

Pavement Management Plan

Town of Exeter, NH

Public Works Department

October 2024



Presentation Outline

- Pavement Management Concepts
- Conditions in Exeter
- Budget Analysis
- Recommendations

Pavement Management Concepts

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

PAVER Process

– Industry Standard

1. Inventory
2. Inspection
3. Condition Analysis
4. Condition Prediction
5. Budget and Work Plan

Micro PAVER 5.2



*New Dimensions in Pavement
Maintenance Management*



Construction Engineering Research Laboratory

Pavement Management Concepts

Levels of Analysis

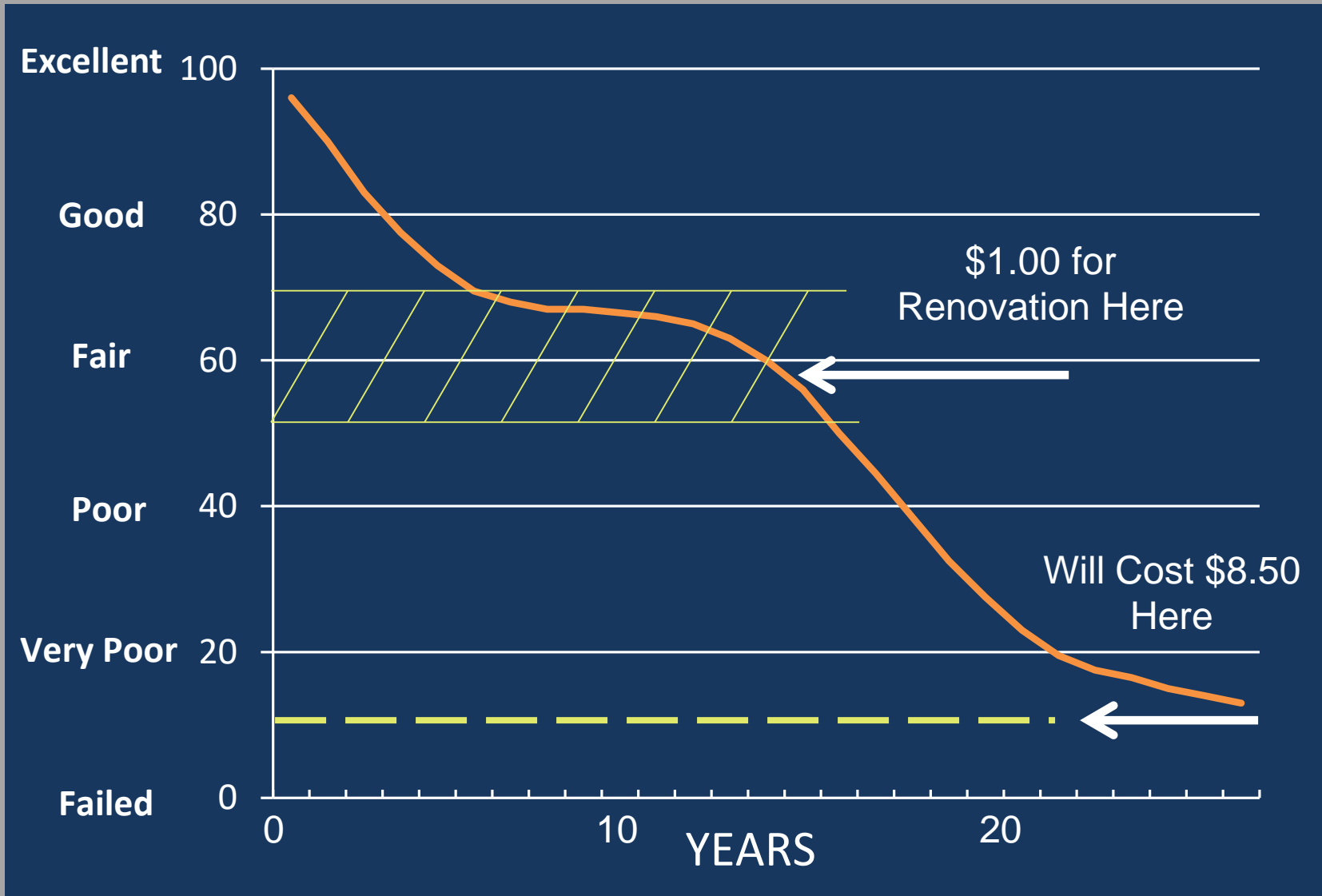
Network Level

VS.

Project Level

Pavement Management Concepts

Preventive Maintenance Approach

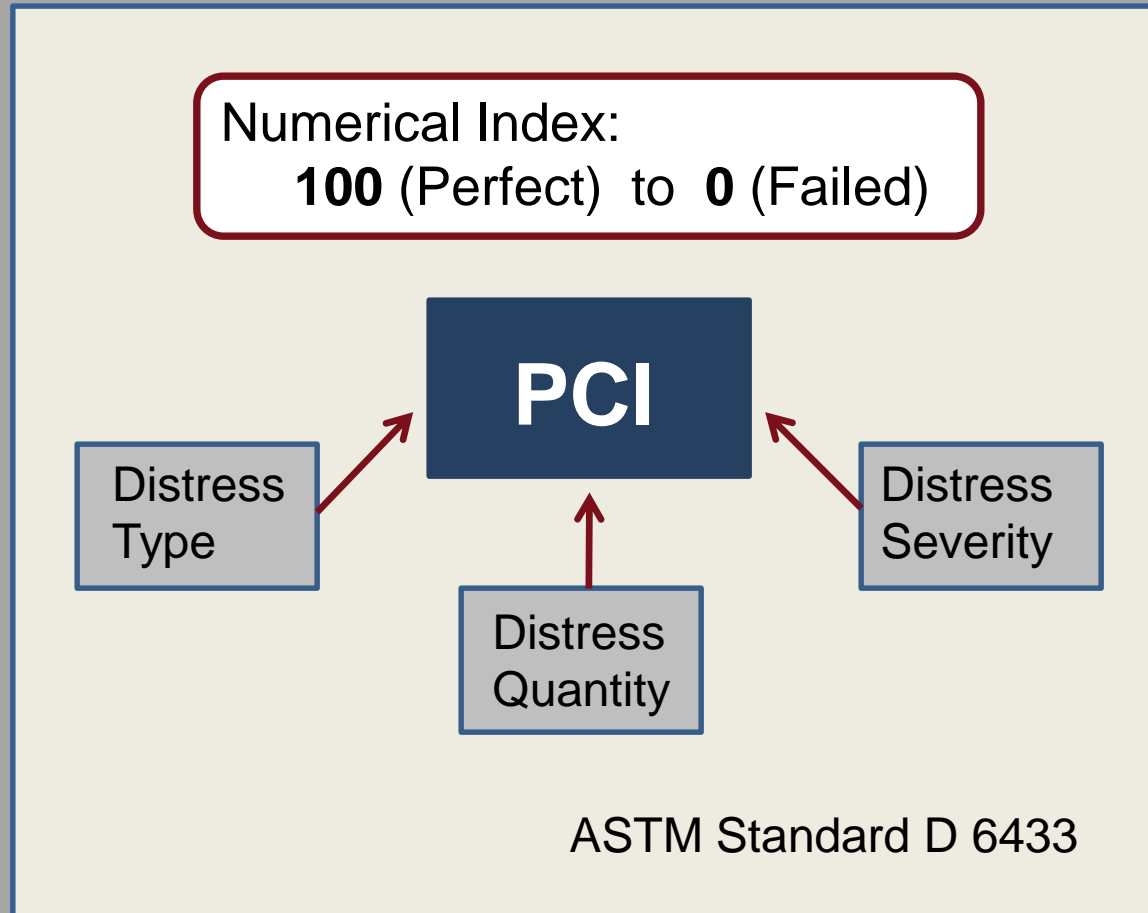


Pavement Management Concepts

- **Do the Right Thing,**
 - (use a variety of treatments)
- **At the Right Time,**
 - (not too early or too late)
- **In the Right Place**
 - (on the correct roads)
- **In the Right Way**
 - (use construction inspection & testing)

