



Using Pavement Data to Assess Funding Needs and Manage Performance

TENNESSEE COUNTY HIGHWAY OFFICIALS ASSOCIATION (TCHOA)
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Question

- Are your roads in good condition?
- How do you define a good road?
- Are they getting better, worse, or staying the same?
- Is your current maintenance strategy the best strategy?
- How do you know?

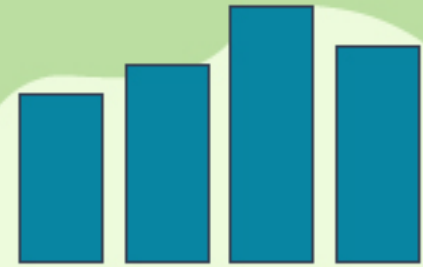


Data



Using Data
to Determine
Funding
Need

✧
better
DATA,
better
RESULTS



A table with a green header row and three data rows. A sparkline icon is located in the top-left corner of the table.



What Does a Good Asset Funding Request Look Like?



Measures and Targets



Demonstrated Value



Accurate and Trustworthy



Historical and Future Trends

- Should include measures, targets
- Should demonstrate value
- Should be accurate, trustworthy
- Can include historical performance, projections



What Basic Information is Needed?

- Inventory
 - Road names
 - Location
 - Length
- Roadway width
- Functional classification
- Surface type
- Years since last treatment



