



MODULE 14

QUALITY MANAGEMENT

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Instructional Objectives

- € Identify the fundamental principles of Total Quality
- € Become familiar with the application of Quality Management

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Quality - Definition

- € The efficiency of a business system to meet external needs
- € needs defined by driving public
- € needs defined by funding providers

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General Principles

- € Commitment of top management
- € Belief in management commitment
- € Leadership
- € Unending, intense focus on satisfying customer
- € Decision-making based on data, measurement, statistical inference

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General Principles

- € Process control equals variation reduction
- € Continuous improvement
- € Process improvement vs. production inspection
- € Prevention vs. fixing problems
- € Collaboration in organization

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General Principles of Total Quality

- € Cross-functional teamwork
- € Concurrent product/service development
- € Customers and suppliers as partners
- € Management focus on long-term results

MassPQP

- € Massachusetts Pavement Quality Partnership
- € A joint public/private effort to achieve quality pavements through the application of TQM principles and partnering methods

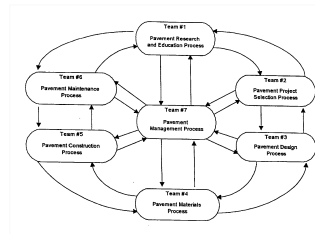
Reason for MassPQP

- € Realization that pavement quality was deteriorating
- € Lack of expertise within design and construction community
- € Interest in NQI
- € Desire to institutionalize PMS

Five Objectives

- € Define pavement quality
- € Assess level of pavement quality
- € Develop long-term Strategic Plan
- € Identify implementation actions
- € Provide support, guidance to front-line workers

MassPQP Pavement Quality Process



Defining Pavement Quality

- € Smoothest practical ride
- € Safest pavement surface
- € Least possible maintenance
- € Lowest life-cycle cost
- € Most environmentally friendly

Measuring Pavement Quality

- € Criteria - what should be measured
- € Tools - how best to collect and analyze data
- € Target Levels - where performance level is expected
- € Frequency - when criteria should be measured
- € Responsibility - who should measure criteria

Constructing a Pavement Quality Process

- € Flow chart development
- € Structured problem-solving
 - Process issues
 - Process improvements
 - Action plans

Pavement Management Process Improvement

- € Expand and improve PMS database
- € Get feedback from all other processes
- € Incorporate all branches of pavement design
- € Train district personnel in PMS process

Summary

- € Primary objective of PMS
 - Improve pavement quality
- € Quality management also seeks to improve quality
 - Construction
 - Design
- € PMS is the core of any quality management program

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