

3<sup>rd</sup> INTERNATIONAL CONFERENCE  
BITUMINOUS MIXTURES AND PAVEMENTS  
Thessaloniki, Greece, 21-22 November 2002

**“RELATIONSHIP BETWEEN STRUCTURAL AND  
FUNCTIONAL PERFORMANCE AND LEVEL OF SERVICE  
FOR ASPHALTIC CONCRETE PAVEMENTS”**

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*ABSTRACT*

Deterioration of AC pavements occurs gradually and is usually unnoticed during the first few years following construction. However, at some stage of its life, pavement structural deficiencies and surface deterioration become evident.

Visual assessment of a pavement's condition identifies defects and their severity at the surface level. These defects determine the pavement's functional performance that in turn, relates to the level of service. The surface condition is also the result of the pavement's sub-surface structural deterioration. The relationship between pavement performance and level of service is hard to establish because the various defects are difficult to quantify. Furthermore, in the literature, there is a lack of correlation between the results obtained from the evaluation of pavement functional performance and structural conditions.

Earlier observations and tests on thin AC pavements allowed the development of a Pavement Performance/ Deterioration Model – HDN (PP/DM-HDN). In this study, the PP/DM-HDN model has been used to correlate pavement structural and functional performance with level of service. The results obtained are presented in this paper.

*KEY WORDS:* asphaltic concrete performance, functional pavement performance structural pavement performance, level of service, pavement defects.