

Overview

The Pavement Management process is an ongoing perpetual cycle of Inspection, Analysis, and Application of Surface Treatment. The Pavement Management System was developed using a common sense approach and off-the-shelf technology to develop a road inventory and pavement priority list. It is computer based, using a Compaq iPAQ handheld computer running ESRI's ArcPad Geographical Information System (GIS) software to collect data in the field and then Microsoft Access and ESRI's Arcview to process the data.

INSPECTIONS

Although a complete road network inspection each year is not practical, a percentage of the roads are inspected on an annual basis; Main roads are inspected more frequently due to the heavy traffic volume and the high cost to repair if not properly maintained. Local roads are inspected once every three to four years since those roads experience less “wear & tear” due to the low volume of vehicles that use those roads.

ANALYSIS

Once the inspection data is collected, it is exported to a Microsoft Access database where it is analyzed and used to generate a Pavement Condition Index (PCI). Based on the PCI, as well as other factors such as proximity to other roads of similar condition and utility replacement projects, a priority list for pavement maintenance and resurfacing can be created.

SURFACE TREATMENT

The Pavement Priorities List is a guide that assists in the development of the Paving Program, which typically schedules specific road paving projects for two (2) years. Due to the fluctuating pavement costs as well as funding constraints, forecasting beyond two years is unrealistic. Current funding sources are State Aid, known as “Chapter 90” funds, which can be expended on only town accepted streets (public ways) and local appropriations approved by Town Meeting, which can be used for any Town way.