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DEVELOPMENT OF COMPUTER PROGRAMS FOR CALIBRATION OF HDM-4 SOFTWARE FOR LOW VOLUME ROADS IN INDIA

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ABSTRACT

The Highway Development and a Management System (HDM-4) developed by World Bank is a powerful pavement management software tool capable of performing technical and economic appraisals of road projects, investing road investment programs, and analyzing road network preservation strategies. Its effectiveness is dependent on the proper calibration of its predictive models to local conditions. The use of appropriate calibration factors in HDM-4 pavement deterioration models will facilitate more reliable and rational prediction of pavement deterioration for the road network under considerations. This in turn will help in better assessment of the maintenance and rehabilitation requirements of pavements and improved pavement management system. In the present study, computer programs in 'Visual C' language have been developed for the calibration of cracking, ravelling, edge break and pothole pavement deterioration progression models stipulated in HDM-4 tool for surface treatments with unbound base types of pavement composition used for Low Volume Roads (LVR) in Indian condition.

Key words: pavement, deterioration models, low volume roads, calibration

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AN INVESTIGATION ON REMAINING SERVICE LIFE OF RURAL ROADS

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ABSTRACT

Low -volume roads not only account for a major portion of national road networks, but also play a very vital role in the socio economic growth of a country like India whose 75 percent of population lives in villages. India has the second largest network in the world. Till now, low-volume roads in India are basically low cost roads having low grade specifications. During the last 8-10 years the maintenance discussion of these road based on ad-hoc experience of engineers. So it has been felt that the performance of these roads is monitoring and scientific based discussion making tools are estimates. The present study focus on estimating the remaining service life (RSL) using the performance indicators such as traffic, rutdepth skid number and deflection data. Detailed analysis has been done to asses' performance of these roads and suitable responsive models have been developed.

Key words: Rural road, remaining service life, rut depth, skid resistance and deflection