Charleston County, SC

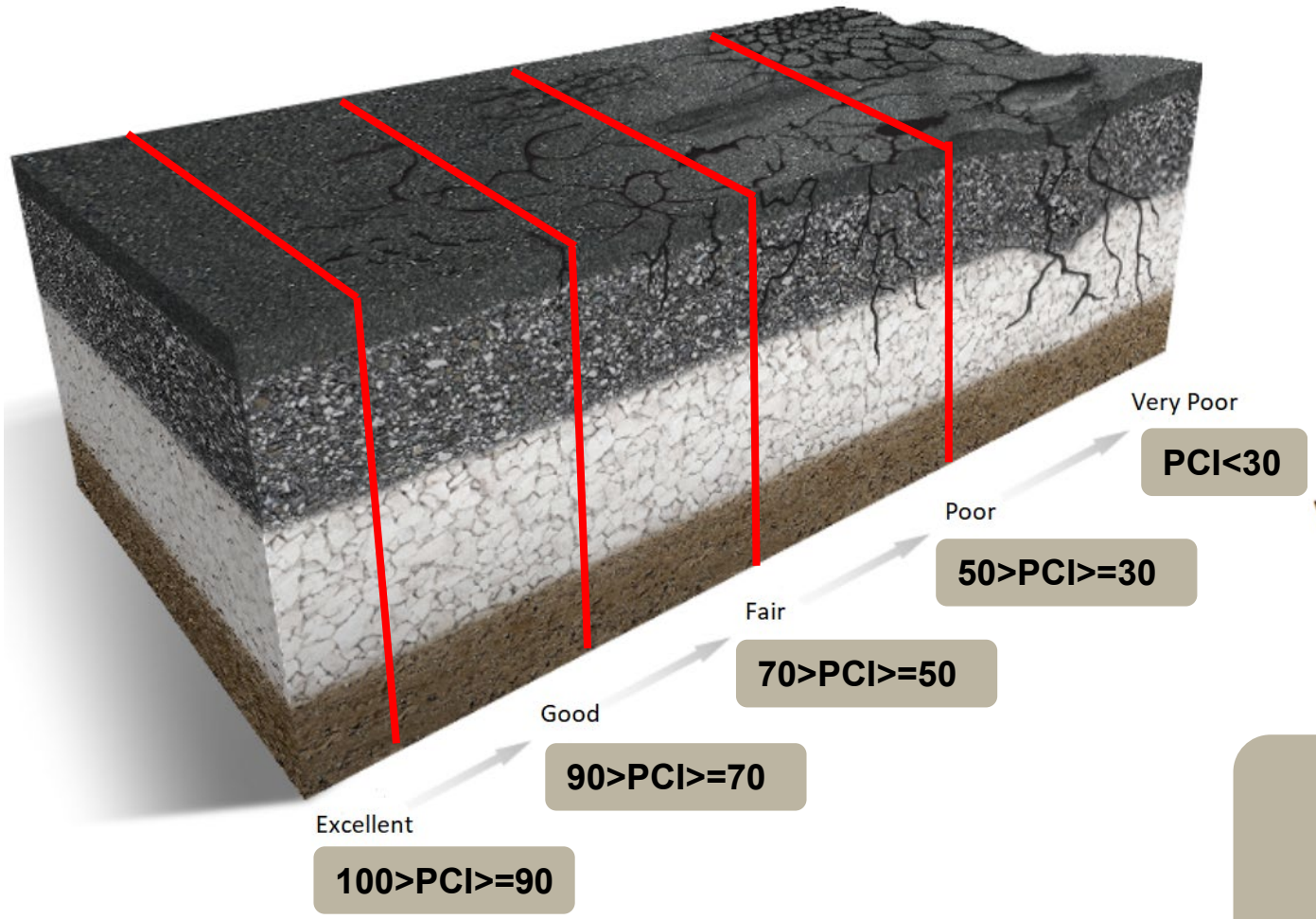
Pavement Management Program Overview

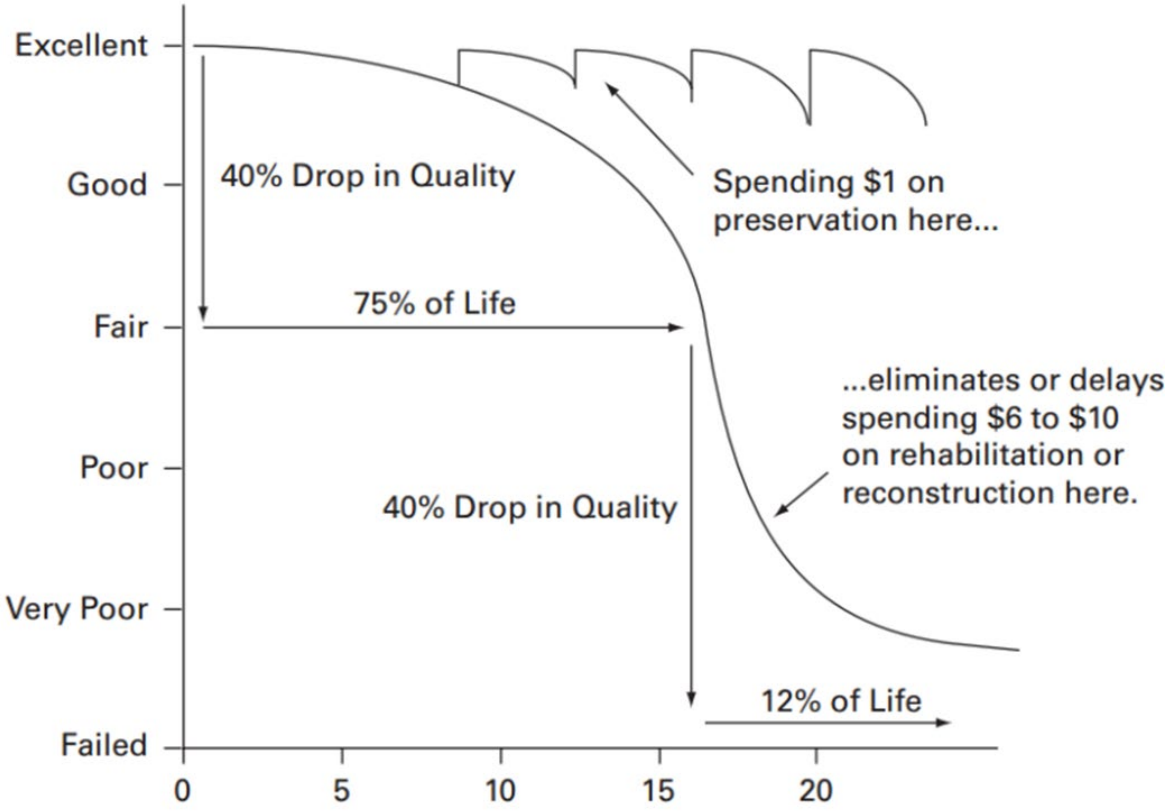
December 14, 2021

THE KERCHER GROUP

A Mott MacDonald Company

