Investigation of Distresses of Block Paved Roads and Condition Evaluation

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Abstract

Sri Lankan road network is consisting with a high number of rural roads and the Governments over the past decade or so have invested a substantial amount on rural road upgrading and expansion. A large portion of them was allocated to improve rural roads with interlocking block paving, for example in 2013 and 2014 the government allocated about Rs. 7 bn for interlocking paving roads.

As we have a large number of concrete block paved roads which are older than five years, this is a suitable time for reassessing the performance of block paved roads. The study aims to identify common distresses in block paved road surfaces, evaluate the pavement condition using interlocking concrete pavement distress manual, find out the applicability of the pavement condition index method to Sri Lankan paved roads and identify improvements to extend the service life of road surfaces.

Selected road sections with interlocking block paving in Gampaha District was evaluated to as a sample. The common distresses of the block paved roads observed were damaged pavers, depressions and edge restraint. The methodology proposed in the Interlocking Concrete Block Pavement Distress Guide was applied to evaluate the condition of the road sections. The results suggest that Concrete block paving is a durable road paving method with more than five years of service life, the cause for most distresses is poor drainage and 'Distress Manual' is a reliable method for evaluation of block paved roads in Sri Lanka.

The result of this study would be useful for comparing the performance concrete block paving method with other pavement techniques and to identify remedial measures to in the construction method to mitigate the observed issues It further assesses the applicability of the PCI method as quality to assess the performance of block paved roads for maintenance.

Key words**:** Interlocking concrete blocks, Rural roads, Pavement condition index

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