

City of Dover

Pavement Management Study



Kenneth Mavrogeorge – Dover City Engineer

Jill Semprini – Dover Assistant City Engineer

Bill Scarpati – Stantec Senior Asset Management Specialist



Over 50 communities throughout New England have benefited from our pavement/asset management services.

November 30, 2022



Presentation Agenda

1 Pavement Management Study Methodology

2 Pavement Management Philosophy

3 Past and Current Pavement Conditions

4 Future Budget Scenario Projections

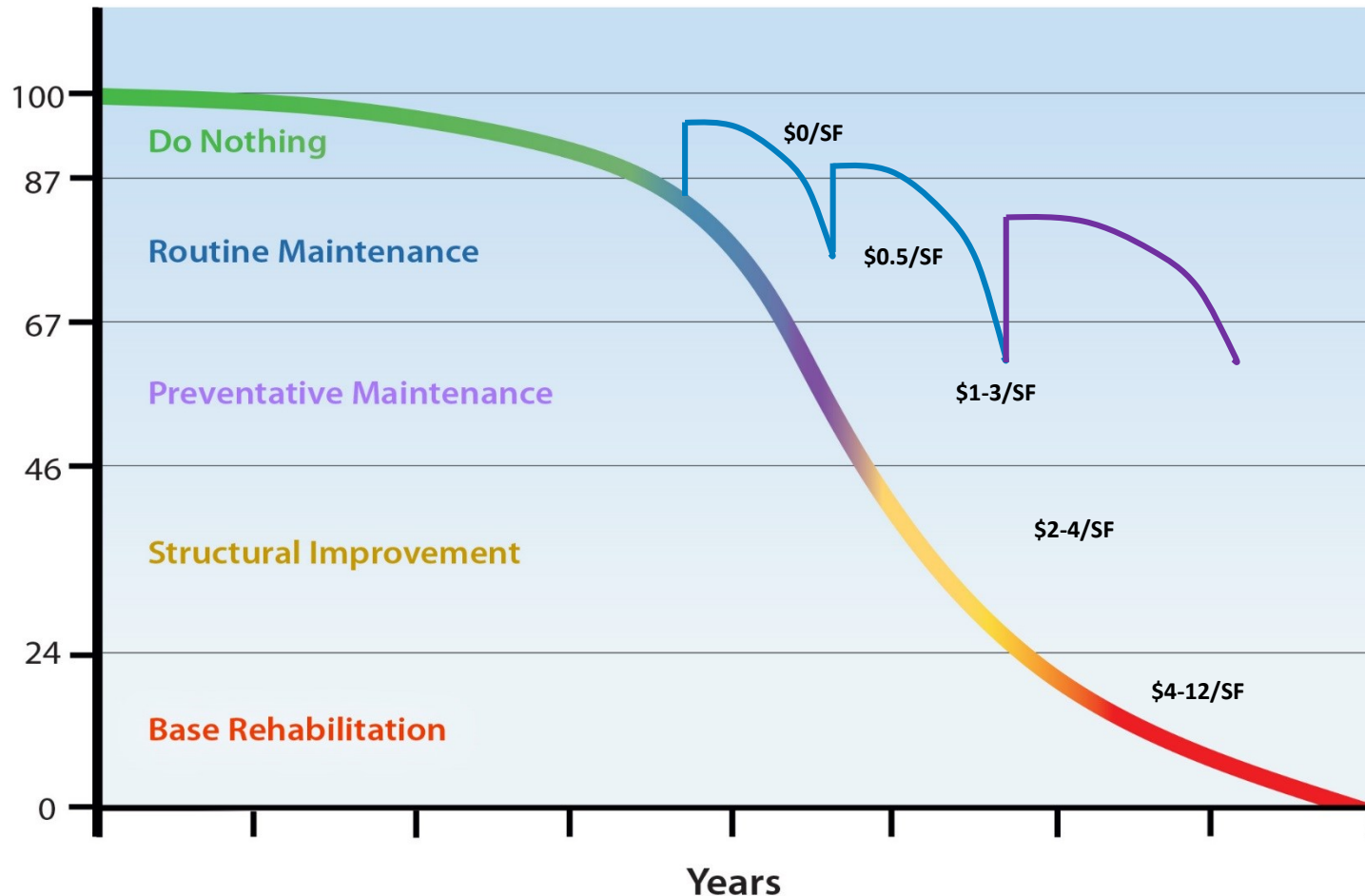
5 Recommendations & Questions

Study Methodology

- Conducted a City-wide Pavement Inventory (125.8 miles)
- Pavement distress identification and quantification was performed on all road segments (Visual Assessment Only)
- Pavement Condition Index (PCI) calculated on a 0 to 100 scale
- City of Dover's Asset Management System – VUEWorks
- City-wide Sign Inventory and Assessment

