

Piyanit Malithong 2009: Pavement Maintenance Prioritization System
for Rural Roads. Master of Engineering (Civil Engineering), Major Field:
Civil Engineering, Department of Civil Engineering. Thesis Advisor:
Associate Professor Sutharin Sthapitanonda, Ph.D. 153 pages.

Department of Rural Roads is responsible for pavement maintenance; however certain routes may not receive appropriate maintenance due to government annual budget constraint. Frequently, the responsible authority is obliged to effectively prioritize the pavement maintenance. The score results of the developed model should represent the maintenance necessity and should be used for budget prioritization. The objectives of this research are to develop the pavement maintenance prioritization model and to develop computer program used for pavement maintenance prioritization. The prioritizing criteria as model input considered in this research comprise of Road Condition Index (RCI), International Roughness Index (IRI), Pavement aging, Traffic Volume, Community and Famous Places to increase indexes consideration that are Present Serviceability Index (PSI), Skid Resistance, Benefit – Cost Ratio and Accident Rate in order to cover socio-economic factor. The results from the developed computer program show the pavement maintenance score and ranking, maintenance cost and the pavement geographic data. The computer program was validated with the hand calculation.

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Thesis Advisor's signature

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