What is Pavement Management and Why is it Necessary?





Objective: Maintain Network in Good Condition for as Long as Possible to Minimize Cost to Traveling Public!

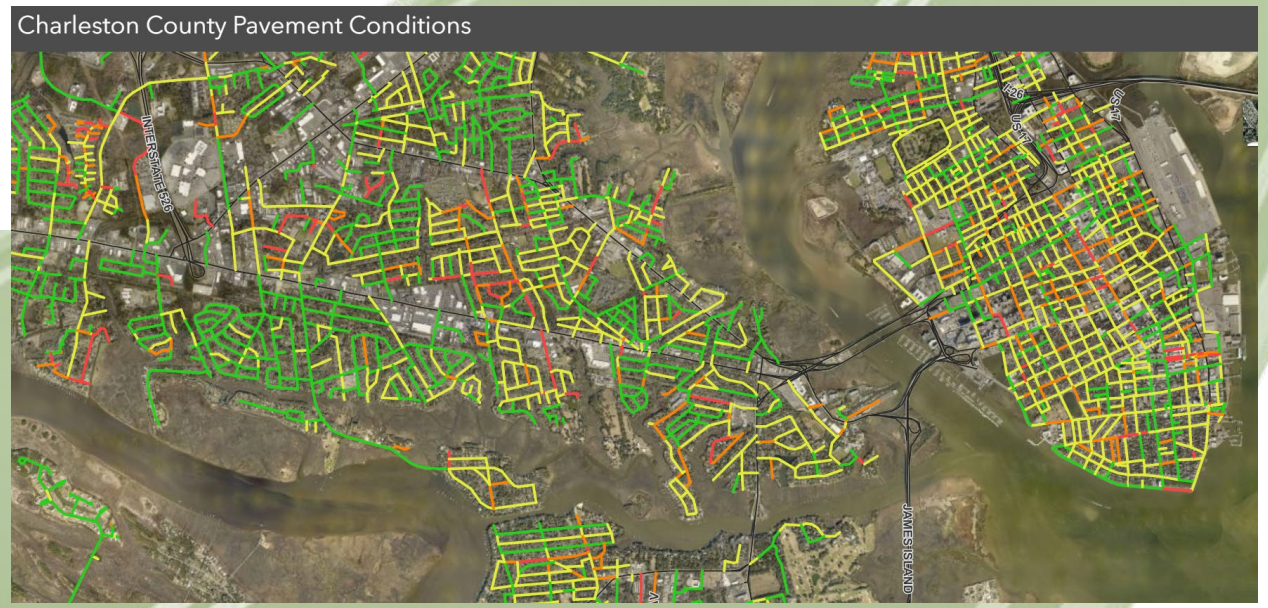
Charleston County Pavement Management Program Overview