Pavement Management Philosophy

PCI Treatment Bands



Treatment Band Examples

Rochester Neck Road from Glen Hill Road to Rochester Town Line



Treatment Band Examples

Hough Street from Hillcrest Drive to Horne Street



Treatment Band Examples

French Cross Road from 1500' S of Tolend Road to Madbury Town Line



Treatment Band Examples

Central Avenue from New York Street to Main Street



Treatment Band Examples

Hillcrest Drive from Sixth Street to Hillcrest Drive

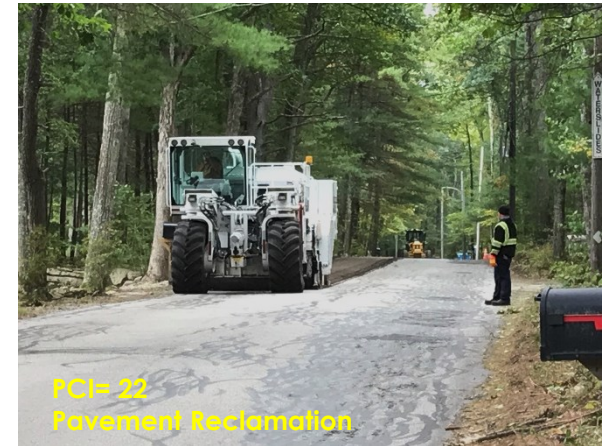


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PCI

BASE REHABILITATION

Treatment Band Repair Examples

PRESERVATION MAINTENANCE



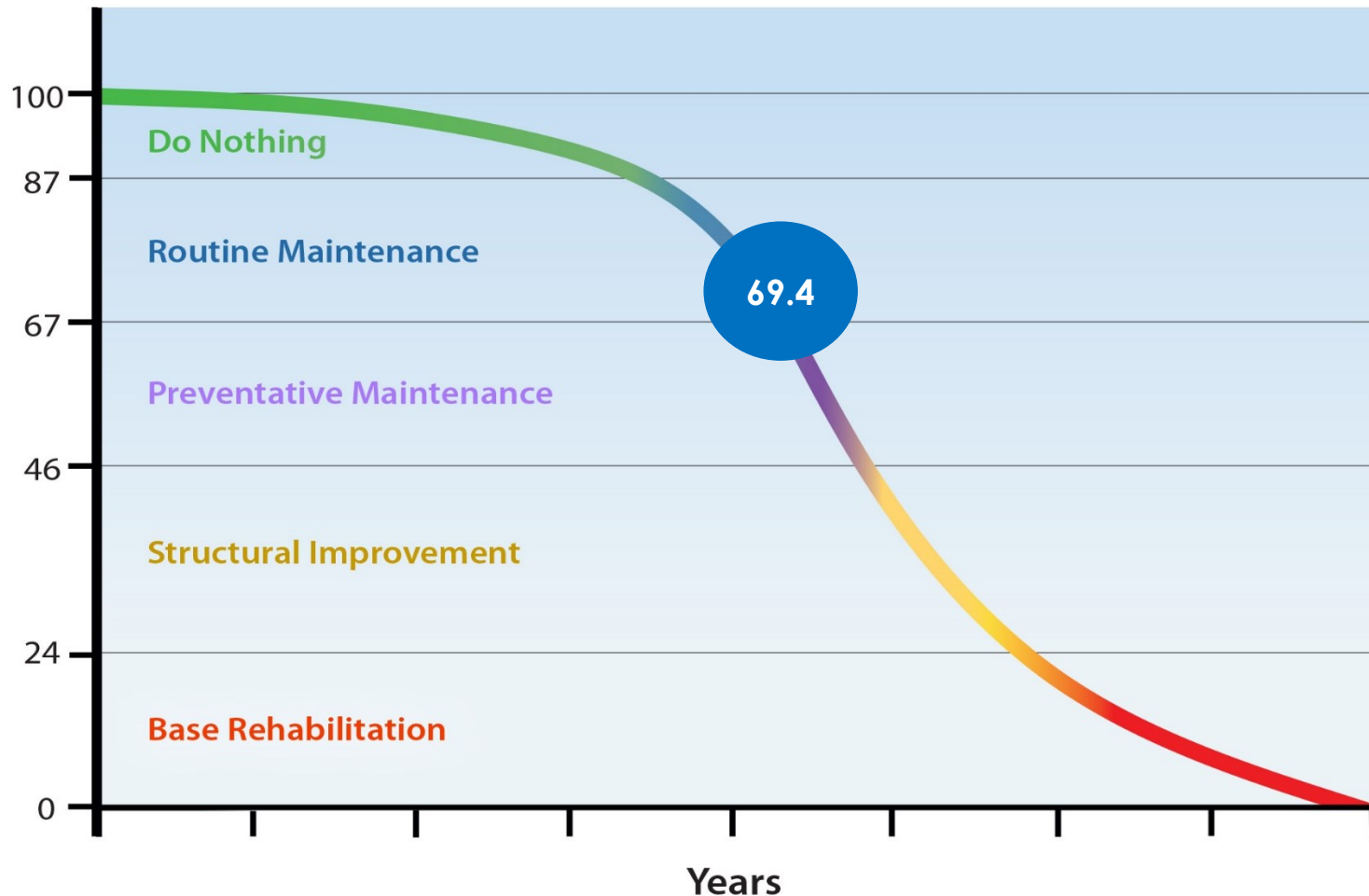
STRUCTURAL IMPROVEMENT



