Presentation Overview

- Pavement Management Concepts
- Pavement Management in Weston
  - Methodology
  - Current Conditions & Backlog
  - Budget Analysis
- Recommendations
What is Pavement Management?

- The practice of planning for pavement maintenance and rehabilitation with the goal of maximizing the value and life of a pavement network.

Otherwise known as “Getting the Biggest Bang for Your Buck”
Pavement Management Concepts

The Process

- Pavement Section Inventory
- Pavement distress identification and quantification *(Visual Inspection Only)*
- Pavement Condition Index (PCI) calculation on a 0 - 100 scale
- Define Treatment Options and Costs
- Test various Budget Scenarios
- Develop list of candidate projects
- Apply engineering and local judgment to define annual road program
Pavement Management Concepts

Pavement Deterioration Curve

- **Excellent**
- **Good**
- **Fair**
- ** Poor**
- **Very Poor**
- **Failed**

- **40% Drop in Quality**
- **75% of Life**
- **$1.00 for Renovation Here**
- **40% Drop in Quality**
- **12% of Life**
- **Will cost $18.00 to $22.00 Here**

Will cost $18.00 to $22.00 Here
Town of Weston - Pavement Management

Pavement Management Concepts

PCI = 100

No Immediate Maintenance (PCI 93-100)

Summer Street
220’ North of Robin Road
Town of Weston - Pavement Management

Pavement Management Concepts

PCI = 87

Routine Maintenance (PCI 86-92)

Shady Hill Road
Between Ledgewood Road and Glenn Road

Treatment options – Cracksealing, patching
Pavement Management Concepts

PCI = 85

Preventive Maintenance (PCI 73-85)

South Avenue (Route 30)
Between Pine Street and Brown Street

Treatment options – Cracksealing, patching, thin overlay, surface treatments (i.e. chip seal, microsurfacing)
PCI = 64

**Structural Improvement (PCI 61-72)**

**West Cliff Road**
400’ N of Scotch Hill Road

Treatment options – Overlay, Mill & Overlay, In-place Surface Recycling
PCI = 54

Base Rehabilitation (PCI 0-60)

Lawrence Road

Treatment options – Reclamation, Reconstruction
Pavement Management in Weston

Average Roadway Pavement Condition Index = 74
Pavement Management in Weston

Distribution of Conditions*

*Miles by PCI

* Only Town accepted roadways are included.
Pavement Management in Weston

GIS Integration
Pavement Management in Weston

Current Roadway Pavement Backlog Summary

Miles of Roadway
87.4 miles

Backlog in Dollars
$15,656,205
Pavement Management in Weston

Budget Analysis

• **$ 0 per Year**– Used as a baseline, this scenario examines the effects of doing no maintenance or rehabilitation on Weston’s roads for 5 years.

• **$ 450,000** – Spending just the Town’s current Chapter 90 allocation each year for the 5 year study period.

• **$ 750,000** – Continuing the town’s current funding level of supplementing the Chapter 90 funds with $300,000 of local funds.

• **$ 1.2 Million** – The annual funding level determined to maintain the town’s current PCI level

• **$ 1.8 Million** – Improves the Town’s average PCI by 5 points over five years.
Pavement Management in Weston

Projected Pavement Condition

- Zero Funding
- Chapter 90 $450K
- Current $750K
- Maintain PCI
- Improve PCI
Recommendations

Pavement Management Recommendations

- **Budget adequate funds** to balance pavement funding needs with water and other infrastructure funding expenditures.

- **Expand the maintenance program** to make timely repairs using a variety of applicable treatments.

- **Provide for construction inspection** at the plant and in the field to ensure quality material is provided and quality work is being performed.

- Having made this investment in pavement management, **provide adequate staffing** to support a quality paving program.
Recommendations

Annual Road Program Development

- Use System Output to Identify Candidate Projects
- Utilize GIS to Coordinate Projects Geographically
  - Reduce Mobilization cost for contractors
  - “Neighborhood” Planning
- Coordinate with Utility Companies
- Adapt to Funding Opportunities and Constraints
System Recommendations

- Update system to reflect work that has been done
- Evaluate funding levels periodically
- Develop multi-year road programs
- Track specific and overall conditions periodically - update pavement condition ratings at a minimum of every 4 years
Questions & Answers

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