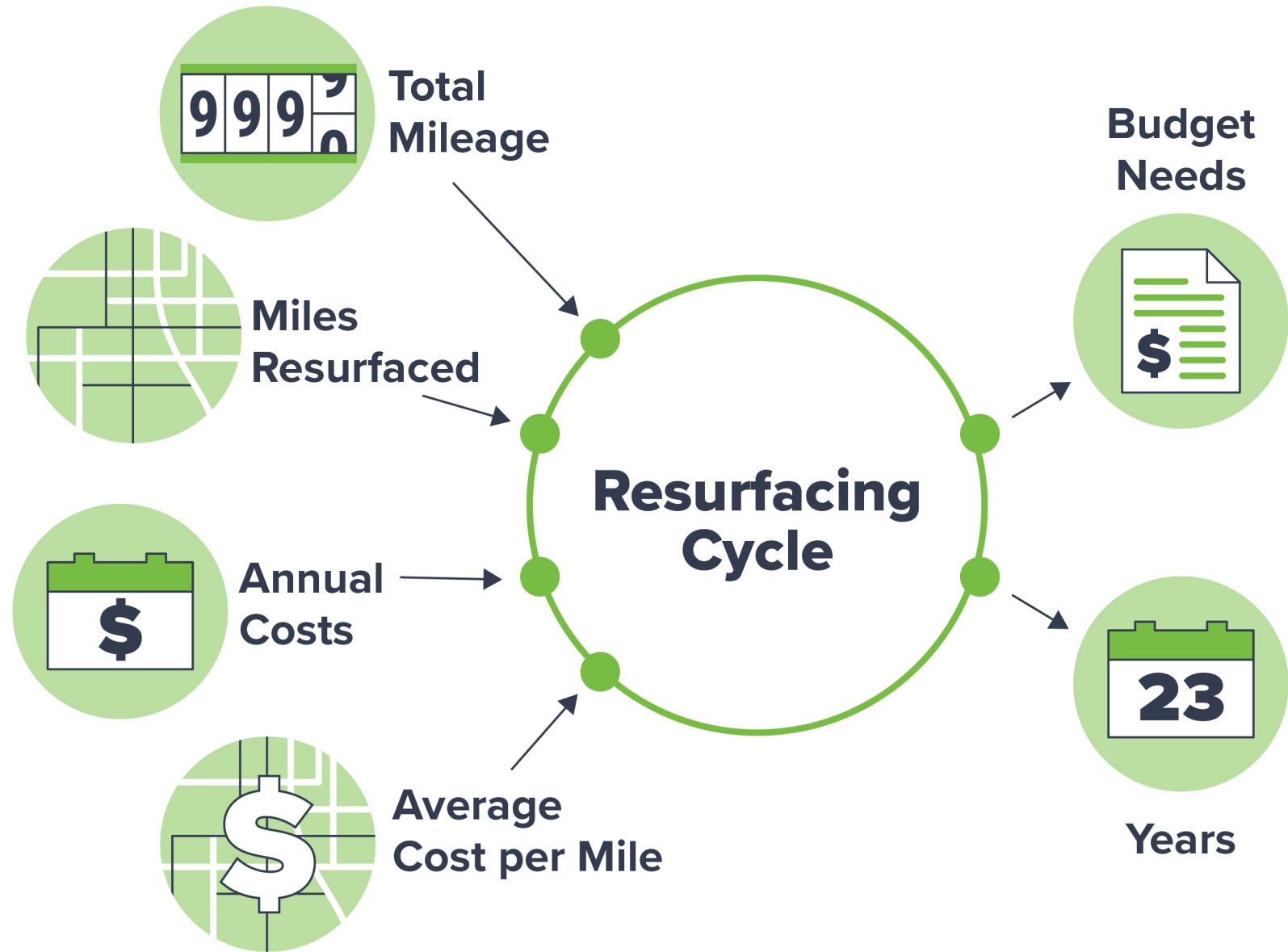


What Other Information Could be Recorded?

- Work history / historical costs
- Itemized or turnkey construction costs
- Project termini / length
- Construction dates
- Inflation
- Traffic
- Shoulder type
- Special features (haul route, etc)
- Pavement condition



