Town of Millbury
Pavement Management System (PMS)
What is PMS?

Pavement Management System (PMS) is a planning tool utilized to:

• **Collect** and **monitor** current pavement condition information,

• **Evaluate** and **prioritize** alternative maintenance, rehabilitation and reconstruction (repair) strategies, and

• **Provide** decision makers with necessary information for understanding the long-term consequences of short-term budgeting decisions.
Deliverables

A need-based Master Plan containing recommendations of which Millbury roadways should be addressed in the coming five years (FY2011 to FY2015).
Deliverables

Work backlog report containing a recommended treatment with associated costs for every segment of roadway maintained by the Town of Millbury.
Data Collection Process: 

**The Data**

- **PAVEMENT DISTRESS SURVEYS (80%)**
  - POTHOLES
  - DISTORTIONS
  - ALLIGATOR CRACKING
  - TRANSVERSE & LONGITUDINAL CRACKING
  - BLOCK CRACKING
  - RUTTING
  - BLEEDING/POLISHED AGGREGATE
  - SURFACE WEAR & RAVELING
  - CORRUGATIONS, SHOVING & SLIPPAGE

- **RIDEABILITY (10%)**

- **DRAINAGE (10%)**
## Overall Condition Index (OCI)

The OCI for an asset inspection is a weighted average of the condition category indexes:

80% - *Pavement Distresses* • 10% *Rideability* • 10% *Drainage*

<table>
<thead>
<tr>
<th>OCI Range</th>
<th>Pavement Condition</th>
<th>Recommended Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 24</td>
<td>Very Poor</td>
<td>Base Rehabilitation - Full depth Reconstruction</td>
</tr>
<tr>
<td>25 - 47</td>
<td>Poor</td>
<td>Structural Improvement - Thick Overlay</td>
</tr>
<tr>
<td>48 - 67</td>
<td>Fair</td>
<td>Preventive Maintenance - Thin Overlay or Surface Treatment</td>
</tr>
<tr>
<td>68 - 87</td>
<td>Good</td>
<td>Routine Maintenance - Crack Seal and/or Skin Patch</td>
</tr>
<tr>
<td>88 - 100</td>
<td>Excellent</td>
<td>Do Nothing at this time</td>
</tr>
</tbody>
</table>
Overall Condition Index (OCI)

- Town maintains approximately **69.7 miles** of roadway
- Current Network OCI **70.5**

- Approximately **$4 million** to bring network to “Excellent” or “Do Nothing” status
Figure X-1 Millbury Local Pavement Management
Current Condition - Fall 2009

Legend

Millbury Road Network
Current Pavement Condition
- Base Rehabilitation (0 - 24)
- Structural Improvement (24.01 - 48)
- Preventative Maintenance (48.01 - 68)
- Routine Maintenance (68.01 - 88)
- Do Nothing (88.01 - 100)
- Other Jurisdiction

CMRPC

CMRPC-Towns

Millbury Local Network OCI 70.5

Legend:

- Base Rehabilitation (0 - 24)
- Structural Improvement (24.01 - 48)
- Preventative Maintenance (48.01 - 68)
- Routine Maintenance (68.01 - 88)
- Do Nothing (88.01 - 100)
- Other Jurisdiction

CMRPC-Towns
Figure X-2 Millbury Local Pavement Management
No Funding Condition - 2015

Legend

Millbury Road Network
No Funding Pavement Condition
Base Rehabilitation (0 - 24)
Structural Improvement (24.01 - 48)
Preventative Maintenance (48.01 - 68)
Routine Maintenance (68.01 - 88)
Routine Maintenance (68.01 - 88)
Other Jurisdiction
CMRPC/Towns

Millbury Local Network OCI 50.8
Budget Development

• It would require approx. $4.1 million to bring all Millbury roads to “do nothing or excellent status”.

• At our current rate of spending ($250K/YR) we will never get there; in fact the OCI will continue to decline with this level of investment.

• Cost to maintain the current OCI of 70 is approx. $500,000K/YR.
Budget Development

Current total Chapter 90 funds: $334K/YR
Chapter 90 funds allocated to PMS: $250K/YR
Chapter 90 funds allocated to other: $84K/YR

Requested Town funds (capital expense) to supplement Chapter 90: $100K/YR
Total funding for PMS($250K + $100K): $350K/YR
Thank You!

QUESTIONS??