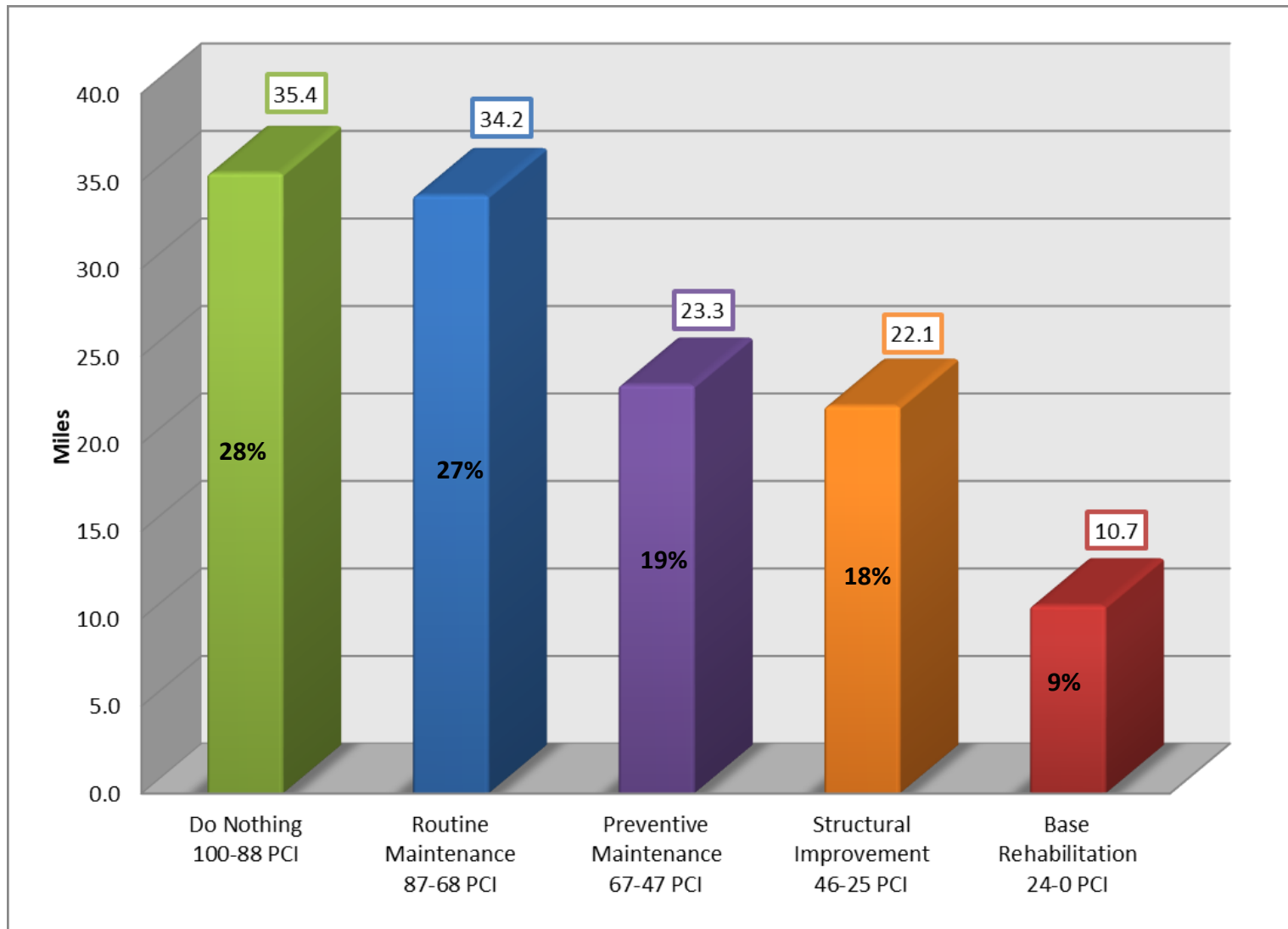
City Streets

August 2022

Average Pavement Condition = 69.4

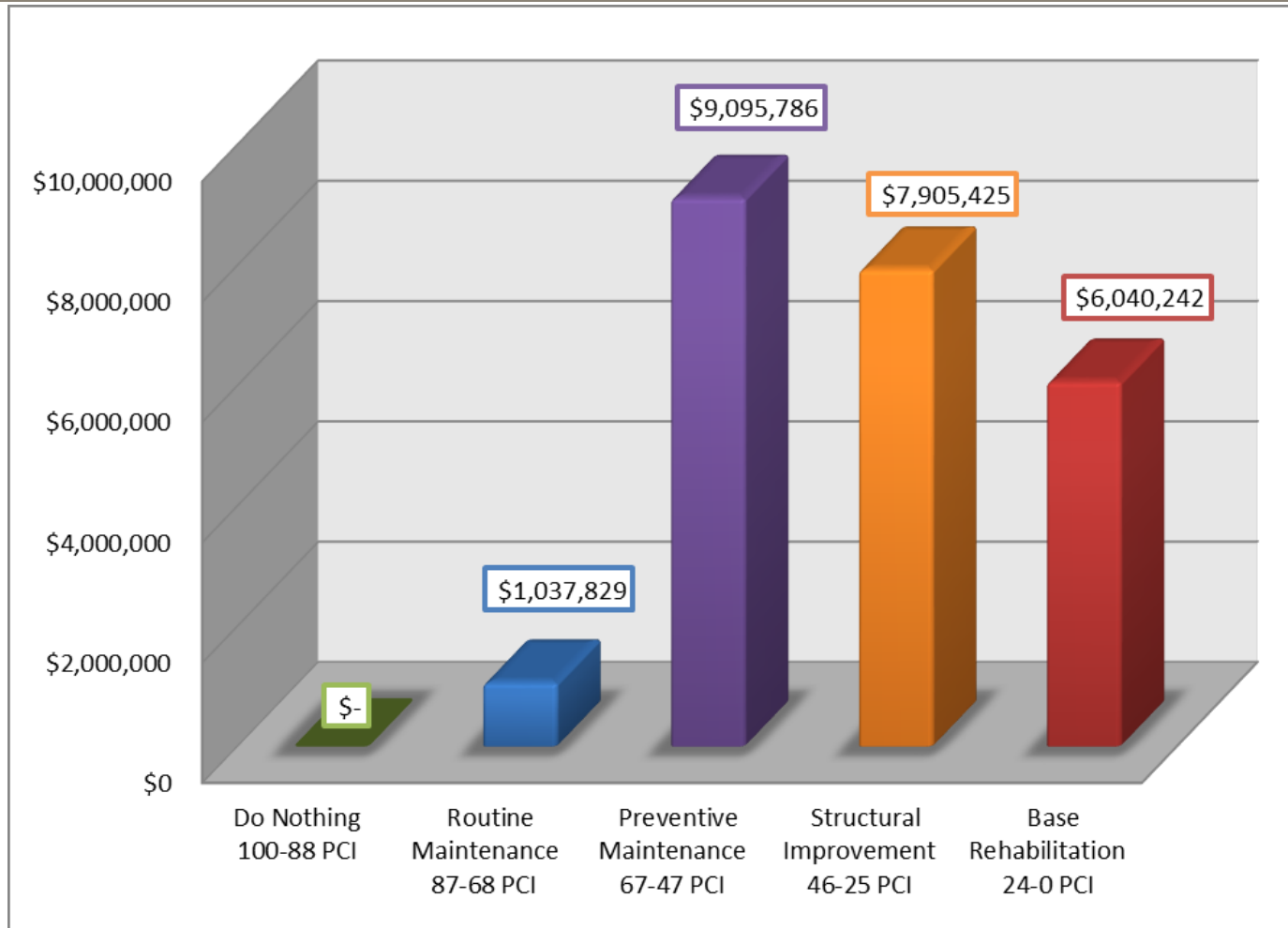


Current City Roadway Conditions



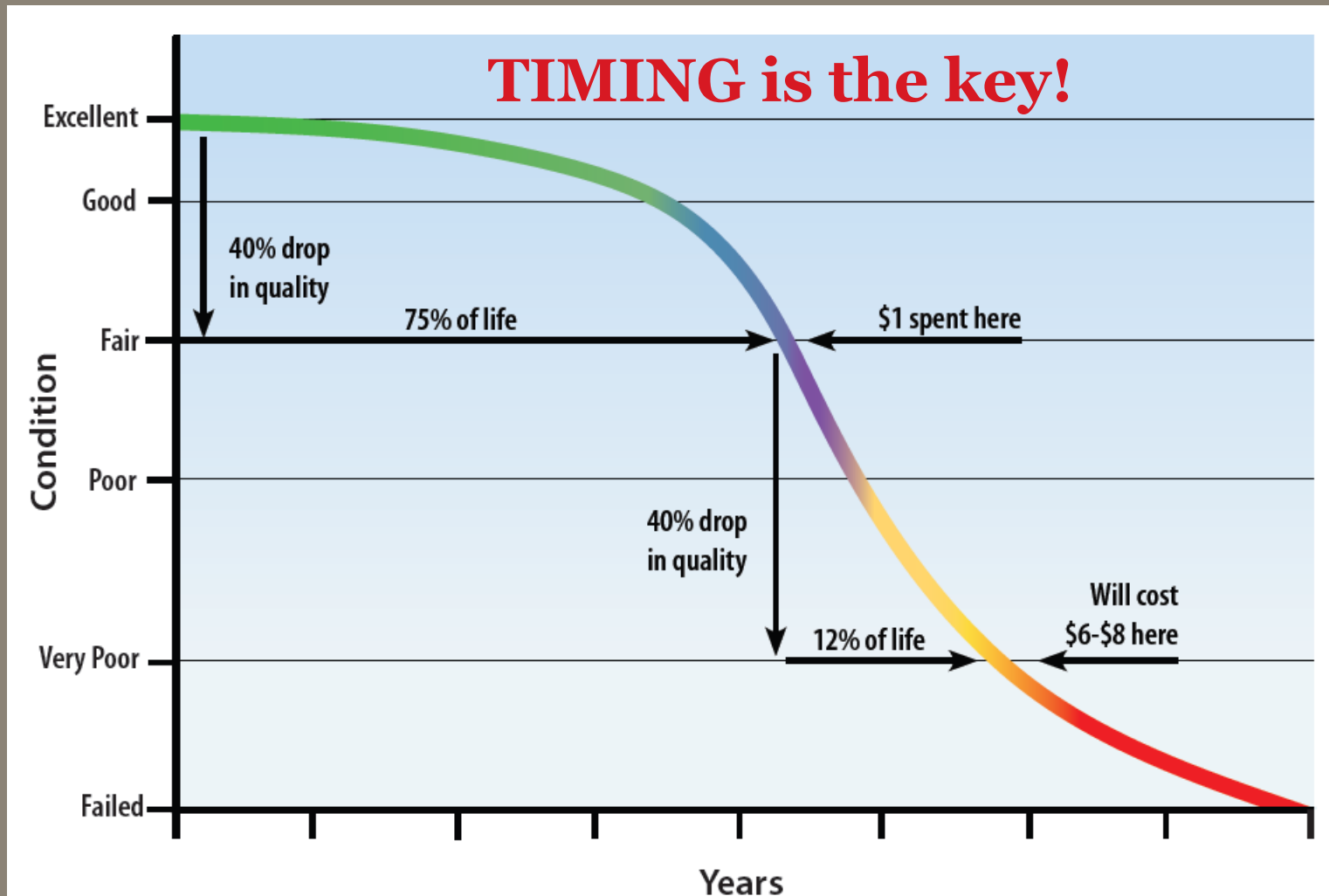
Current City Roadway Conditions

Present Roadway Backlog: \$24,079,282



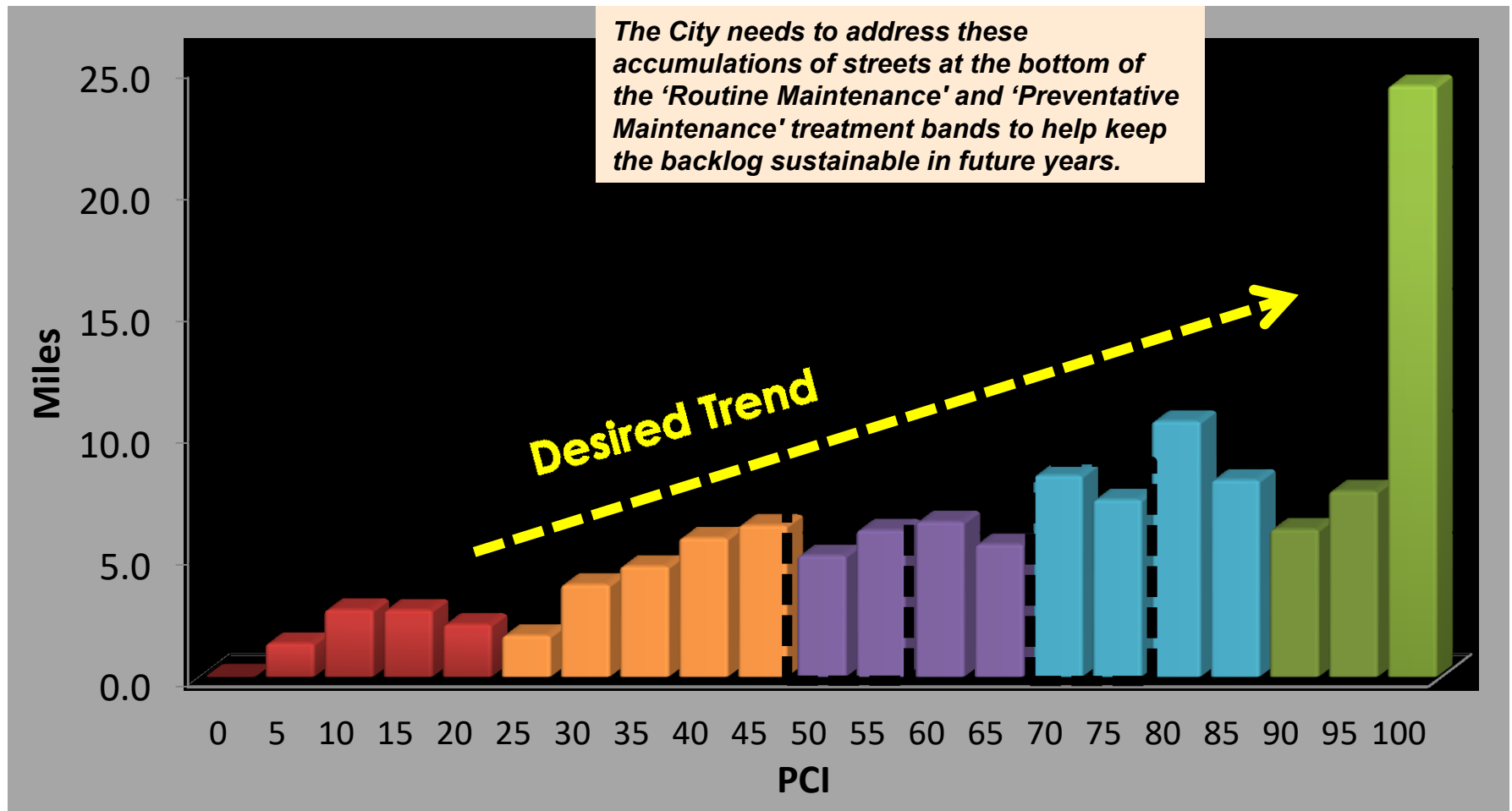
Pavement Management Theory

