

City of Dover

Pavement Management

Presentation to City Council

March 16, 2016



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Dover's Paved Roads

- ▶ 128.7 miles of paved roads maintained by the City.
- ▶ Automated pavement condition assessment completed by Infrastructure Management Services (IMS) in November 2015.



Pavement Condition

- ▶ Pavement Condition Index (PCI)
- ▶ Ranges from 0 to 100 (*higher = better*)
- ▶ Target Range: 60-65
- ▶ City-wide average

PCI = 58

PCI Rating Scale	
86-100	Excellent
71-85	Very Good
61-70	Good
51-60	Fair
34-50	Marginal
26-40	Poor
0-25	Very Poor



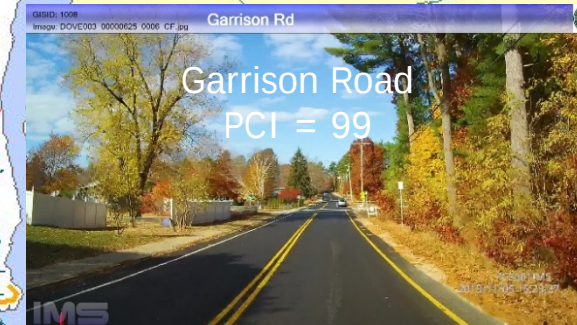
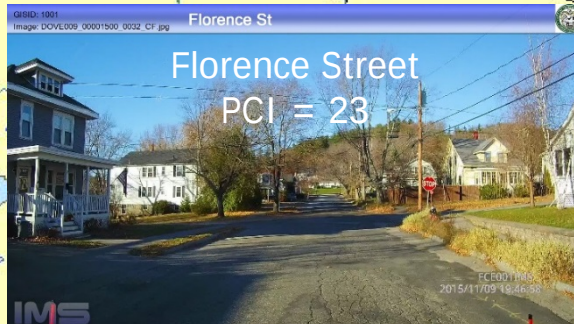
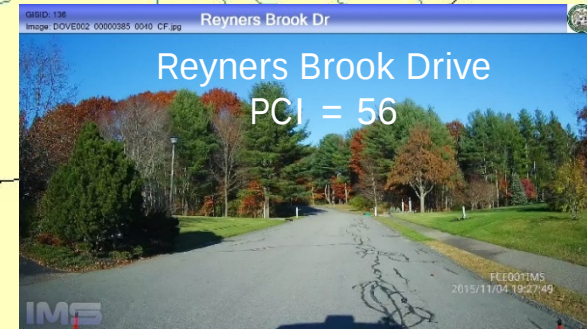
Dover – Overall PCI Map