- **Data Collection Technology for Gathering Accurate and Repeatable Data**

- **Software Systems to Optimize Best Use of Limited Funds**

AgileAssets®

- **Program Reporting for Promoting Agency Transparency**

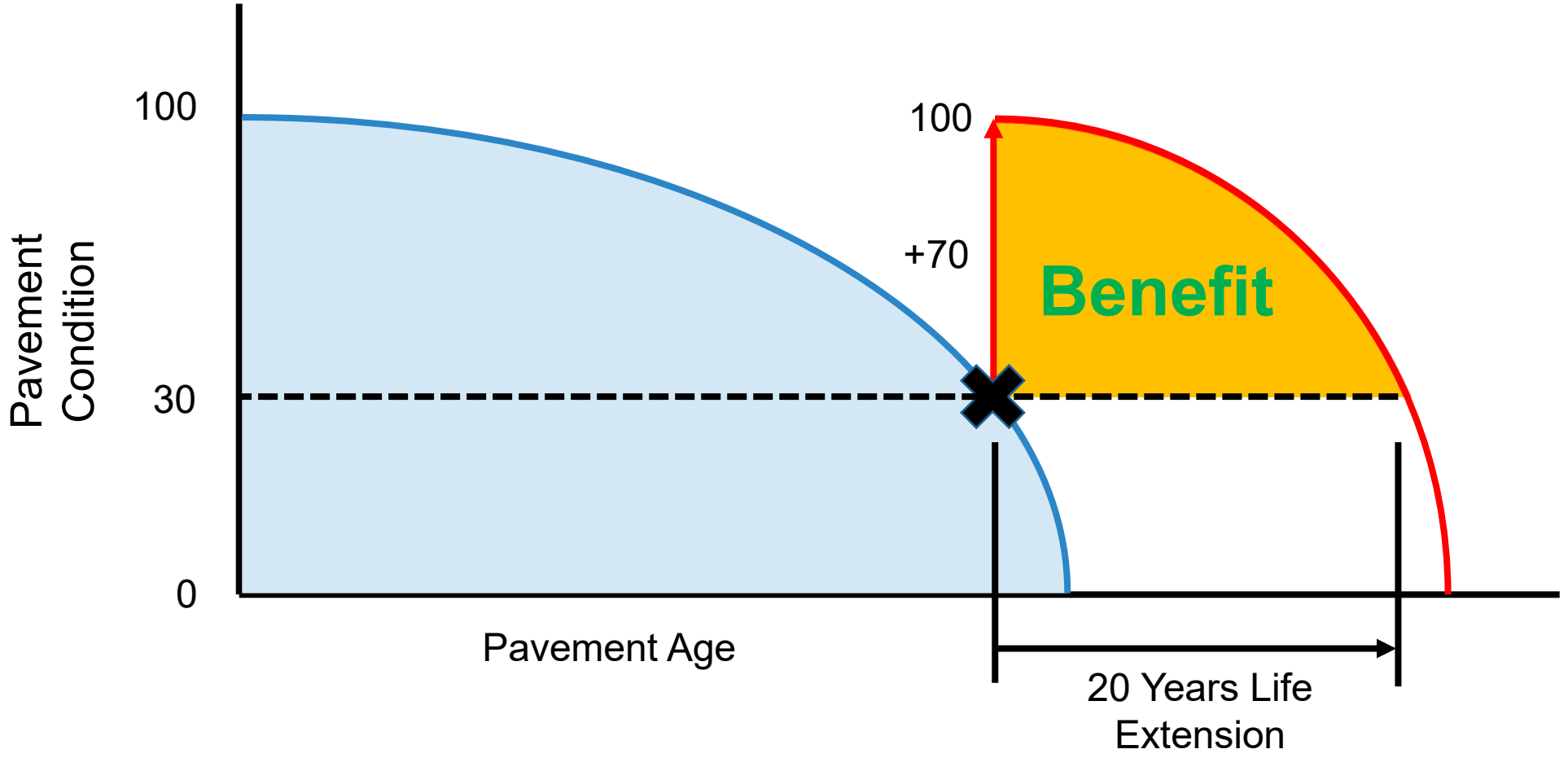


Objective of Pavement Management: Maximize Network Benefit Subject to Cost Constraints for All Roads in the Network

