Identification of Accident Prone Location (Review)

Khyati B. Pathak[1] M.R. Bhatt[2]
[1]Student [2]Professor
[1,2]Department of Transportation Engineering
[1,2]Atmiya Institute of Technology and Science – Rajkot

Abstract— Transportation sector is important in Indian economy. Road transport is the only mode which could give maximum service to one and all. Road accident are dark side of transportation. Throughout the world 30,000 persons die and over 10 to 15 million persons are injured every single year in road accidents. The rapid population growth and increasing economic activities are also responsible for highly fatality rate. In this paper so review for identification of accident black spots for two different city and causes of accidents are studied and suggested different remedial measures to reduce number of accidents.

Key words: Transportation, Road Traffic Accidents, Road Accident Black Spots

I. INTRODUCTION

The economic, industrial, social and cultural development of any countries is depended on the transportation. Due to the increase in population, number of vehicles is increase which leads to the increase in road network. As the mobility increases, the probabilities of accidents are also increases. The basic elements in traffic accidents are vehicles, road, its condition, environmental factors and road users for pedestrians, animals etc. In India there are over 100000 deaths occur on roads due to accidents. The death include people walking, people driving, people traveling in cars, buses, trucks, three wheelers and two wheelers. It also consider people not traveling at all but simply passing the time of the day by the side of the road. Every day, 33000 deaths and 66000 serious injuries occur on the road in the world. Road accidents cannot be totally prevented, but provide suitable traffic engineering formula and improve management system, the accident rate can be decreased considerably. One of the most important factors is identification of accident prone locations.

II. NEED OF STUDY

Road accidents are human tragedy. They impose huge socio-economic cost in terms of untimely deaths, injuries and loss of potential income. The ramification of road accident can be colossal and its negative impact is felt not only on individuals, their health and welfare, but also on economy. Consequently, Road safety has become an issue of national concern. Many of these traffic injuries and deaths take place in constructions zone on all roads and highways. In addition, a significant number of workers associated with construction and maintenance of roads also get injured and killed every year. This increasing trend in injuries and fatalities has been recognised as a public health problem of significance by the authorities and public at large. There is an urgent need to train practitioners and policy–makers in the scientific approach to injury prevention. There needs to be a cadre of professionals working from a shared understanding of the magnitude of the problem of road traffic and work injuries,

risk factor and the value of implementing evidence-based strategies.

Year	Number of Accidents		Number of Persons		Accident Severity*
	Total	Fatal	Killed	Injured	
2005	4,39,255	83,491 (19.0)	94,968	465,282	21.6
2006	4,60,920	93,917 (20.4)	105,749	496,481	22.9
2007	4,79,216	1,01,161 (21.1)	114,444	513,340	23.9
2008	4,84,704	1,06,591 (22.0)	119,860	523,193	24.7
2009	4,86,384	1,10,993 (22.8)	125,660	515,458	25.8
2010	4,99,628	1,19,558 (23.9)	134,513	527,512	26.9
2011	4,97,686	1,21,618 (24.4)	1,42,485	5,11,394	28.6
2012	4,90,383	1,23,093 (25.1)	1,38,258	5,09,667	28.2
2013	4,86,476	1,22,589(25.2)	1,37,572	4,94,893	28.3
2014	4,89,400	1,25,828(25.7)	1,39,671	4,93,474	28.5
2015	5,01,423	1,31,726(26.3)	1,46,133	5,00,279	29.1

Source: Information supplied by States/UTs (Police Departments).
Figures within parentheses indicate share of fatal accidents to total accidents.
* Accident Severity : Number of persons killed per 100 accidents

Table 1: Road Accident Statistical Analysis – Morth 2015

III. ANALYSIS

Gopal raju et.al. [1] studied the causes of accidents and suggest different remedial measures to reduce number of accidents. The present work intended in identification of various black spots (accident prone location) in Vishakhapatnam city. In this work road accident data has been collected from the respective police stations and traffic departments. Major accident prone locations (black spots) have been identified as the number of accidents, severity of accidents and number of fatalities. In Vishakhapatnam city four locations have been identified as major accident prone areas namely, Gajuwaka junction, Venkojipalem junction, Spencers junction and Hanumanthawaka junction. As all the black spots are identified on the highway. Most of the road accidents occur due to heavy vehicles and public utility vehicles like auto rickshaws and taxies. Accidents due to auto rickshaws may not be fatal but number of accidents is more, when compared to other mode of transportation.

R.R.Sorate et.al. [2] carried out a detailed analysis that the 34-km stretch of Mumbai-Bangalore highway in the Pune city limits has seen 110 fatal accidents in the last three years claiming 111 lives. Thus the primary aim of the project is to identify the accident black spots on National Highway-4 spanning 14.5Kms from New Katraj Tunnel to Chandani Chowk and to suggest remedial measures. Methodology adopted includes collecting the secondary data from respective authority, conducting physical survey (primary data) and analyzing them by method of ranking and severity index, accident density method, weighted severity index. Locations appearing in all the three methods were termed as black spots. Further corrective measures were suggested.

IV. FUTURE SCOPE OF WORKS

Identify the accident black spots on express ways, national highways, state highways, rural highways, major district road and other district road by using data of accidents. And to develop accident prediction model by using statistical analysis method.

V. CONCLUSION

The fast growth of road transport has been associated with a steep rise in the number of road accidents. The ever growing population and motor vehicle ownership has brought many adverse problems; road accidents being the prime concern. Accident situation in general, is serious and more worrisome in urban areas.

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