Legend

Pavement Condition Index

Pavement_Condition_Index_PCI

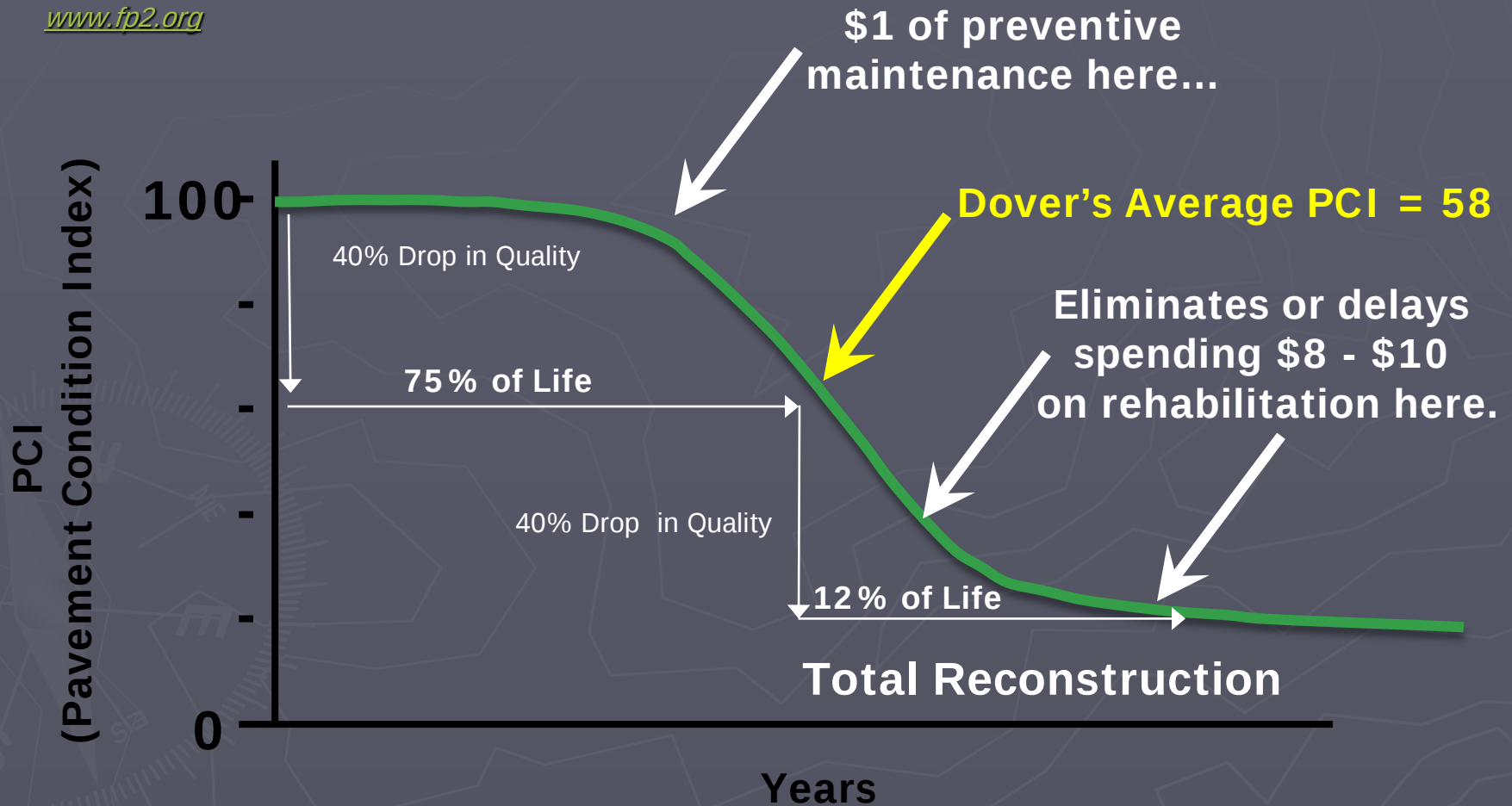
- 0 - 50 Poor
- 51 - 70 Good
- 71 - 100 Excellent