Condition Improvement = 70 PCI Points (100-30)
Life Extension = 20 Years

Benefit = Condition Improvement * Life Extension

Pavement Management System – Optimization Approach



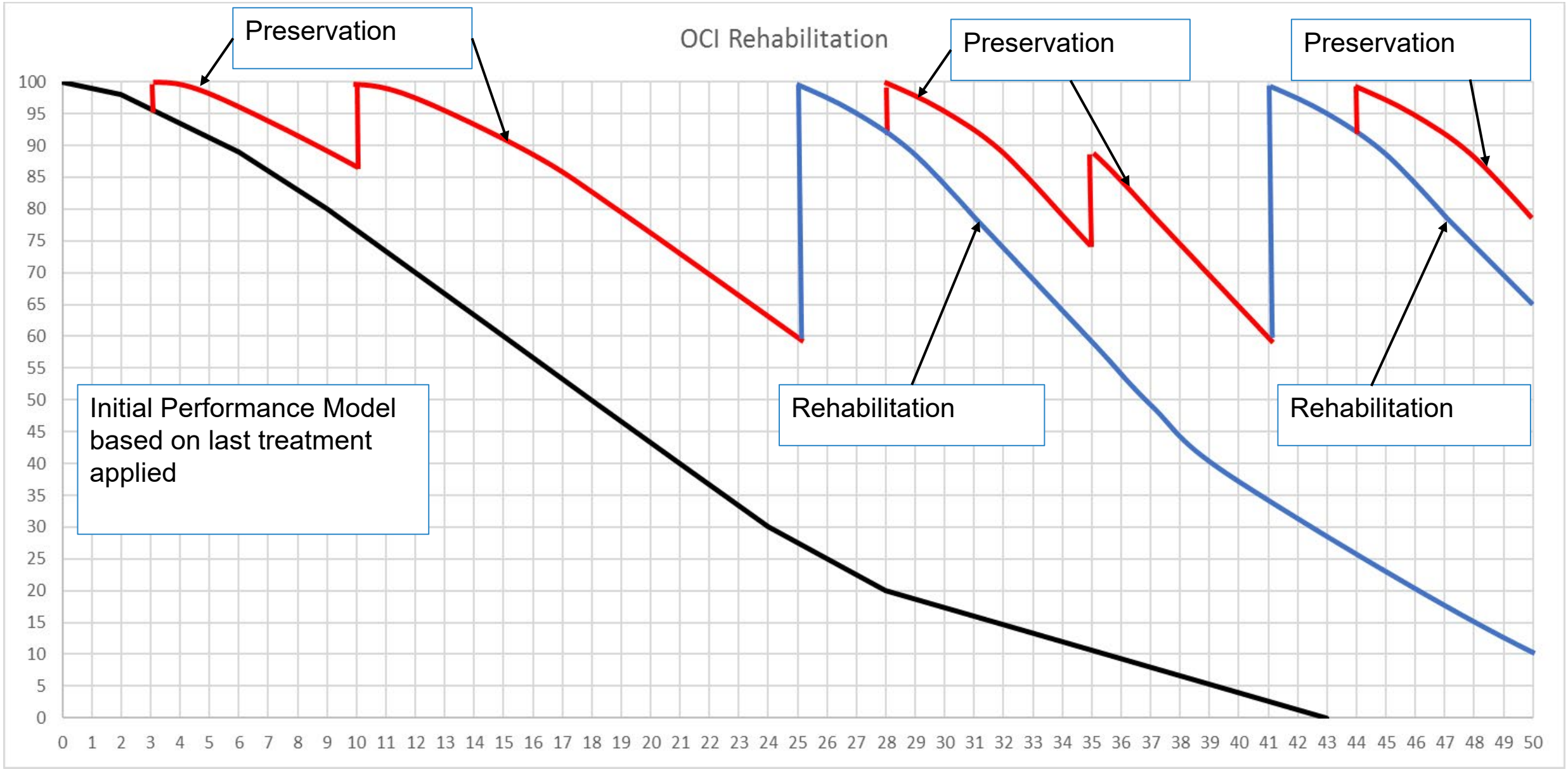
Pavement Management Project Selection

3R's Optimized Work Plan

- Right Treatment
- Right Place
- Right Time

Full Depth Reclamation (FDR)