Pavement Management Concepts

Pavement Condition Index (PCI)



Conditions in Exeter - 2024



Tamarind Ln – PCI 100

Conditions in Exeter - 2024



Marilyn Ave – PCI 86

Conditions in Exeter – 2024



Charter St – PCI 68

Conditions in Exeter - 2024



Wentworth St – PCI 45

Conditions in Exeter - 2024



Continental Dr – PCI 31

Conditions in Exeter – 2024



School St – PCI 16

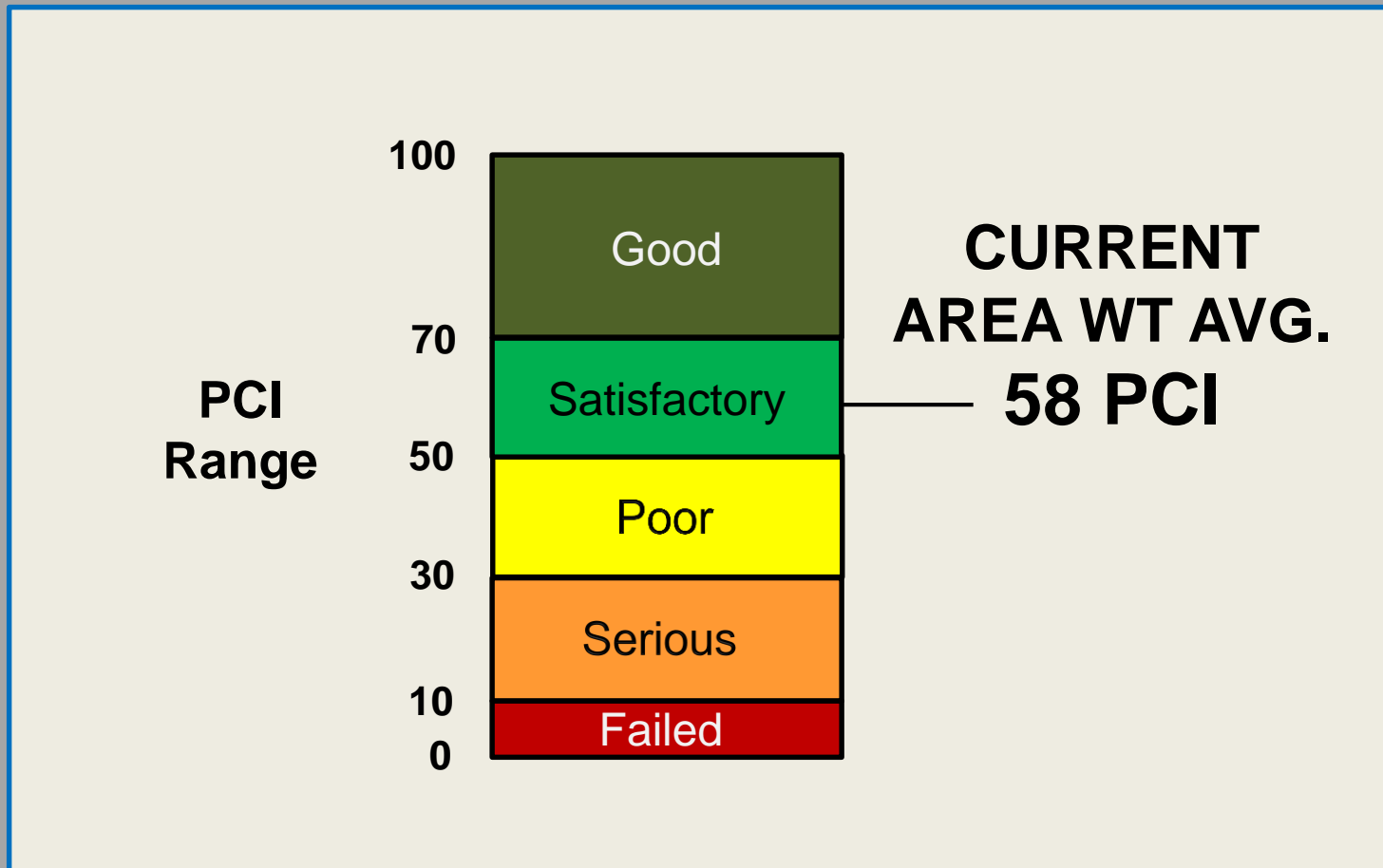
Conditions in Exeter - 2024



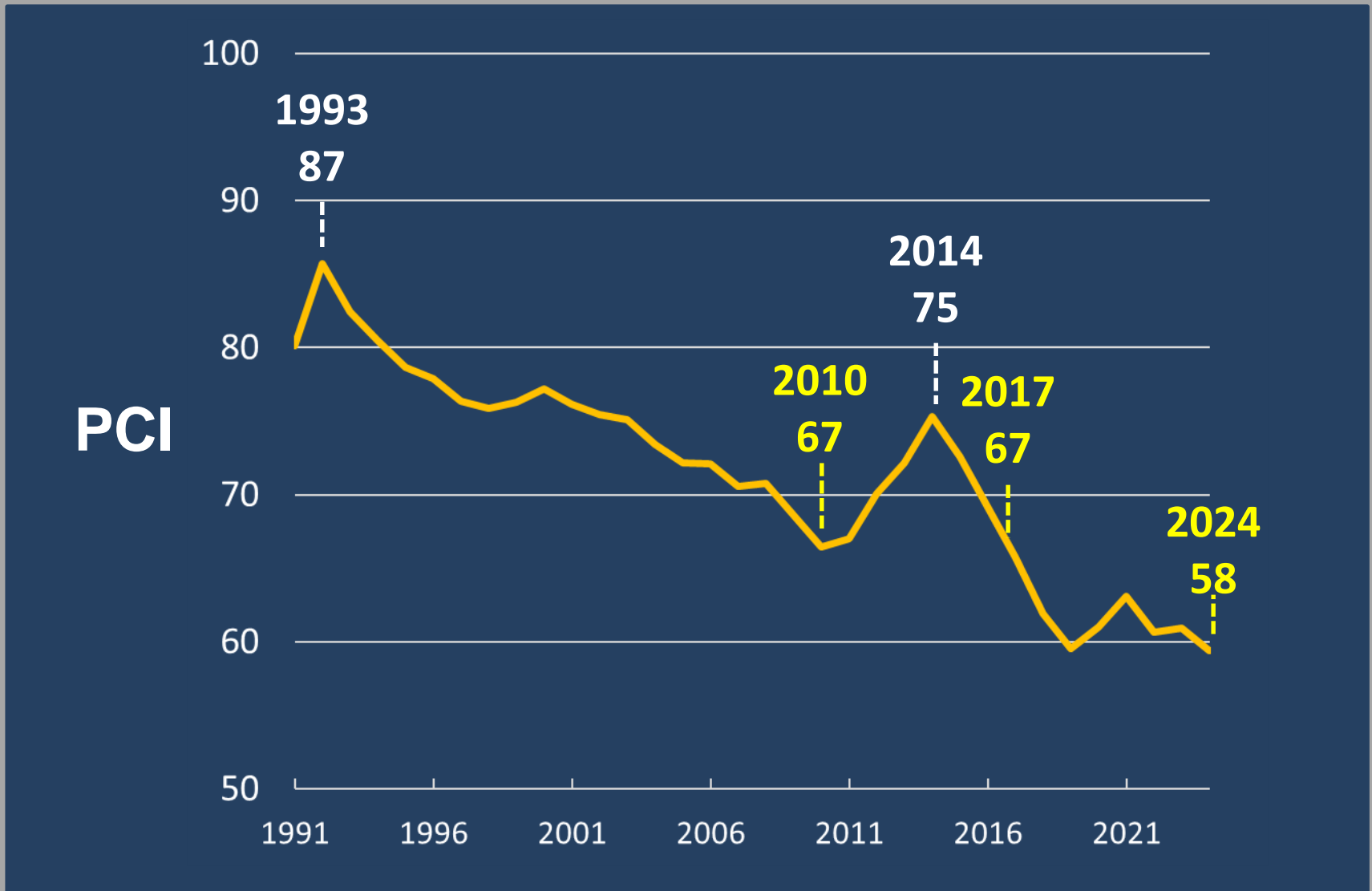
Laperle Ave – PCI 0

Conditions in Exeter

66.9 Town Maintained Road Miles

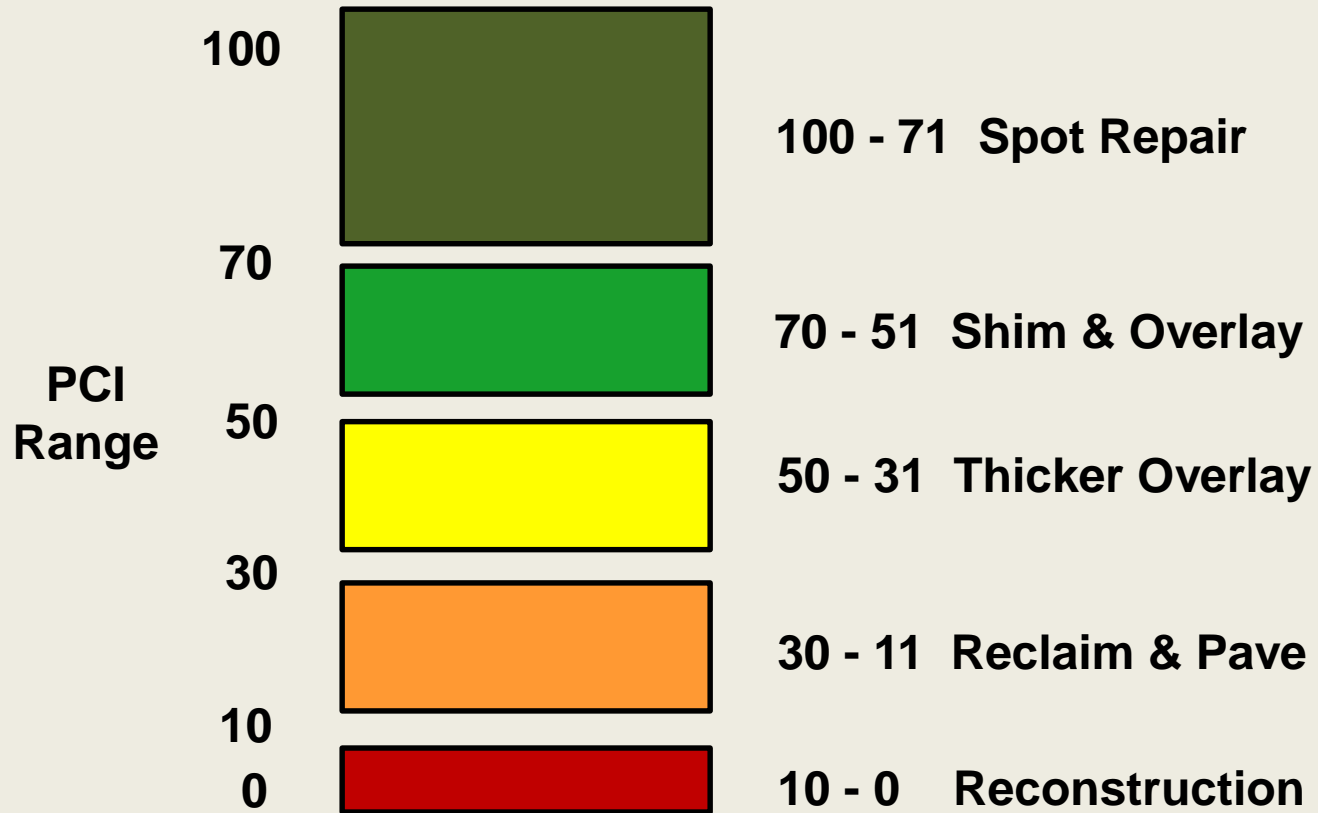