Life of Pavement

Source: "For Pavement Preservation" Task Force

www.fp2.org



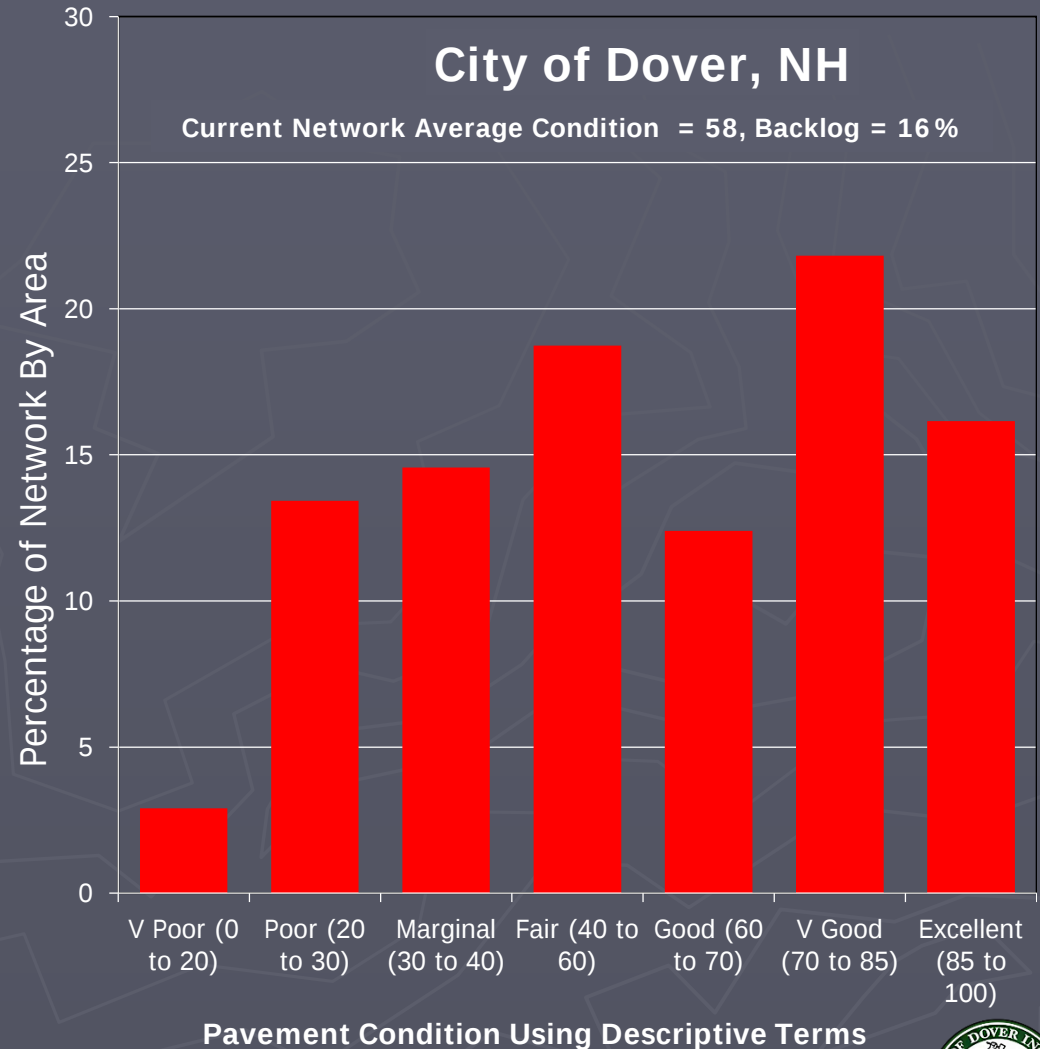
Other Metrics

► Backlog

- Percentage of Roads Needing Surface Replacement (PCI 0–30)
- 20% = Excessive
- 15% = Manageable
- 12% = Reasonable
- Currently at 16%

