UNIVERSITI TEKNOLOGI MARA

RISK MAPPING FOR PEDESTRIAN IN UiTM PERLIS BRANCH USING GEOGRAPHICAL INFORMATION SYSTEM (GIS)

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Thesis submitted in fulfillment
of the requirements for the degree of
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Faculty of Architecture, Planning and Surveying Geomatics

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AUTHOR'S DECLARATION

I declare that the work in this thesis/dissertation was carried out in accordace with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations for Post Graduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

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ABTRACT

The issue concerning the safety of study and University institutions have continued to attract public attention. Pedestrians are the most vulnerable road users and require with special consideration of the factors contributing to occurrence of traffic accidents. The campuses also are multimodal settings with very high levels of walking and high volume of vehicular traffic, which increases risks for pedestrians. The research of this study to produce risk map on hazards area for pedestrians using Geographical Information System in UiTM Perlis Branch. Based on the issue, the study was conducted is to determine the area that has high risk potential for pedestrian and identify the impact of the risk for pedestrian. Therefore, on the risk that has completed survey it can produce and analyse risk mapping for pedestrian. In that case, the data HIRARC is important for this research to analyze the risk assessment. The risk management process of identifying, analyzing, evaluating, and ultimately responding to and monitoring risk is at the heart of an integrated safety and risk management system. Besides that, by using GIS it can be produce risk mapping that connected with spatial analysis tool. In general, this is an enviable project. There were no complications in the use of the data and the conversion to GIS system. Pedestrian risk GIS layers were developed for the studied period is to identify entities, attributes, and relationships of variables. The kriging is used synonymously with optimal spatial prediction. For this research, there were four high-level risks location which is four junctions road nearby Mushroom, three junctions road next to Damai' Cafeteria, road nearby rugby's field and road from Block C to block Al-Farabi 2. Two weeks observation showed the same result of the risk location. The causes of hazard can be determined by high volume of vehicles, narrow road and long distance. As recommendation the pedestrian walkways around the campus areas should be upgraded, it's is to provide more secure and comfortable facilities for pedestrian to consider the safety of them.

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