Optimized Treatment Timing in Concept



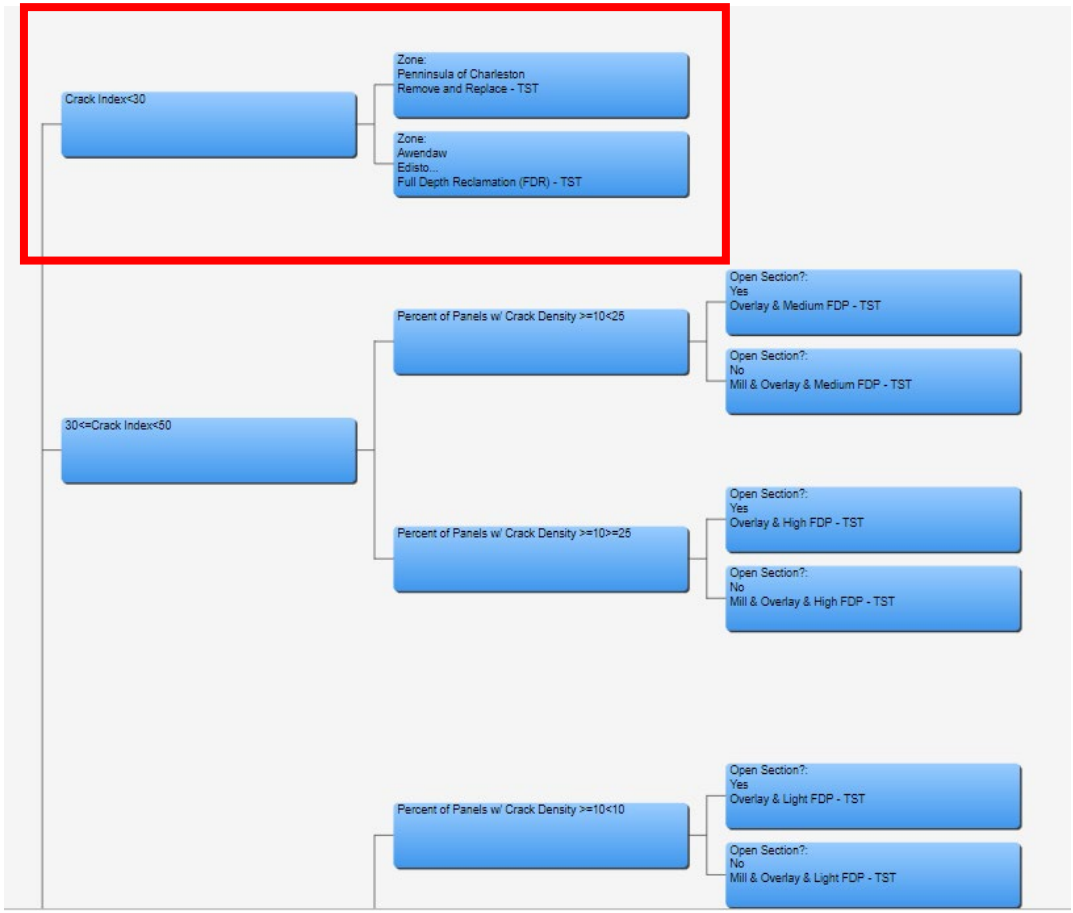
Pavement Management Program Components

Pavement Management System Engineering Analysis Components

- TREATMENTS
- DECISION TREES
- PERFORMANCE MODELS
- ANALYSIS & REPORTING

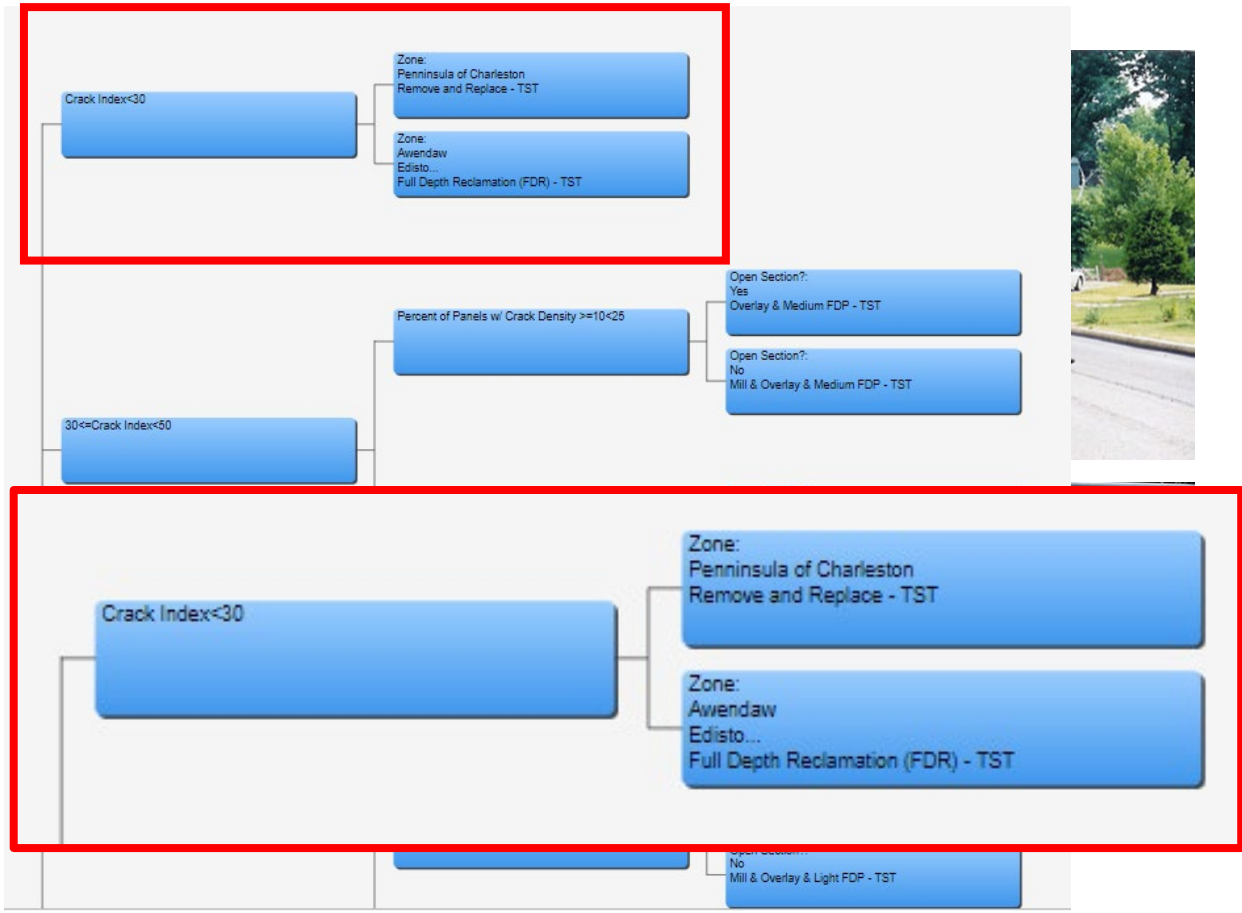
Pavement Management System Engineering Analysis Components