Historical Pavement Condition



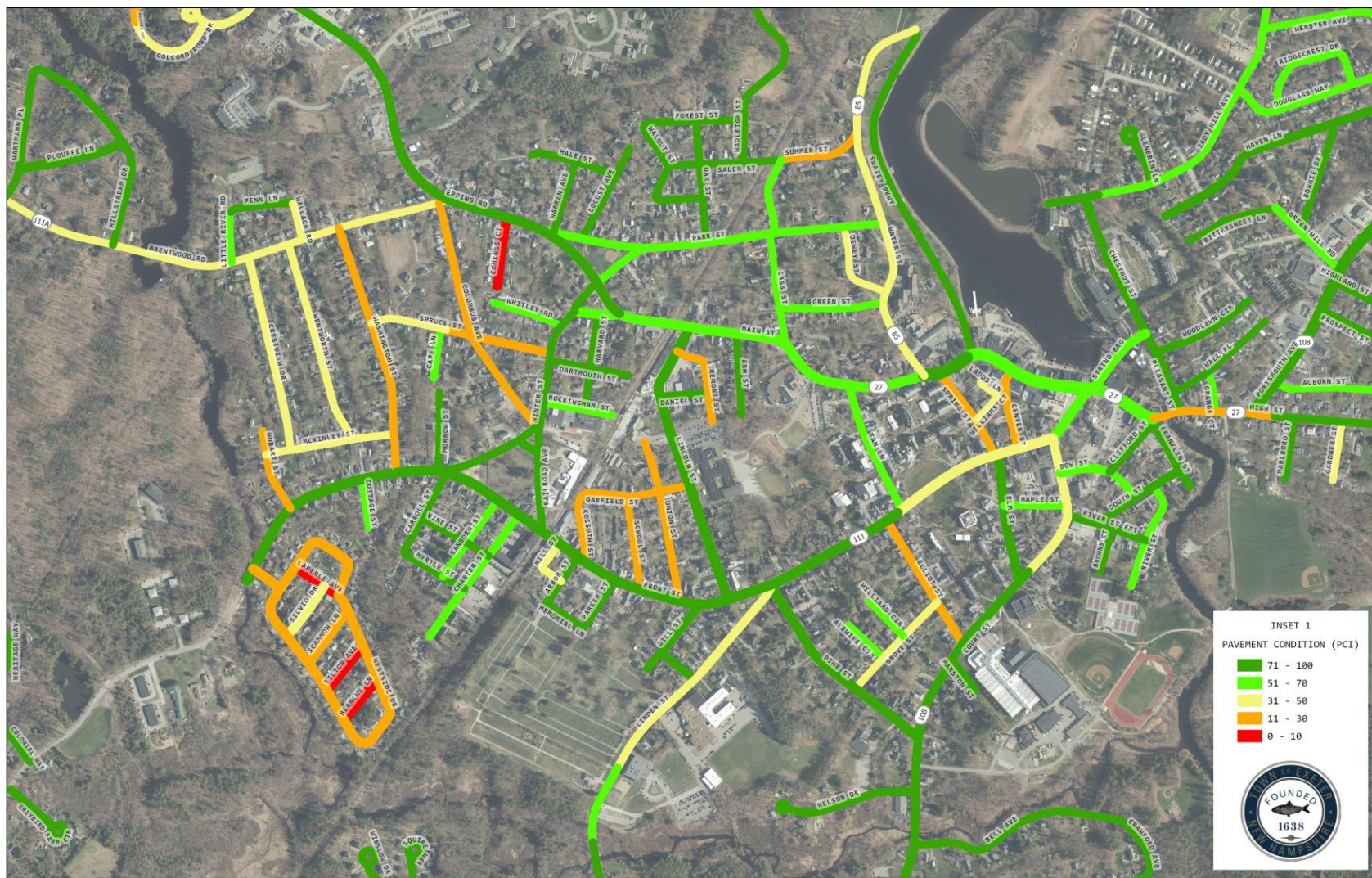
Conditions in Exeter

Repair Categories



Conditions in Exeter

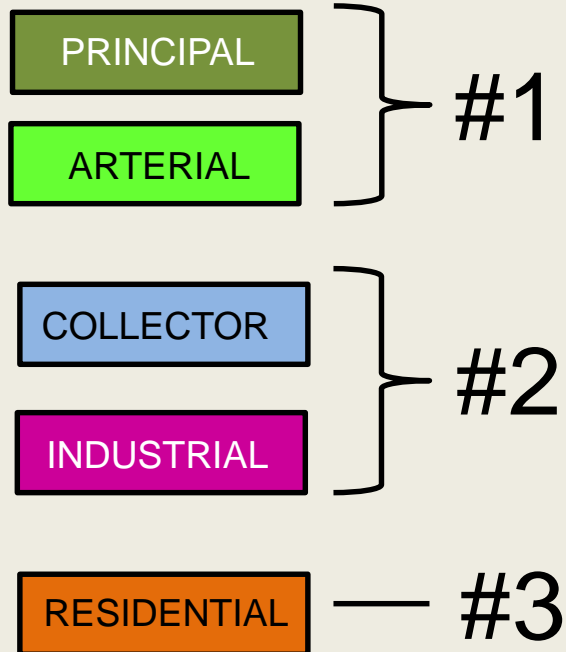
PCI / Repair Categories



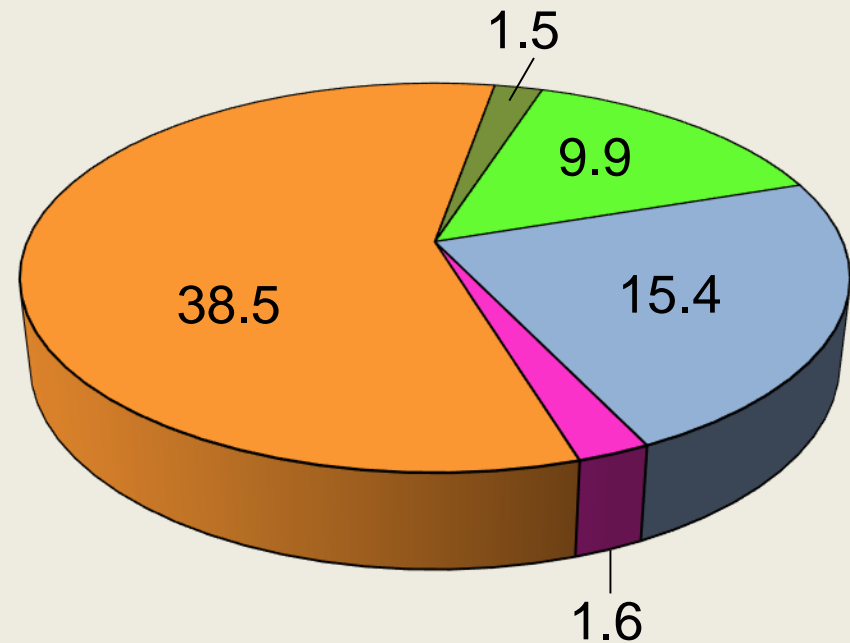
Conditions in Exeter

Priority / Roadway Function

PRIORITY