► Percent of Excellent

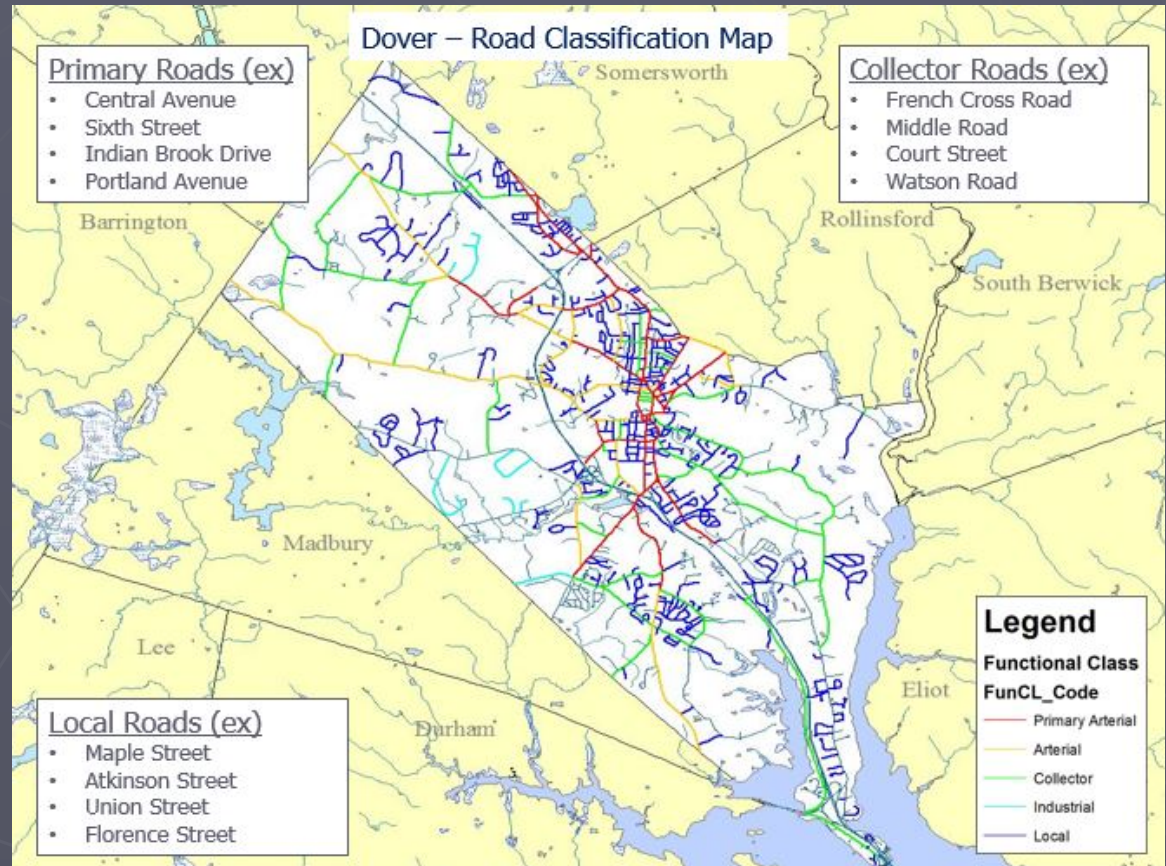
- Target 15% or greater
- Currently at 16%



Network Analysis

Key Elements include:

- Road Classification
- Funding Levels
- Repair Type / Cost
- Objectives



Pavement Repair Unit Costs

Preservation Methods (1-4yrs)

Crack Seal

Spot Repair

Cost Range: \$ 0.10/sf to \$ 0.50/sf



Resurfacing Methods (4-12 yrs)

Mill, Shim, and Overlay

Cost Range: \$ 1.00/sf to \$ 1.55/sf



Reconstruction Methods (12-20 yrs)