Resurfacing Cycle

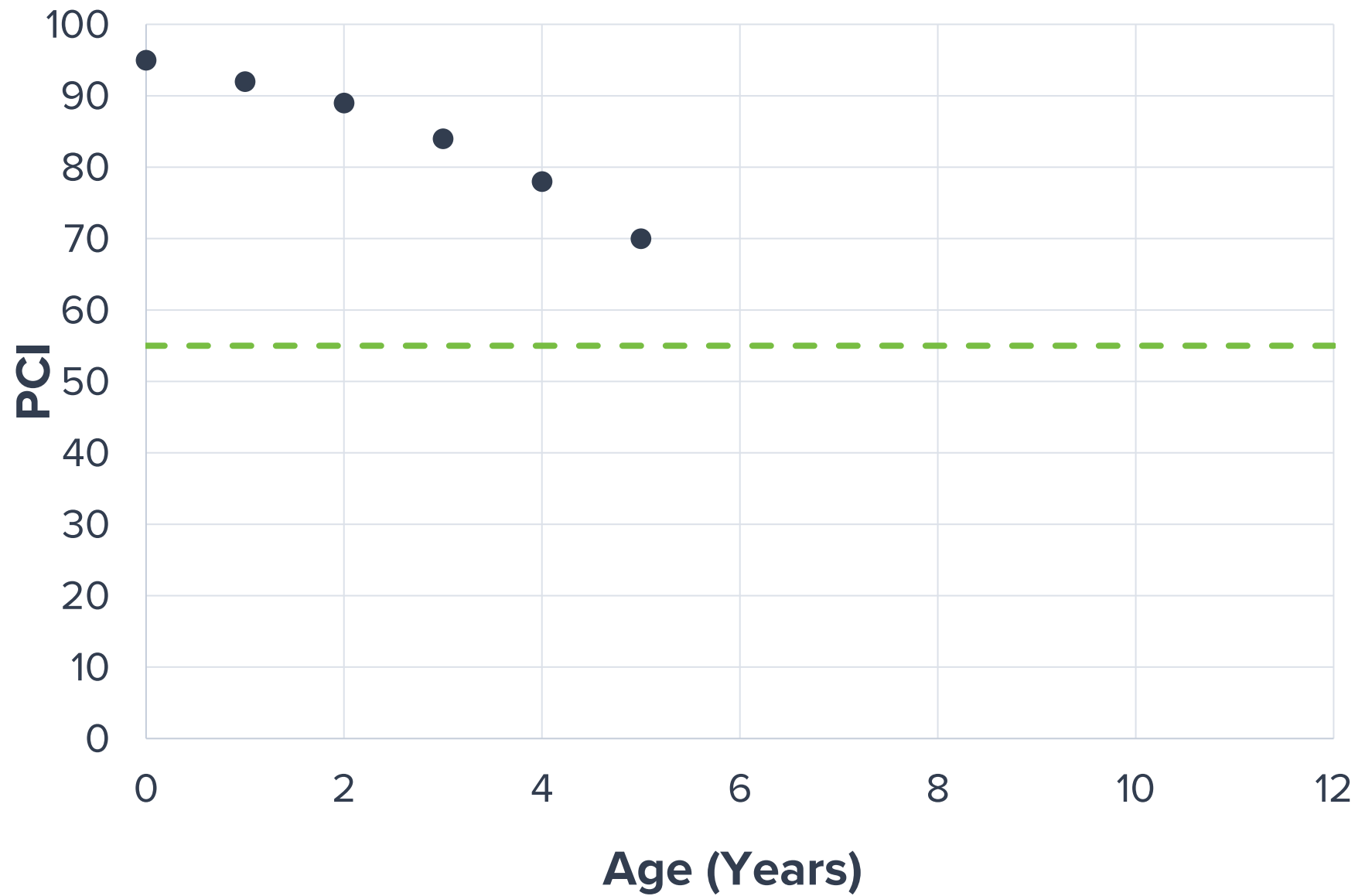


Issues with Using Resurfacing Cycle

1. Unit costs change over time
2. Not all work types are considered
3. Paving treatments don't always last as desired
4. Different strategies aren't considered