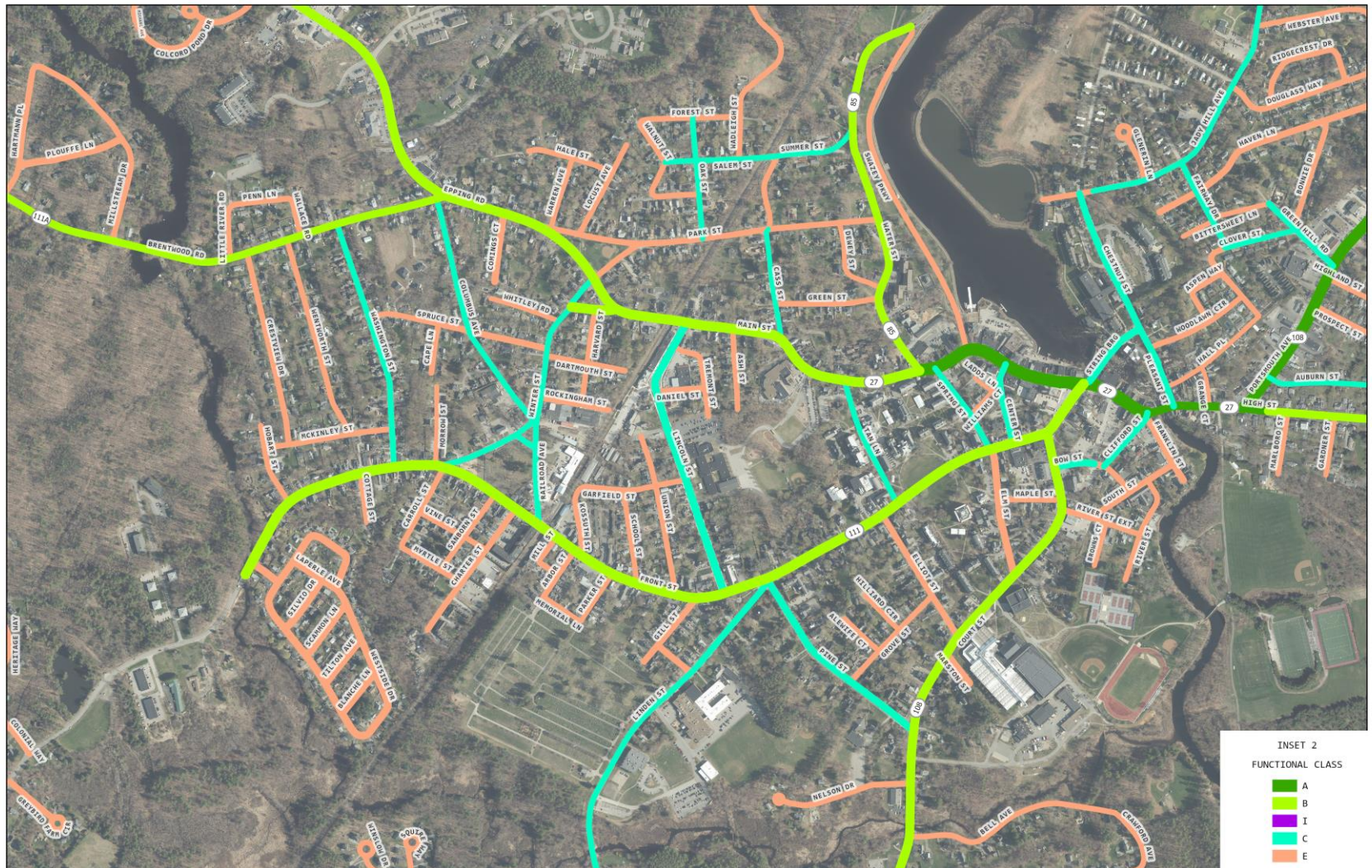


MILES



Conditions in Exeter

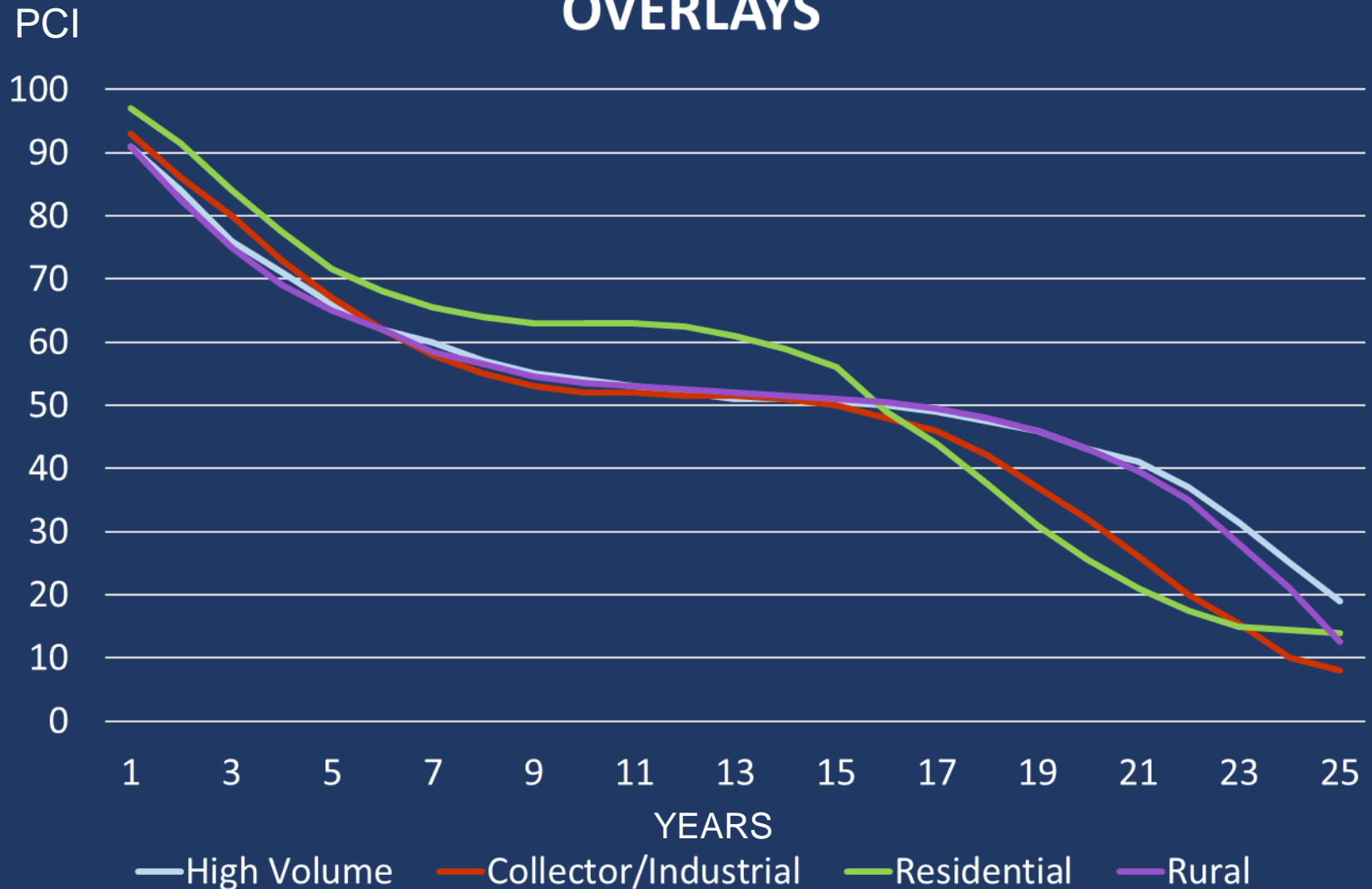
Functional Classification - Rank



Conditions in Exeter

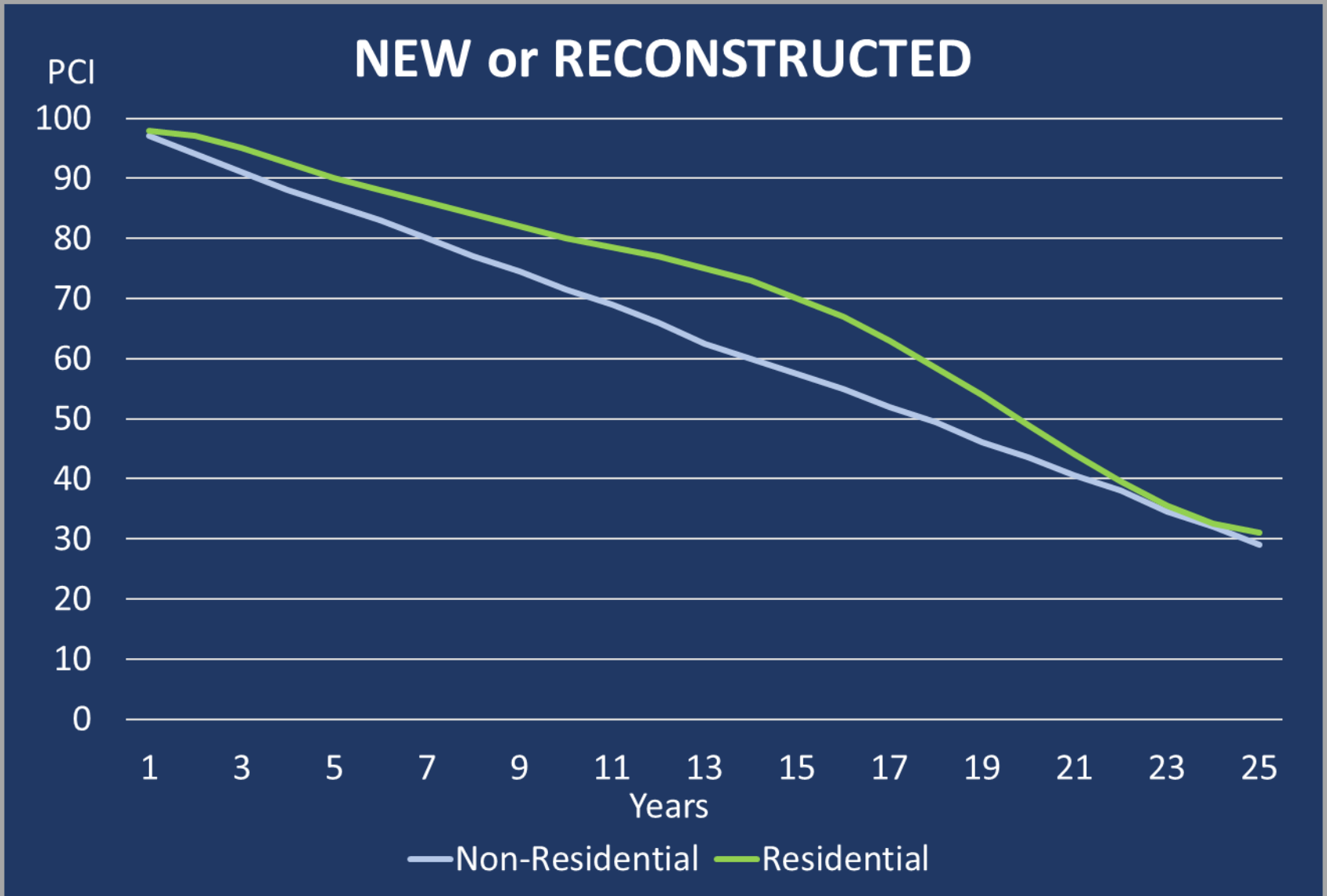
Family Prediction Curves

OVERLAYS



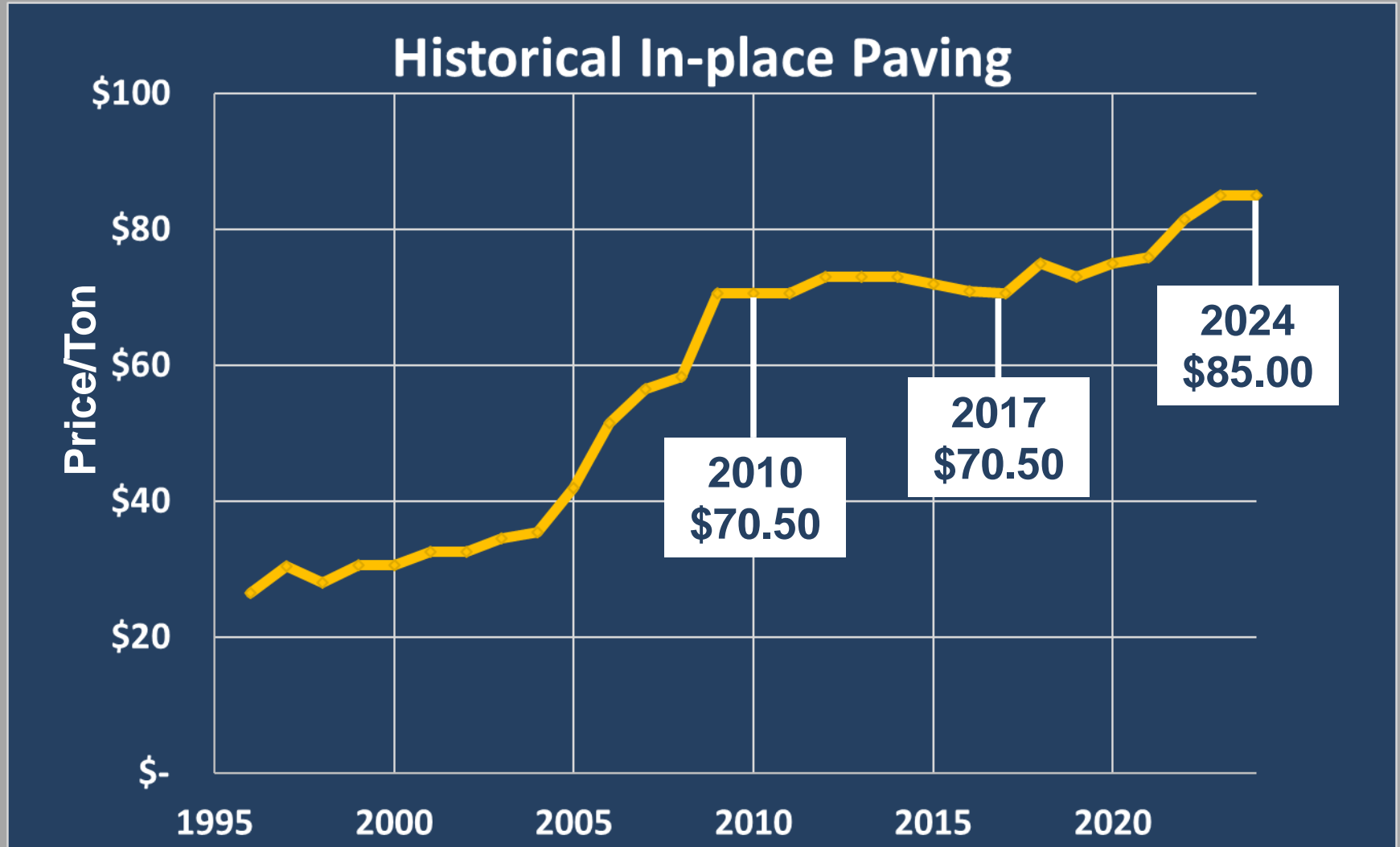
Conditions in Exeter