- TREATMENTS
- DECISION TREES
- PERFORMANCE MODELS
- ANALYSIS & REPORTING



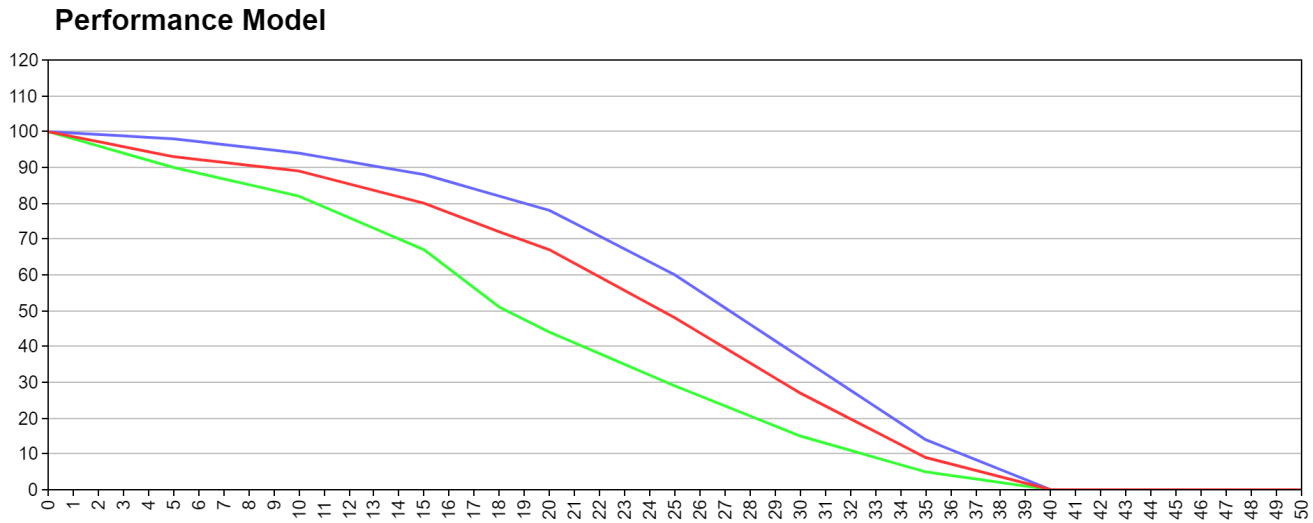
Pavement Management System Engineering Analysis Components

- TREATMENTS
- DECISION TREES
- PERFORMANCE MODELS
- ANALYSIS & REPORTING



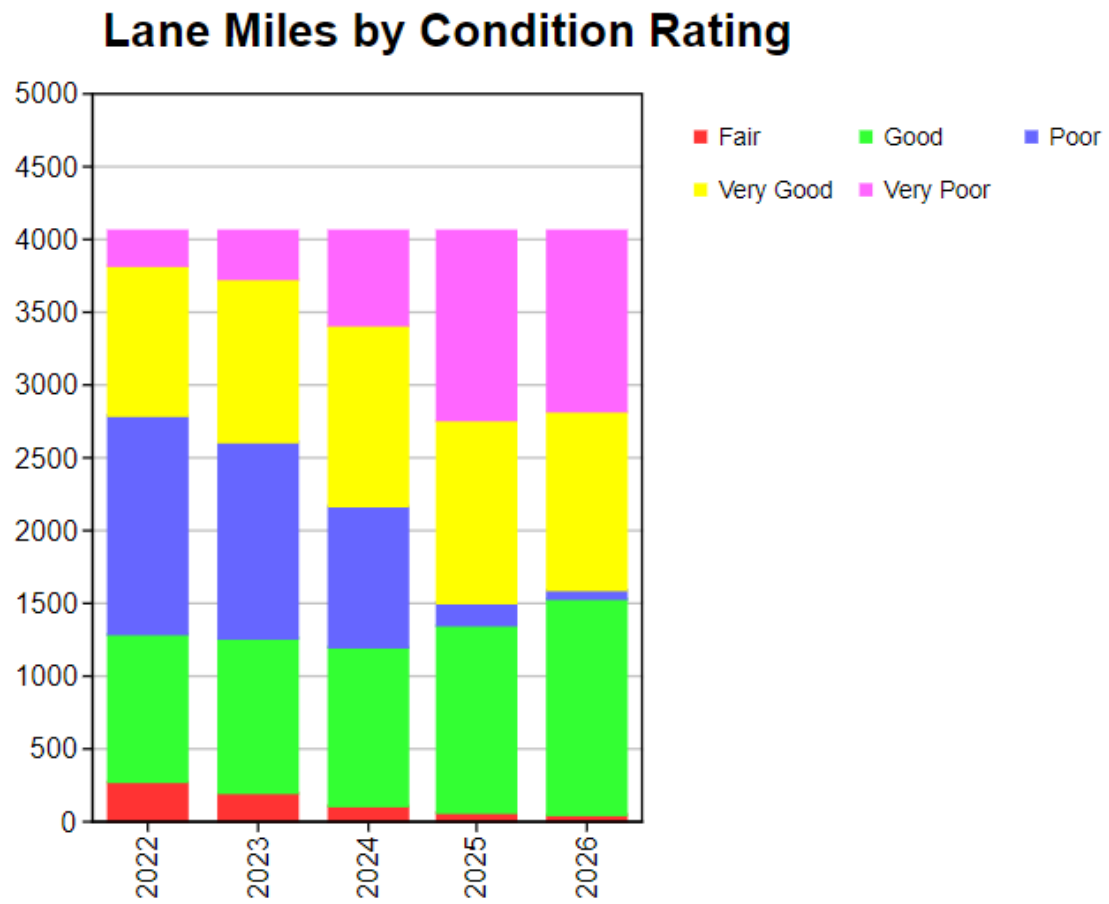
Pavement Management System Engineering Analysis Components