Pavement Deterioration Curve



Current Pavement Conditions

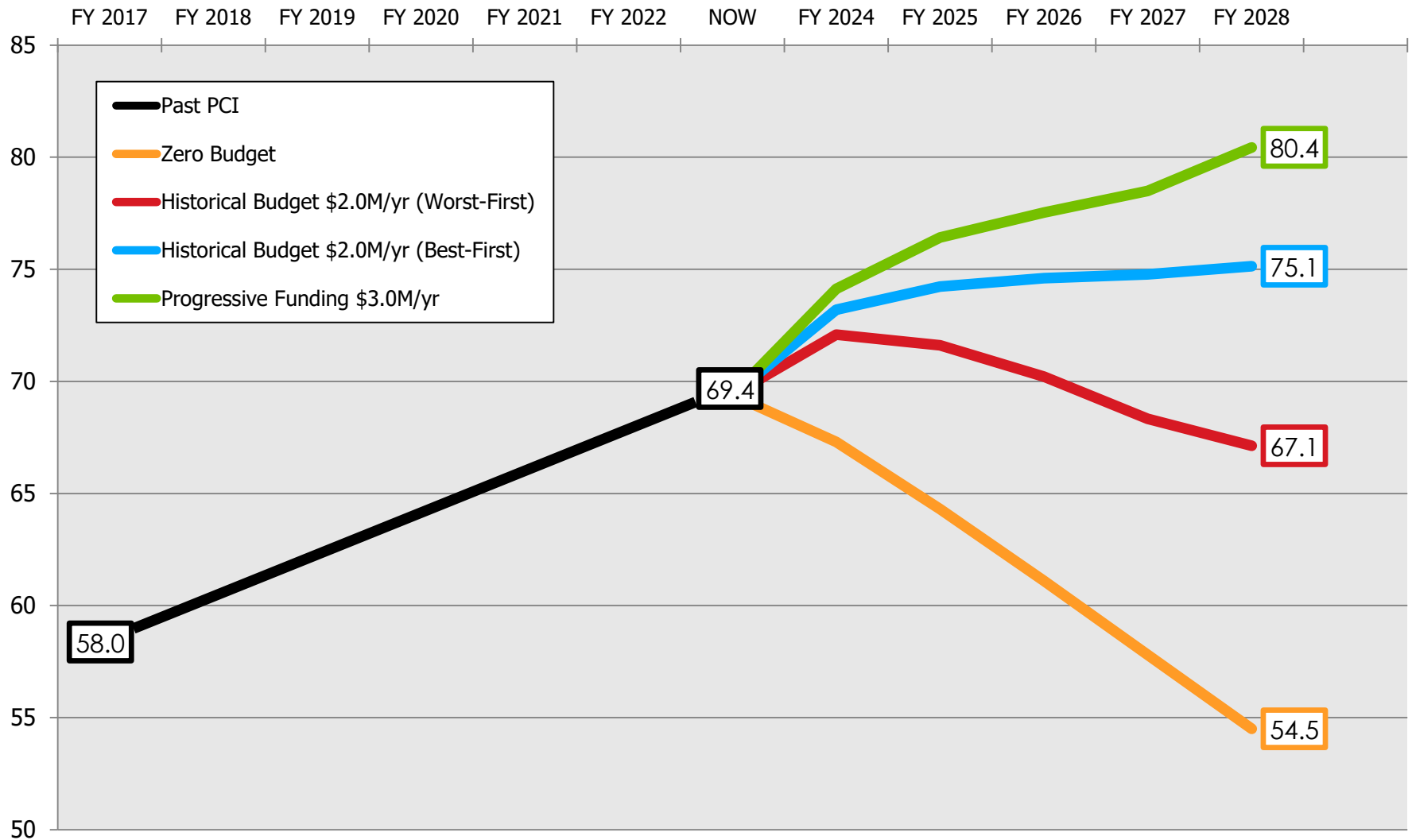
Histogram – ‘Bottom of Band’ Strategy



Future Budget Scenarios

Year	Zero Budget Scenario	Historical Budget (Worst-First)	Historical Budget (Best-First)	Progressive Funding Scenario
FY 2024	\$0	\$2M	\$2M	\$3M
FY 2025	\$0	\$2.06M	\$2.06M	\$3M
FY 2026	\$0	\$2.12M	\$2.12M	\$3M
FY 2027	\$0	\$2.19M	\$2.19M	\$3M
FY 2028	\$0	\$2.25M	\$2.25M	\$3M
Totals:	\$0	\$10.62M	\$10.62M	\$15M

Average PCI Projections



Recommendations

- **The City of Dover should at least maintain its current roadway funding:**
 - \$2.0M/Yr. w/3% increase shows slowly improving PCI
 - Dover should consider up to \$3.0M/Yr. to improve city-wide pavement conditions sooner.
- **Address Routine and Preventive Maintenance Backlog:**
 - Nearly 50% of network mileage is in these treatment bands
 - Crack Seals - The City should spend at least \$200k/year on a Crack and Fog Sealing program
 - Pilot Preservation Maintenance Treatments to build an annual program – Micro Surfacing, Chip sealing, Cape Seals.
 - Determine best-fit treatments to meet City Policy
- **Redirect Capital Program to Neighborhoods:**
 - Average PCI on Principal Arterial, Arterial, and Collectors is 74.
 - Average PCI on Residential streets is 58.
- **Continue Pavement Management:**
 - Pavement is on going process – setting goals, monitoring and tracking performance

Questions?