Family Prediction Curves



Budget Analysis

Historical Hot Mix Asphalt Cost



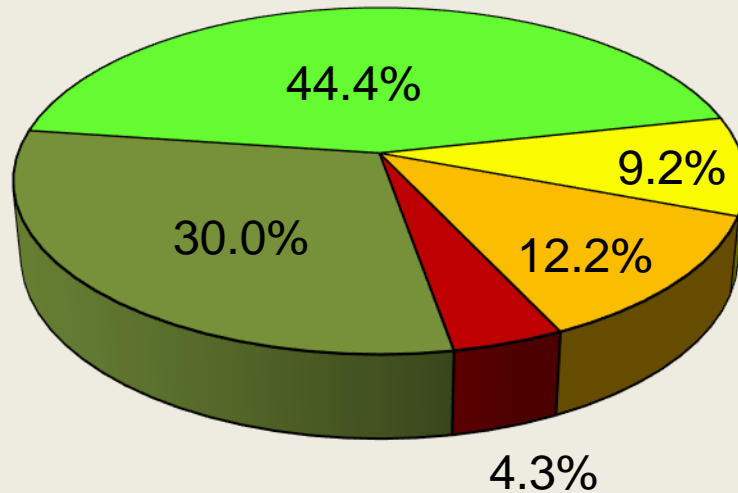
Budget Analysis

Treatment Unit Costs

Treatments Used:	2024 (est)
-Crack Sealing	\$ 2.00/LF
-Pothole Patching	
-1" Overlay and Shim	\$ 1.10/SF
-2" Overlay	\$ 1.47/SF
