

Government of India  
Ministry of Railways  
(Railway Board)

No.2013/W-I/Genl./0/30 Pt.II

New Delhi dated 12.05.2017

The Chief Administrative Officer (C) and  
Principal Chief Engineers,  
All Indian Railways

**Sub: Provision of transition curve in new line and gauge conversion.**

It has been observed that while planning the construction of new lines & gauge conversion, transition curves are being designed and provided for speed potential up to 100 Kmph, as most of the routes of new lines are categorized in Group "E" category.

At later date, to increase the speed of a particular route, normally length of transition curve is required to be increased to maintain desired rate of change of cant and cant deficiency, involving shift of the curve. To achieve this objective, additional works of considerable value, like widening of embankment/cutting, extension of bridges are required. On electrified routes, relocation of OHE mast is also involved. Due to high cost and various other constraints, execution of such works is not always possible. Under the circumstances, a number of speed restrictions are imposed on such routes due to inadequate length of transition curve.

To avoid such a situation, it is desirable to design the transition curve for a future speed potential of 160 kmph at the first instance itself. Therefore, while planning the alignment of new line & gauge conversion projects, transition curve should be designed and planned/executed for a future speed potential of 160 Kmph. This implies that the speed on a particular curve will be governed by its radius and super elevation and there will be no restriction of speed on account of inadequate transition length. While opening the section at a lower speed, super elevation on the curve shall be provided as per prevailing designed maximum speed of the section. These instructions will be applicable for sections, where detailed plan and longitudinal sections have not already been prepared. In case of any deviation from the above, prior approval of PCE/CAO(C) should be taken.

This issues with the approval of Member Engineering.

  
(S C JAIN)

Executive Director/Works  
Railway Board