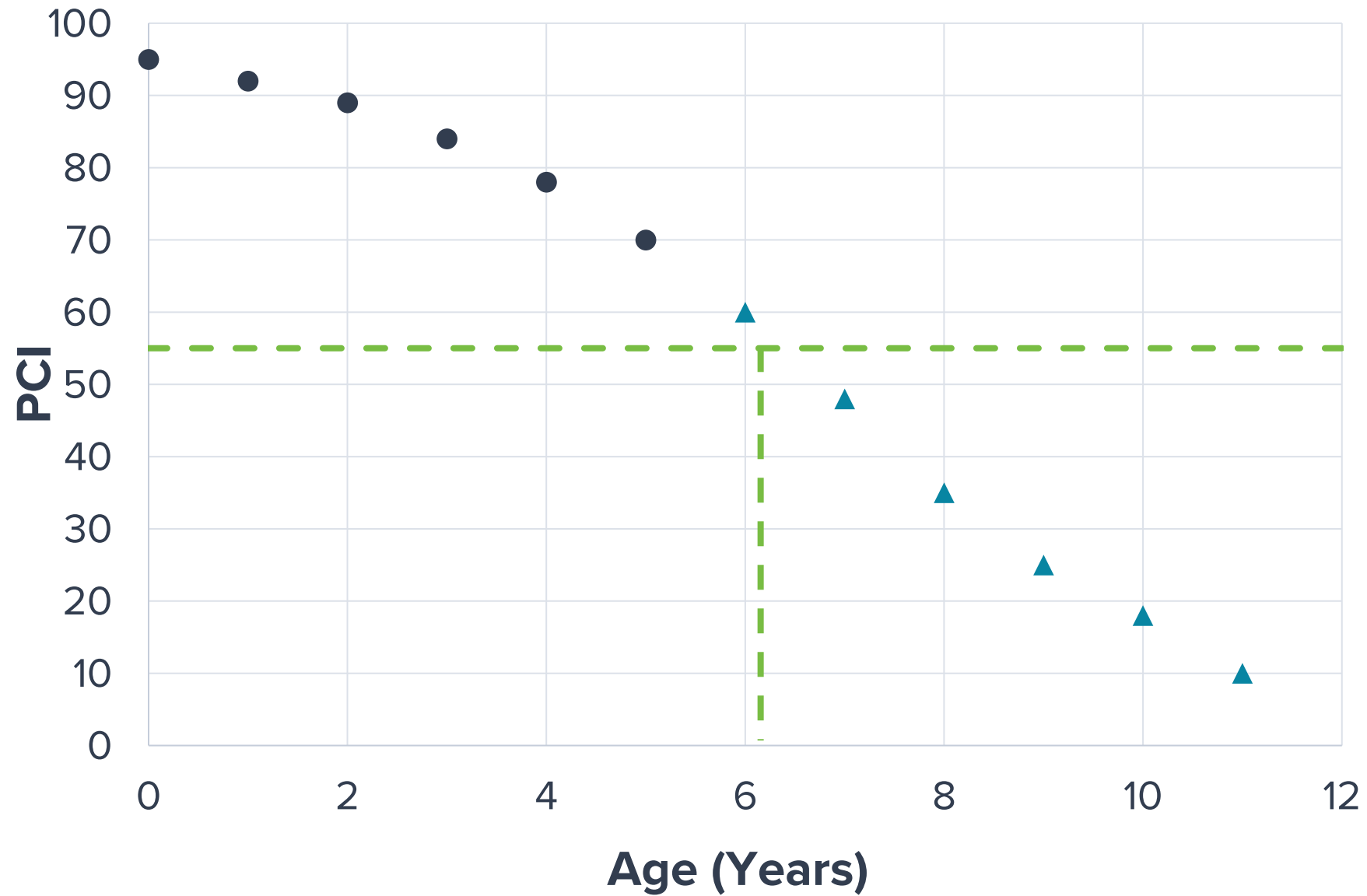
Remaining Service Life



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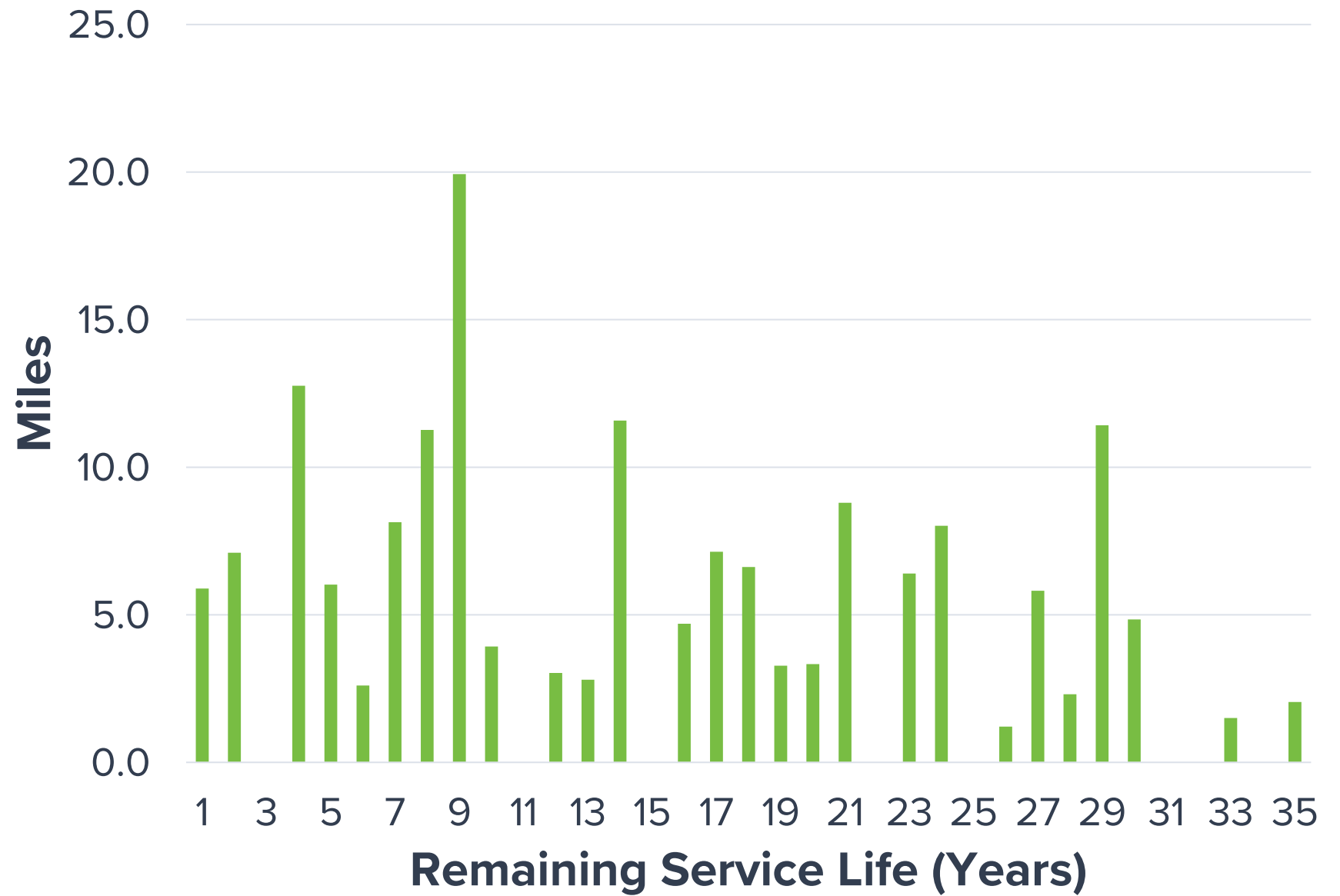