-Reclaim plus 3" Surface	\$ 3.53/SF
-Reconstruct	\$ 9.38/SF

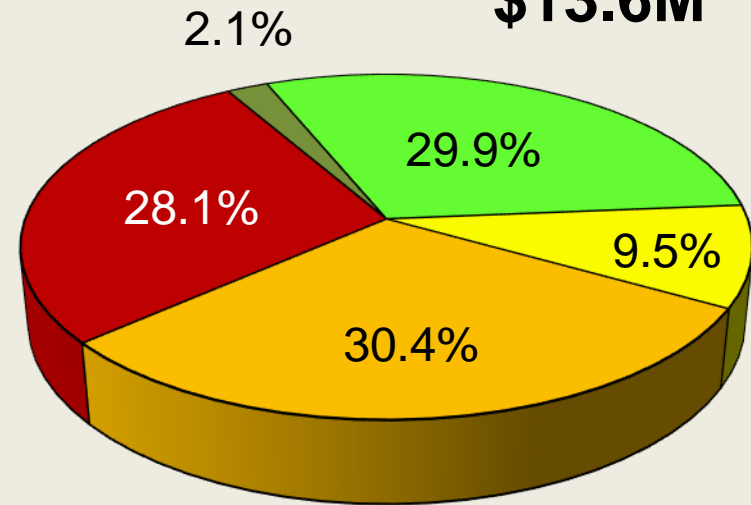
Budget Analysis

AREA



REPAIR COSTS

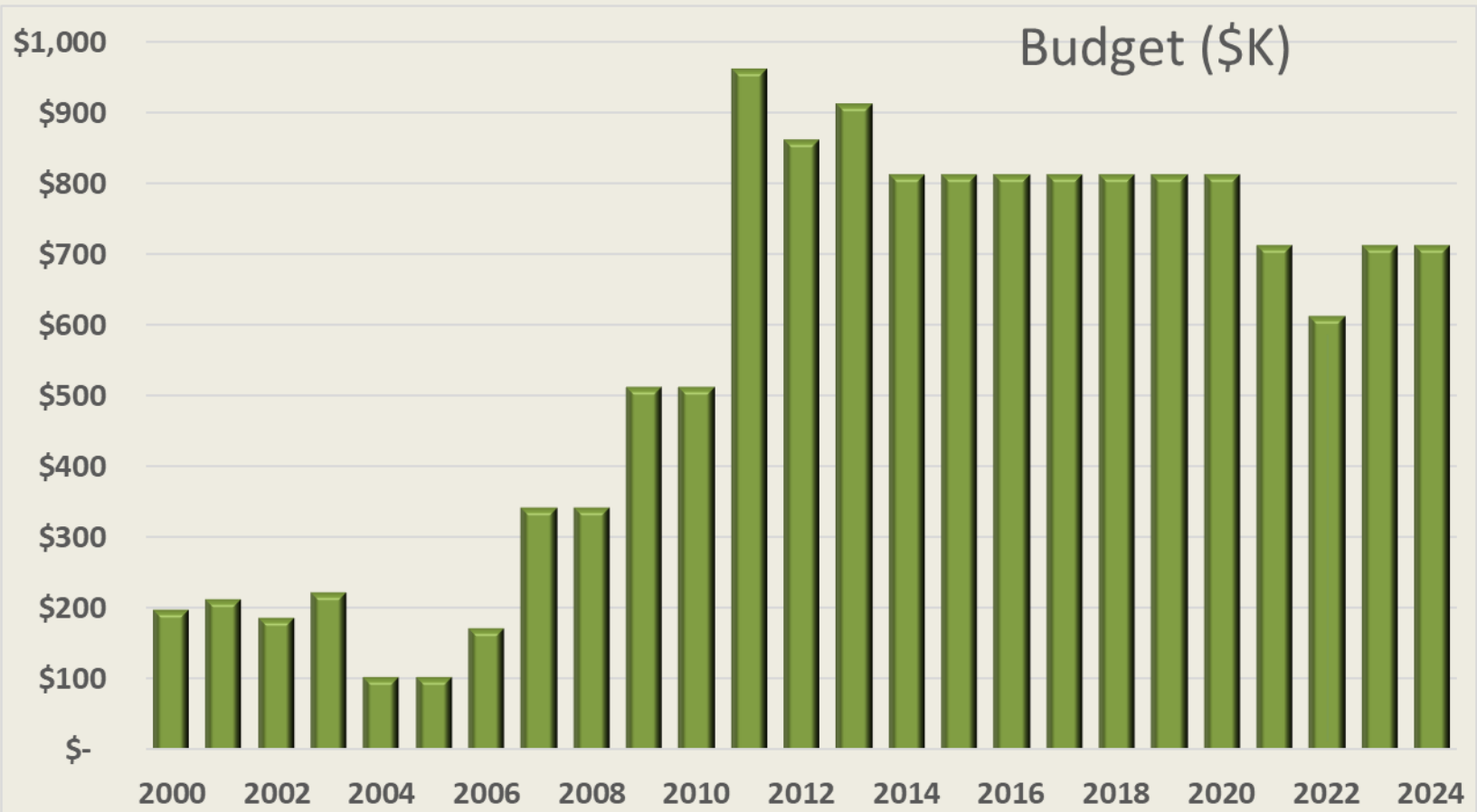
\$13.6M



PCI 100-71	Spot Repairs
PCI 70-51	Shim & Overlay
PCI 50-31	Thicker Overlay
PCI 30-11	Reclaim & Pave
PCI 10-0	Reconstruction