- TREATMENTS
- DECISION TREES
- PERFORMANCE MODELS
- ANALYSIS & REPORTING



Pavement Management System Engineering Analysis Components

- TREATMENTS
- DECISION TREES
- PERFORMANCE MODELS
- ANALYSIS & REPORTING



Charleston County 2021 Network Statistics

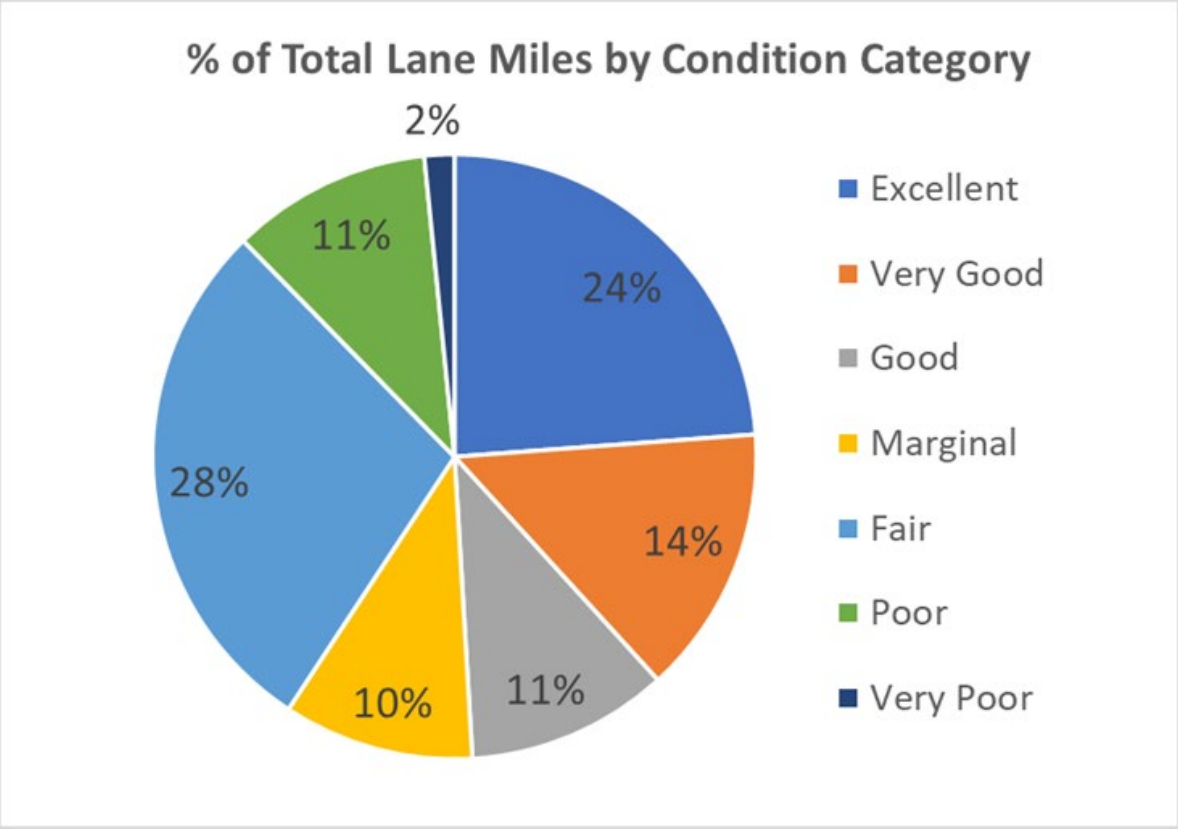
Network Average PCI = 70.5

Total Centerline Miles = 1,811

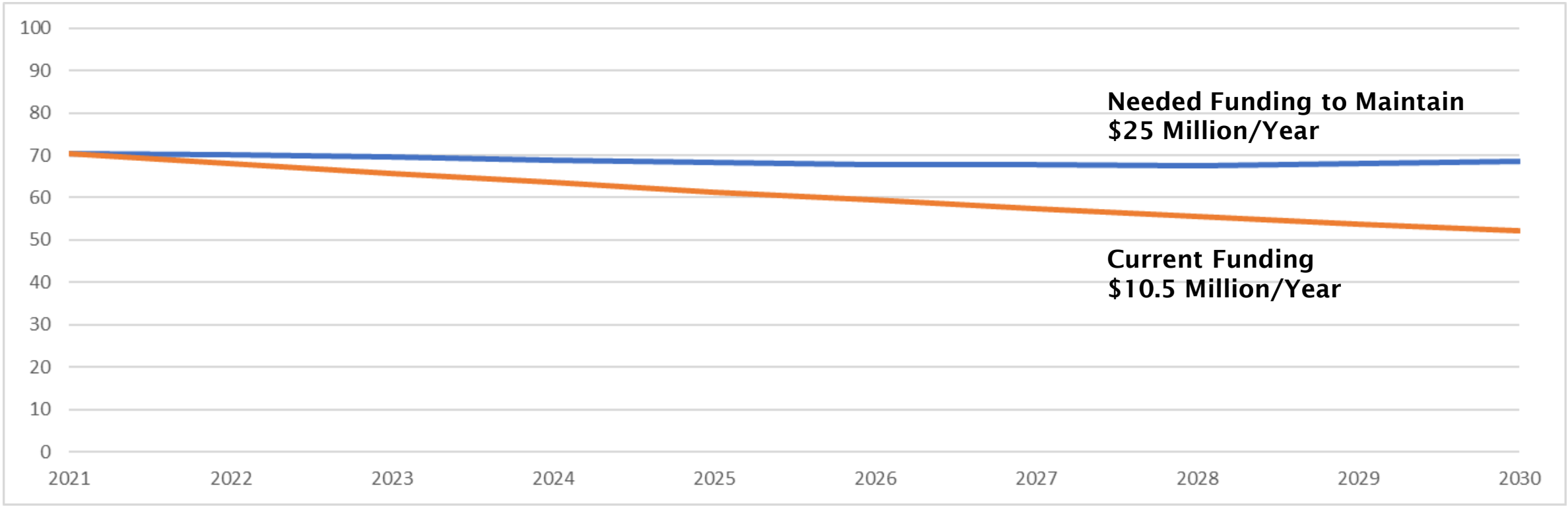
Total Network Lane Miles = 4,182

Total Pavement Area (SY) = 24,826,979

	TST Cost	CTC Cost
Network Total Backlog	$330,184,684	$235,032,832
Per Mile Backlog	$182,322/Mile	$129,781/Mile
Network Replacement Value	$881,257,755	$633,336,234

