

MANUAL OF SPECIFICATIONS & STANDARDS FOR TWO LANING OF HIGHWAYS WITH PAVED SHOULDER

(First Revision)

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Table 2.1 Design Speed

| Nature of Terrain | Cross Slope of the Ground | Design Speed (km/h) | |
|-----------------------|---------------------------|---------------------|---------|
| | | Ruling | Minimum |
| Plain and Rolling | Up to 25 percent | 100 | 80 |
| Mountainous and Steep | More than 25 percent | 60 | 40 |

Short stretches (say less than 1 km) of varying terrain met with on the road stretch shall not be taken into consideration while deciding the terrain classification for a given section of Project Highway

2.2.2 In general, the ruling design speed shall be adopted for the various geometric design features of the road. Minimum design speed shall be adopted only where site conditions are restrictive and adequate land width is not available. Such stretches where design speed other than ruling speed is to be adopted shall be as indicated as deviation in Schedule 'D' of the Concession Agreement.

2.3 Right of Way

Two laning shall be accommodated within the existing ROW to the extent possible. However, additional land, if required for accommodating the two laning cross sections, improvement of geometrics, realignment, junctions, bypasses etc., shall be acquired by the Authority. For bypasses, Right of Way shall be 60 m. The existing and proposed ROW shall be indicated in Schedule A of the Concession Agreement. The consideration for planning, design and construction described in Para 1.13 shall apply.

2.4 Lane Width of Carriageway

The standard lane width of the Project Highway shall be 3.5 m.

2.5 Median

2.5.1 In built-up areas with 4-lane divided carriageway the median shall be raised and the width of median (distance between inside edges of carriage way) shall be 2.5 metres including kerb shyness of 0.50 m on either side (**Fig 2.5**). In 4-lane bypasses the median and median drainage shall be provided as per IRC:SP:84.

2.5.2 The median in built up areas shall be paved and railings of steel and suitable antiglare measures such as plastic screens shall be provided at the center of median to reduce headlight glare from opposite traffic. The total height of screen including the height of the barrier shall be 1.5 m and spacing shall be such as to effectively cut the glare.

2.6 Shoulders

2.6.1 Width of Shoulders

The shoulder width on both sides of the carriageway shall be as given in **Tables 2.2 and 2.3**.

MANUAL OF SPECIFICATIONS & STANDARDS FOR FOUR LANING OF HIGHWAYS THROUGH PUBLIC PRIVATE PARTNERSHIP

(First Revision)



**INDIAN ROADS CONGRESS
2014**

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2.3 Right-of-Way

A minimum Right of Way (ROW) of 60 m should be available for development of a 4-lane highway. The Authority would acquire the additional land required, if any. The land to be acquired shall be indicated in Schedule 'B' of the Concession Agreement. The consideration for planning, design and construction described in Para 1.13 shall apply.

2.4 Lane Width of Carriageway

The standard lane width of project highway shall be 3.5 m.

2.5 Median

2.5.1 The median shall be either raised or depressed. The width of median is the distance between inside edges of carriageway. The type of median shall depend upon the availability of Right of Way. The minimum width of median, subject to availability of Right of Way, for various locations shall be as in **Table 2.2**.

Table 2.2 Width of Median

| Type of Section | Minimum Width of Median (m) | | |
|--|-----------------------------|------------------|-------------------------------|
| | Plain and Rolling terrain | | Mountainous and Steep terrain |
| | Raised* | Depressed median | Raised* |
| Open country with isolated built-up area | 5.0 | 7.0 | 2.50 |
| Built up area | 2.50 | Not Applicable | 2.50 |
| Approach to grade separated structures | 5.0 | Not Applicable | 2.50 |