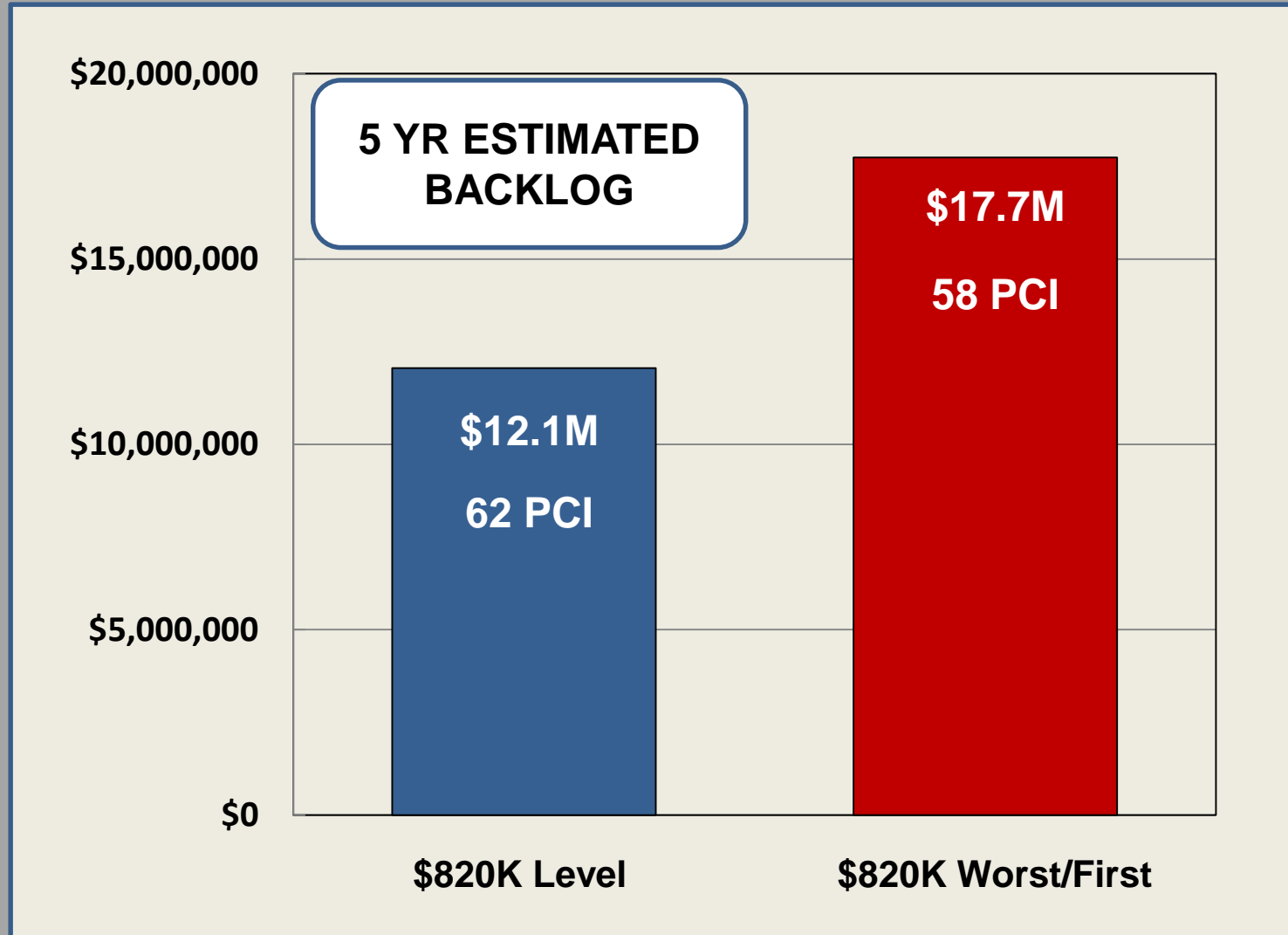
Budget Analysis

Historical Roadway Funding



Budget Analysis - 2010

Pavement Management vs. “Worst / First”



Budget Analysis

Three Scenarios Analyzed

Funding Level	Cost	YR5 PCI	BL (\$M)
Current Budget 5-YR	\$ 700,000/YR	53	22.6
Maintain 5-YR Level PCI	\$ 1,100,000/YR	58	19.2
Increase PCI to 65 in 5-YR	\$ 2,250,000/YR	65	11.7
	<i>Current</i>	58	13.6

Conclusions / Recommendations

PAVER

- Document worked performed annually.
- Refine family prediction curves periodically.
- Evaluate funding levels periodically.
- Update condition ratings at least every 3 or 4 years.
- Multi-year programs no more than 3 years out.
- GIS link
- PAVER – Latest version and training.

Conclusions / Recommendations

Pavement Management

- Appropriate treatment, right time, correct street, proper procedures.
- Pavement preservation not Worst-first.
- Repair strategies appropriate to underlying conditions. Unless future utility project.
- Continue a cracksealing program

Conclusions / Recommendations

Budgets

- Contributors to a reduced PCI from 2017
 - Decreased paving budgets.
 - 20% increase in asphalt cost
 - Increase costs in equipment, manpower and material
 - Curb/sidewalk costs related to street paving
- Street reconstruction projects do not help the network, but additional funds are required.
- Increase budget in 2026.
- Municipal parking lots

Conclusions / Recommendations

2025 Proposed Street Improvement List

\$700,000

- Industrial Dr
- Commerce Way
- Colcord Pond Rd
- Michael Ave
- Allard St
- Anna Louise Dr
- Drinkwater Rd
- Jay's Cutoff – Epping Rd
- Amberwood

Conclusions / Recommendations

2026 Proposed Street Improvement List

\$1,100,000

- Continental Dr
- Jubal Martin Rd
- Columbus Ave
- Allen St
- Leary Ct
- Stevens Ct
- Downing Ct
- Melody Ln
- Minuteman Ln
- Tan Ln
- Lary Ln
- Commings Ct
- Farmington Rd
- Linden St
 - Front to Squamscott
- Spring St
- Court St
 - Front to Elm

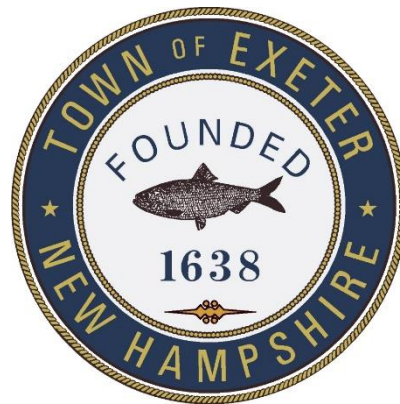
Conclusions / Recommendations

2027 Proposed Street Improvement List

\$1,100,000

- Brentwood Rd
- Webster Ave
- Oaklands Rd
- Watson Rd
 - Oaklands to Power line
- Exeter Falls
- Garrison Ln
- Louisburg Cir
- Linden St
 - Exeter River to Kimball
- Walters Way
- Carriage Dr
- Municipal Downtown Parking

Town of Exeter Pavement Management Plan



Questions?