Reclaim and Overlay

Reclaim with CI & Overlay

Full Box Reconstruction

Cost Range: \$ 3.50/sf to \$ 6.50/sf



Establish Priorities



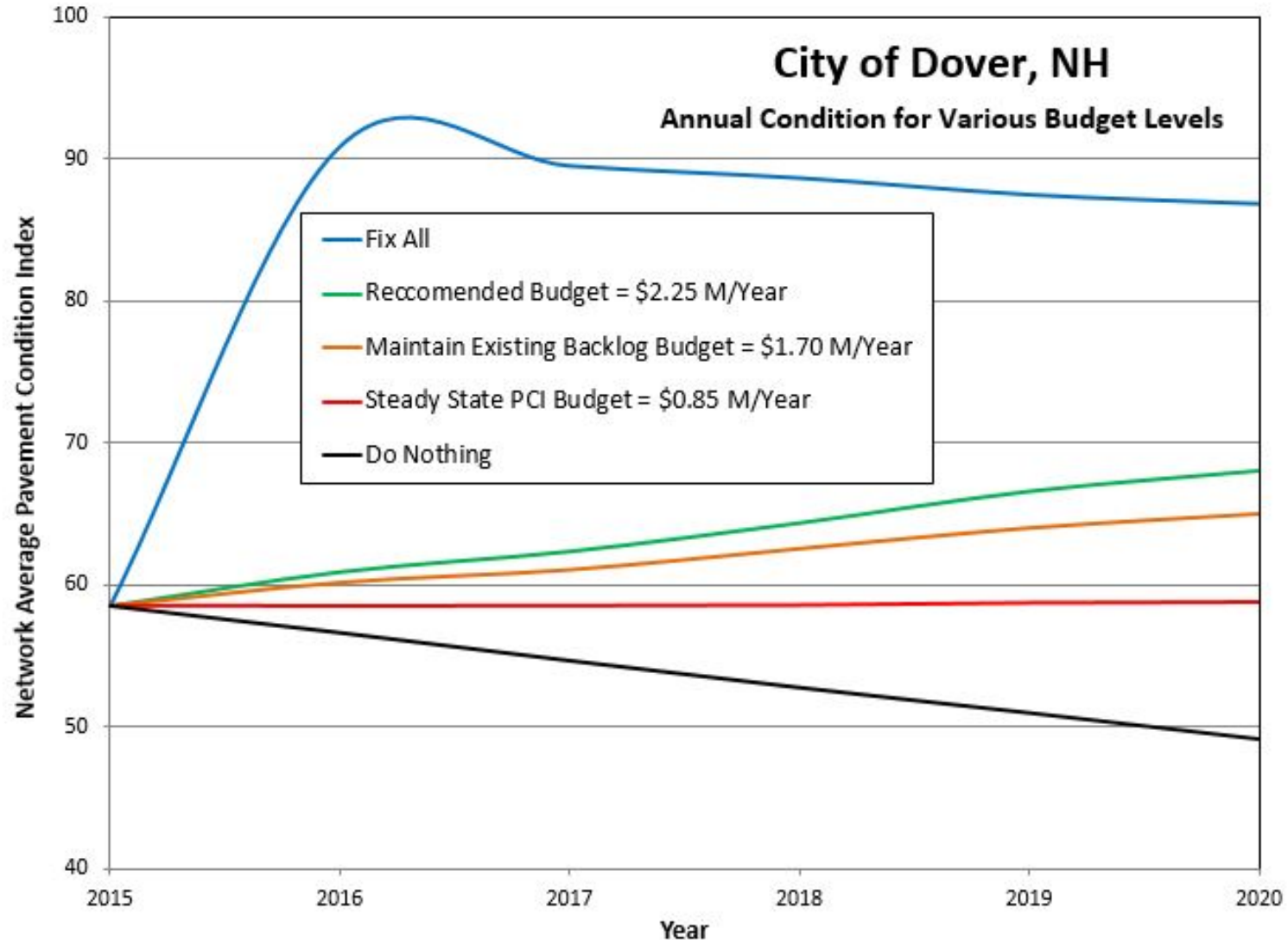
- ▶ Consider Road Classification
- ▶ Consider other City needs (utilities)
- ▶ Coordinate repairs to leverage funds
- ▶ **Dig the Road Once**
- ▶ Run the PMP program



