

Road Maintenance Training

Description

Course Description

The road transport network of any country plays a vital role in its economy, and the physical condition of its infrastructure is critical. Without adequate and timely maintenance, highways and rural roads alike inexorably deteriorate, leading to higher vehicle operating costs, increased numbers of accidents, and reduced reliability of transport services.

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When repair work can no longer be delayed it will often involve extensive rehabilitation, and even reconstruction, costing many times more than simpler maintenance treatment carried out earlier. The need to protect the existing network and keep it in good condition is paramount, often taking precedence over new investment.

Course Objective

The project’s objectives were to develop and improve the road maintenance management system for national and provincial roads by deploying Routine Maintenance Units (RMU) and Disaster Recovery Units (DRU) and providing training to maintenance personnel, and thereby contribute to infrastructure improvements and regional development targeting economic growth.

Course Outline

Road Survey

- Introduction
- Pavements Types
- Basic Distress Mechanisms
- Condition Data Collection and Processing
- Automated Distress Survey
- Non Destructive Data Collection and Interpretation
- Drainage Survey and Evaluation
- Traffic Loading Evaluation

- Overall Project Evaluation

Pavement Maintenance Stratigies

- Crack Sealing
- Patching With Bituminous Mixtures
- Automated Patching Equipment
- Cold Milling
- Surface Rehabilitation Treatments
- Video: Pavement Preservation

Development in Road Maintenance

- Recycling Overview
- Cold-In-Place Recycling
- Recycled Mix Design
- Hot Central Plant Recycling
- Hot Mix Asphalt Overlays
- Identification of Feasible Alternative
- Selection of the Preferred Rehabilitation Alternative

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Pavement Management System (PMS)

- Introduction
- Need for PMS
- Current State of Practice in PMS
- Database Management
- GIS in PMS
- Inventory and History
- Inspection and Condition Surveys
- Condition Indices
- Pavement Condition Indices
- Performance Models
- Prioritization
- Optimization
- Pavement Quality
- Demonstration of a PMS – Case Study

Bridge Maintenance

- Types of Bridges
- Bridge components
- Construction Consideration of Bridges
- Bridge Problems and Distresses
- Bridge Inspection and Evaluation
- Bridge Management