

No. NHIII/P/35/77

Dated the 24th December, 1977

To

The Chief Engineers of all State P.W.Ds. &
Union Territories (dealing with Roads).

Subject : Ensuring fluent grades lines at culverts on National Highways

Your attention is invited to this Ministry's Circular letter No. NHI-37 (2)/70 dated the 2nd April, 1970 with which the points to be specially kept in view during investigations and preparations of detailed estimates for improvements to the different National Highways, were communicated. It was *inter alia* impressed therein that "where culverts occur on a gradient or horizontal curve, their top levels should be so fixed that the culverts fit in with the profile of the flanking portions of the road and there is no resulting hump". This has been reiterated in this Ministry's Circular No. NHI-41 (18)/70, dated the 12th August, 1970 wherein *inter alia* the following points have been highlighted.

- (i) The culvert deck should follow the same profile as that of the flanking road sections, without any break, whether the same is in level, grade or in a curve. In cases where it is essential to have the culvert deck higher than the adjoining road levels, suitable vertical curves should be provided.
 - (ii) At locations where the culverts lie on horizontal curves, necessary super-elevation in the road should be provided by laying the deck slab of the culvert to the required cross slope.
 - (iii) The camber to be provided over the culvert deck should conform to the camber of the flanking road sections. For achieving this, the deck slab should be laid to the required camber and grade, and the bed blocks laid to suit.
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