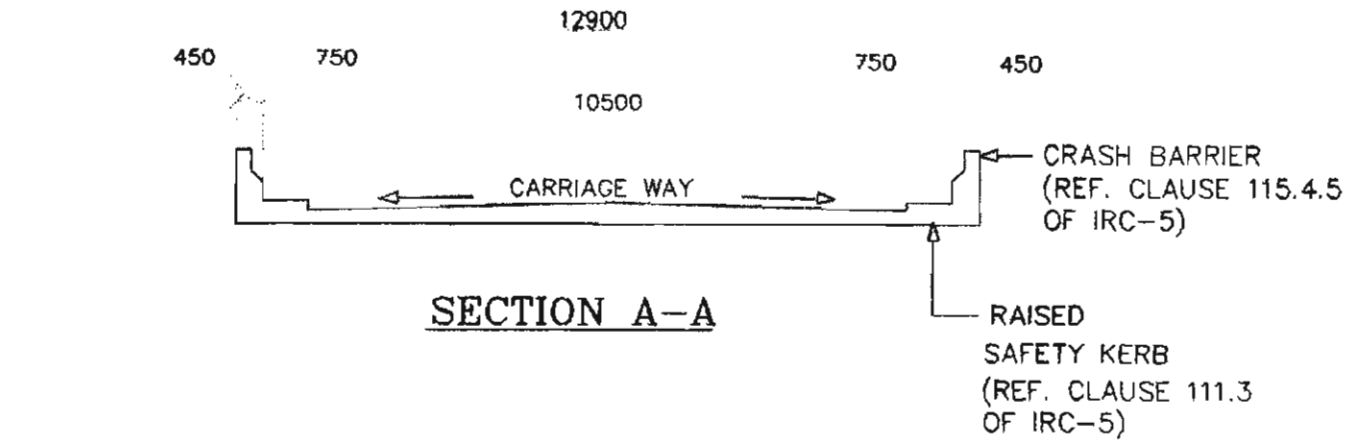
Dimensions in meters

Description	Bridge without footpath	Bridge with footpath (1.5 footpath)
Carriageway	10.00	10.00
Kerb shyness	0.50(2x 0.25)	0.50(2x 0.25)
Footpath	-	3.00 (2 x 1.50)
Safety Kerbs	1.50 (2 x 0.75)	-
Crash Barrier	0.90 (2 x 0.45)	0.90 (2 x 0.45)
Railings	-	0.40 (2 x 20)
Overall width	12.90	14.80

Note:

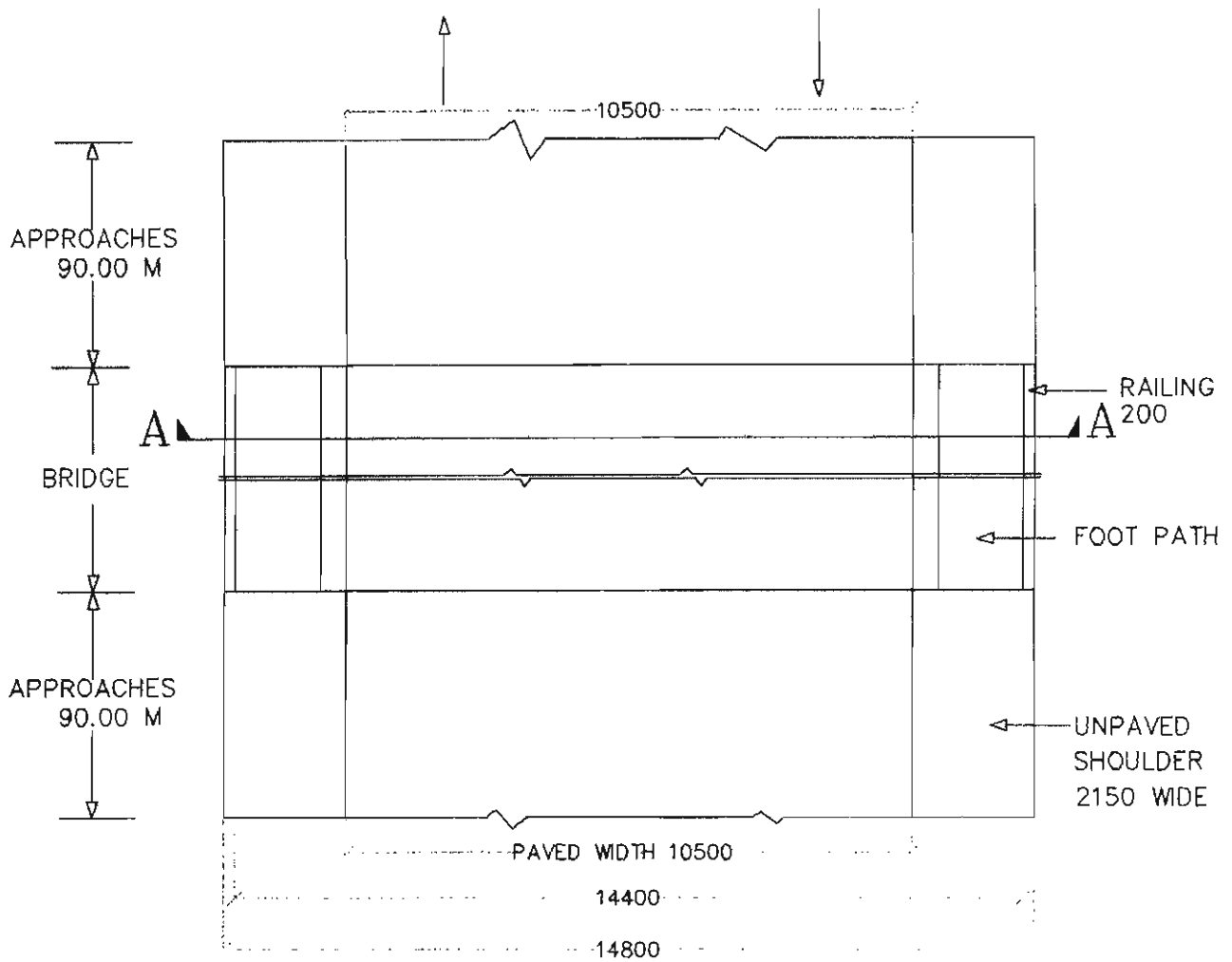
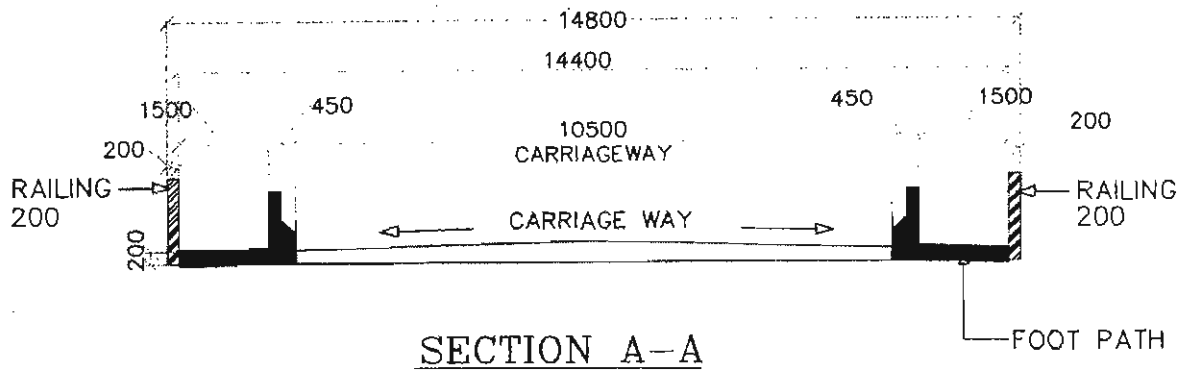
(a) Carriageway width of 10.50m on bridges is planned to account for paved shoulders on approaches if provided later. Thus to arrive at the width of carriageway on bridges, the allowance for paved shoulders and kerb shyness has been made.

-4/6-



ALL DIMENSIONS IN mm

FIG.1:- TWO LANE HIGHWAY BRIDGE WITHOUT FOOTPATHS
HAVING CRASH BARRIER AT THE EDGES



ALL DIMENSIONS IN mm

FIG.2:- TWO LANE HIGHWAY BRIDGE WITH FOOTPATHS HAVING
CRASH BARRIER BETWEEN FOOTPATH AND CARRIAGEWAY