

MAPPING ROAD GEOMETRY AND IDENTIFICATION OF ACCIDENT PRONE BLIND CORNERS USING GEOSPATIAL TECHNOLOGY

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Abstract

Transportation network plays a key role in the socio-economic development of any country. The continuous socio-economic growth over the years is causing an increase in demand for transport service including road transport. With the number of vehicles on the road growing rapidly, more road conflicts develop traffic accidents. It is observed that most of these accidents result from human error and carelessness on the part of the drivers or pedestrians. But, there are some technical errors also which causes accidents i.e. bad geometry / blind corners etc. The geometric design of roads deals with the dimensions and layout of visible features on the road. The emphasis of the geometric design is to address the requirement of the driver and the vehicle such as safety, comfort, efficiency, etc. The features normally considered are the cross section elements, sight distance consideration, horizontal curvature, gradients, and intersection. Proper geometric design will help in the reduction of accidents and their severity. Therefore, the objective of geometric design is to provide optimum efficiency in traffic operation and maximum safety at reasonable cost.

Design of road junctions is very crucial in this context. Understanding the nature of traffic, the kind of area, density of population etc is very important for a suitable road junction design. The objective of the present study is to study the geometry /blind corners of selected road junctions of Dehradun city and identify the land use pattern within a buffer of 100 m for selected junctions. This is used for the analysis and to suggest the improvements at selected junctions. The detailed study is carried out on 9 selected junction including Kolagarh Road (scissors junction), Kishanpur Chowk (multiway junction), E .C. Road (Y junction), CMI Chowk (Y junction), Aragarh (T junction) M K V Chowk (Y junction) The Great Value Hotel (Y junction) Nani Bakery (scissors junction) Sharanpur Chowk (Y junction) Racecourse (staggered and skewed).