INSPECTION AND ASSESSMENT SYSTEM OF HIGHWAY BRIDGES IN SRI LANKA

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DECLARATION

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ABSTRACT

Highway Bridges play a key role in the road based transportation system. There are 4456 highway bridges in Class A, Class B and Class AB roads in Sri Lanka, as per the "Annual Report, Road Development Authority – 2015". Significant portion of those bridges are reaching their design life. Therefore, a proper maintenance system, which includes preventive maintenance for these highway bridges is an essential requirement.

Road Development Authority (RDA) is the principal organization, which handles the road related infrastructure in Sri Lanka. RDA conducts inspection on bridge structures, assesses their functionality, and carries out repair and rehabilitation works. The current method of inspection and assessment has been followed since 1997. RDA is in the process of upgrading their Bridge Management System (BMS) and still practicing the old system, which was implemented in year 1997.

The current method of inspection and assessment is not comprehensive enough to grasp the necessary distresses. Only basic information, with respect to distresses, are collected in the process of bridge inspection. The present study provides a detailed review of the current method of inspection, which is followed by RDA, Sri Lanka. The current local system is compared with the advanced Bridge Inspection Systems in several other countries. At the same time, necessary feedback about the current method of inspection is sought from the bridge inspectors at RDA. This study revealed several shortcomings of the current system. Hence, an improved Bridge Inspection and Assessment System, which overcomes most of the shortcomings in the current system is proposed with the present study.

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CONTENTS