

Investigating Causes of Pavement Deterioration in Khartoum State, Sudan

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Abstract : It is quite essential to investigate the causes of pavement deterioration in order to select the proper maintenance technique. The objective of this study was to identify factors cause deterioration of recently constructed roads in Khartoum state. A comprehensive literature concerning the factors of road deterioration, common road defects and their causes were reviewed. Three major road projects with different deterioration reasons were selected for this study. The investigation involved field survey and laboratory testing on those projects to examine the existing pavement conditions. The results revealed that the roads investigated experienced severe failures in the forms of cracks, potholes and rutting in the wheel path. The causes of those failures were found mainly linked to poor drainage, traffic overloading, expansive subgrade soils and the use of low quality materials in construction. Based on the results, recommendations were provided to help highway engineers in selecting the most effective repair techniques for specific kinds of distresses.

Keywords : pavement, deterioration, causes, failures

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