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AN ANALYSIS OF ROAD SAFETY EFFECTS OF LAND USE

By

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The Dissertation was submitted to the Department of Civil Engineering of the University of Moratuwa in partial fulfilment of the requirement for the Degree of Master of Business Administration.

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DECLARATION

I certify that this dissertation does not incorporate without acknowledgment of any material previously submitted for the degree or diploma in any university to the best of my knowledge and believe it does not contain any material previously published, written or orally communicated by other person or myself except where due reference made in the text.



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CERTIFICATION

I hereby recommend that the dissertation was prepared under my supervision by K.Ravindralingam (MBA/Infra/05/9109) entitled “**An Analysis of Road Safety Effects of Land Use**” be accepted in partial fulfilment of the requirement for the degree of Master of Business Administration in Infrastructure.

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ABSTRACT

Road safety is a major part of the highway sector. Accident problems are very complex in nature as so many factors are involved in its occurrence. The purpose of this study is to find out the interrelationship between land uses and road accidents in the different kind of road sections and make awareness of knowledge to improve road safety activities.

The study area of road sections were considered as highly developed (urban), moderately developed (suburban) and less developed (rural area) for this dissertation. Data about accident, traffic and field inspection data such as dimension of road section and building area for Floor Area Ratio were collected to study the road safety analysis in different types of land use of road sections.

It was found that a significant amount of accidents occurred due to land use related accidents. The highest number of accidents occurred in urban road section due to access road influence. At the same time, accidents caused by on street parking and pedestrians are also considerably influenced in urban road section. However, the cause of land use related accidents is lower in rural road section than suburban road section. This clearly shows that road accidents depend on land use effects of road sections.

Land use activities influence accidents. Accidents were prevalent where there were more activities in road sections. In this study analysis, most accidents occurred in urban road section where commercial activities were high. This study also reveals that more accidents occur where there are more road user activities which are influenced by the Floor Area Ratio of the road section. Therefore, Floor Area Ratio influences the road usage activities and the number of accidents.

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