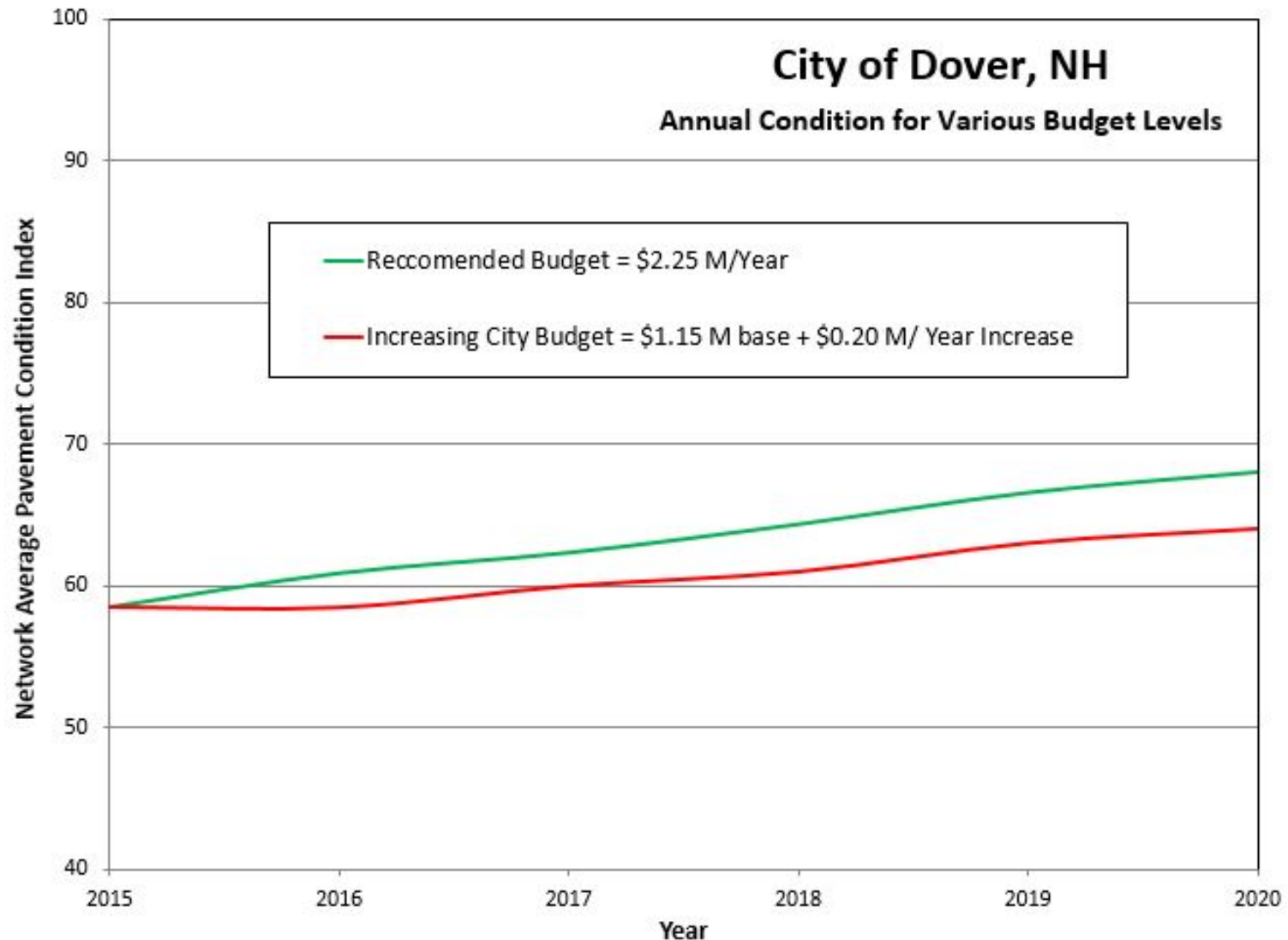
Preserve Good Roads
Raise Average PCI
Reduce Backlog



Level of Investment Matters



Level of Investment Matters



Next Steps

- ▶ Fully integrate data in VUEWorks
- ▶ Commit to annual funding level then advance a plan
- ▶ Field verify pavement thickness and base gravels on roads planned for repairs
- ▶ Perform repairs, update records, and re-evaluate planned repairs annually
- ▶ Reassess pavement every 3-5 years



Questions ?

