

PAVEMENT PERFORMANCE EVALUATION

The performance of road pavement and the effects of maintenance are important parameters concerning their costs. Both determine the direct outlays of the highway authority and affect the operating cost of vehicles plying the roads.

Research and Development Department collects various road surface condition data with traffic speed devices. The data are used for several purposes such as performance measurements, support in maintenance and road construction and for regulation in contracts. And also they used for Pavement Management System (PMS).

Pavement management is generally described, developed and used in two levels network and project level. These two levels differ in both management application and data collection.

Pavement evaluation and monitoring are needed for effective pavement management.

Pavement condition measurements are used to identify the maintenance requirements, including the option of the minimum possible treatment. Pavement condition is normally measured using the following factors; roughness, skid resistance, structural capacity, surface distress. The machines and equipment of General Directorate of Highways related to these issues are given below.

Performance measurement devices are given below (Figure 1).



Figure 1. Performance Measurement Devices

Profilometer is used to measure the surface roughness (IRI). The data from the profilometer can be used in other studies where road profile data are required texture and deterioration of the pavement surface such as cracking, patching, and rutting in the wheel paths (Figure 2).



Figure 2. Profilometer

The friction coefficient is calculated by the Friction Tester (Figure 3).



Figure 3. Friction Tester

Falling Weight Deflectometer is used to estimate load carrying capacity (Figure 4).



Figure 4.Falling Weight Deflectometer