



सत्यमेव जयते

भारत सरकार  
Government of India  
सड़क परिवहन और राजमार्ग मंत्रालय  
Ministry of Road Transport & Highways  
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604.35



No. RW/NH-29020/1/2015-P&M (RSCE)

Dated: 07.09.2016

**OFFICE MEMORANDUM**

**Sub: Provision of Road Safety items like Road signs, Markings, crash barriers, safety provision at road side hazards etc., on National Highways in the Improvement projects and Resurfacing works – regarding.**

Road Safety provisions and Road Safety furniture play an important role in guiding, cautioning and protecting the road users especially on high speed roads like National Highways and Expressways. Ministry of Road Transport and Highways has been time and again emphasizing the importance of including the road safety provisions in all the improvement projects of National Highways. This issue gains urgency in the context of increasing road accidents/ fatalities in the country especially on National Highways. National Highways which are high speed facilities should be designed as "Forgiving Roads" with adequate provisions for channelization, merging/demerging, crash barriers, repetition of signs where required etc., especially to compensate the prevailing short falls in enforcement, road user education and other safety related aspects. In this regard provision of certain road safety items and road furniture is again emphasized/ reiterated as below:

2.1 Road signs/markings: Appropriate Retro-reflective road signs and thermoplastic pavement markings are to be invariably provided at all the locations like inter-sections/ (especially at "Y" inter-sections where visibility/sight distances are likely to be lower), sharp curves, steep gradients, urban/semi-urban locations with significant pedestrian movements etc. The signs should be of adequate size commensurate with the speed on the Highways so as to be clearly readable to the drivers of fast moving vehicles including elderly drivers. Detailed guidelines on sizes of different signs and their location from the feature being defined by the sign (ex: location of school, location of intersection, a sharp curves etc.) are specified in IRC-67-2012. As clustering of signs leads to confusion to road users, optimum number of signs should be provided at a given location as per the priority of features to be highlighted at that location. These signs are to be repeated wherever required to reinforce the comprehension of the road user. Cautionary and informatory signs shall be at least 120m ahead of the location of concerned feature or turning point in case of National Highways with design speeds of 80 to 100 Kmph. Details of



distance of various sign ahead of concern feature for various design speeds have been specified in IRC-67-2012 which may be followed while installing road signs.

2.2 Pavement markings should always accompany the road signs where specified to achieve the objective of cautioning and streamlining the traffic along the highways. Reflective Road Studs may be provided along with markings to facilitate night visibility and to add auditory effect to the markings. Detailed guidelines on the provision of markings and their specifications are contained in the IRC Code IRC -35 – 2015 which may be followed scrupulously.

2.3 The Provisions of road signs and markings where those are missing in the original sanction may be included through contingencies wherever feasible.

3.1 Safety consideration at median openings: At the median openings, the plantation in the median should be restricted to a height of 600 mm above road surface for a length of 20m from the edge of the median opening to ensure clear visibility to the turning and on-coming vehicles.

3.2 Wherever significant U turning traffic is expected, extra turning lane may be provided either within the median width or by incorporating extra lane wherever feasible. The length of the storage lane shall be sufficient to accommodate the expected Queue length of the waiting vehicles for the U turn.

4.1 Provision of crash barriers, protective wire mesh and protection from road side hazards: Crash barriers of appropriate type (Rigid/Semi-rigid/flexible) shall be provided at accident prone/hazardous locations like valley sides of hill roads, high embankments, sharp curves, approaches to tunnels etc. Adequate flare to the alignment of crash barriers shall be given for guiding the traffic into the intended lanes / tunnels. Detailed guidelines on the installation of different types of crash barriers are contained in the IRC Code IRC-119-2015 which should be followed scrupulously.

4.2 In case of flyovers, in addition to crash barriers, protective steel wire mesh panels with opening size of not more than 50mm x 50mm fabricated with structural steel elements with adequate rigidity shall be provided with a height of 2.40 m from the road surface to prevent objects falling on the roads at lower level with a potential of causing serious accidents. These are to be secured to the parapets/bridge decks /crash barriers with suitable arrangements of fastening.

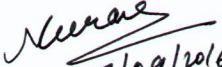
4.3 Any hazardous rigid objects on the road side/median like bridge piers, electrical/light poles, overhead sign support posts, supports of welcome arches etc., shall be protected with hazard markers, crash barriers of adequate length with



appropriate flare and clearance from the hazardous object. No trees with inflexible thick trunks shall be grown in the medians/near carriageway. However, in case of existing trees which cannot be removed, protection through crash barriers/ hazard markers shall be provided similar to other rigid hazardous objects as per relevant IRC codes stated above.

5.0 In case of exceptional gradients in hilly terrain average speeds of traffic drop substantially thereby reducing overtaking opportunities and causing unsafe condition to overtaking vehicles. Provision of climbing lane in hilly roads is covered in IRC-52-2001. In order to improve safety and maintain the level of service in steep gradients vis-a-vis other normal sections, climbing lanes may be provided. Wherever average speeds on steep gradients are expected to fall by 20 Kmph or more such climbing lanes could be provided wherever feasible.

6.0 Contents of this circular may be brought to the notice of all concerned and shall be adequately publicised in view of urgency of drawing attention to these important Road Safety aspects.

  
07/09/2016

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To

All Secretaries of PWDs, Chief Engineers of NH, Chief Engineers of project zones, Regional Officers of MORT&H, DGBR, NHAI, NHIDCL

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