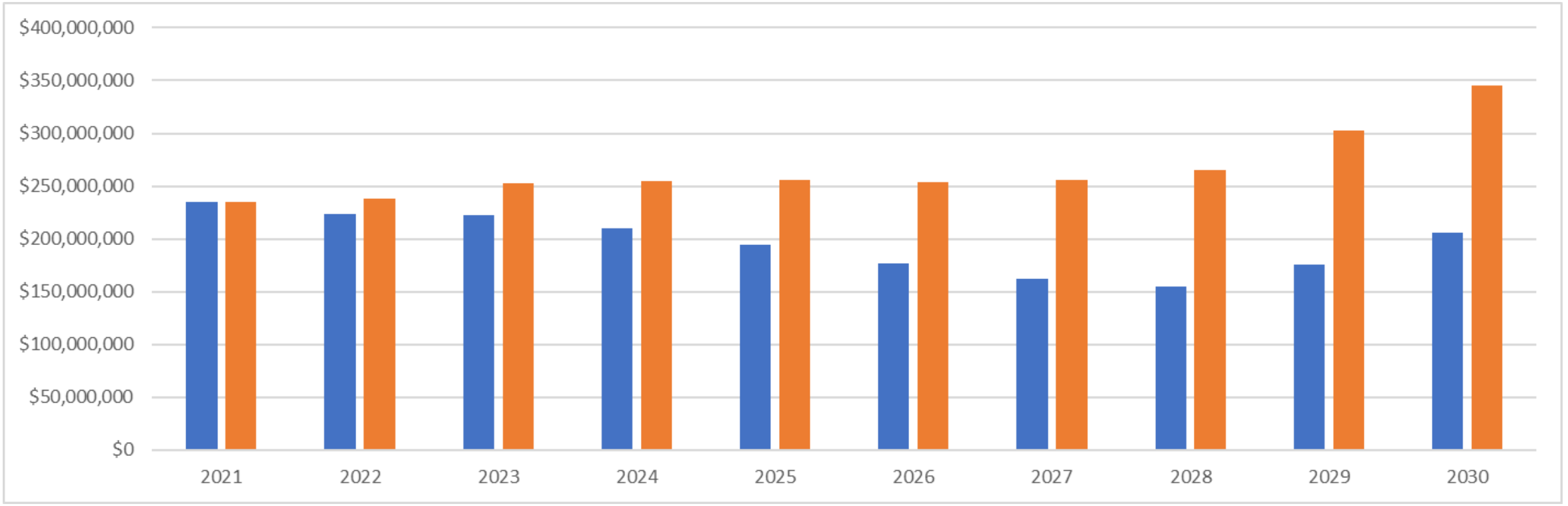


Example: Comparing PCI Funding Scenarios
Current Funding vs. Maintain Current Condition Needs



Average PCI in 2030:
Maintain Current PCI: 70
At Current Funding Level PCI: 52

Example: Minimizing Cost to Asset Users
Current Funding vs. Maintain Current Condition Needs



Total Backlog Cost in 2030:
Maintain Current Condition Backlog: $206.3 Million
Current Funding Backlog: $345.6 Million

Money Saved by Funding Adequately: **$9 Million**

Charleston County, SC

Pavement Management Program Overview

December 14, 2021

THE KERCHER GROUP

A Mott MacDonald Company