Remaining Service Life



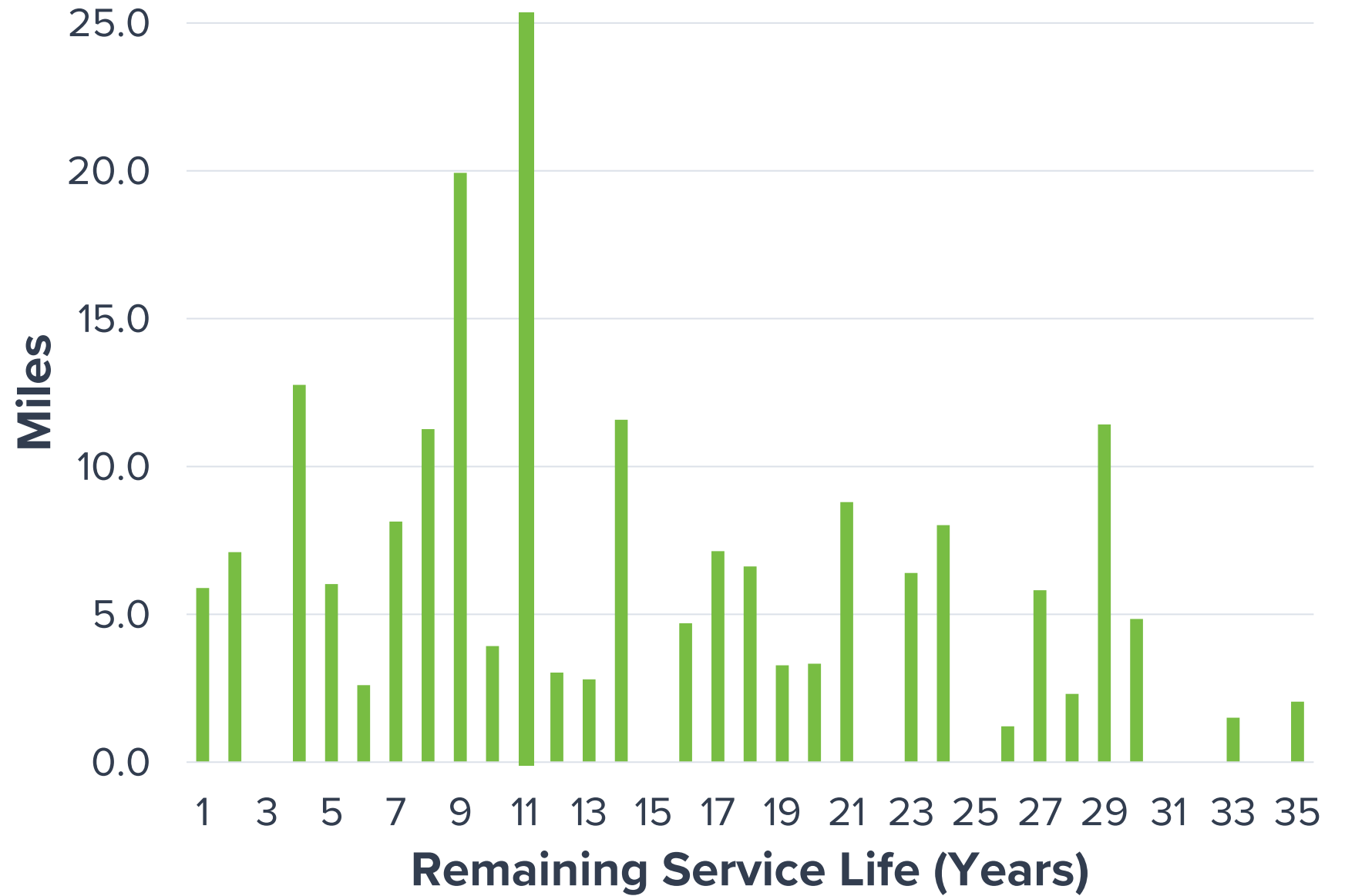
Remaining Service Life

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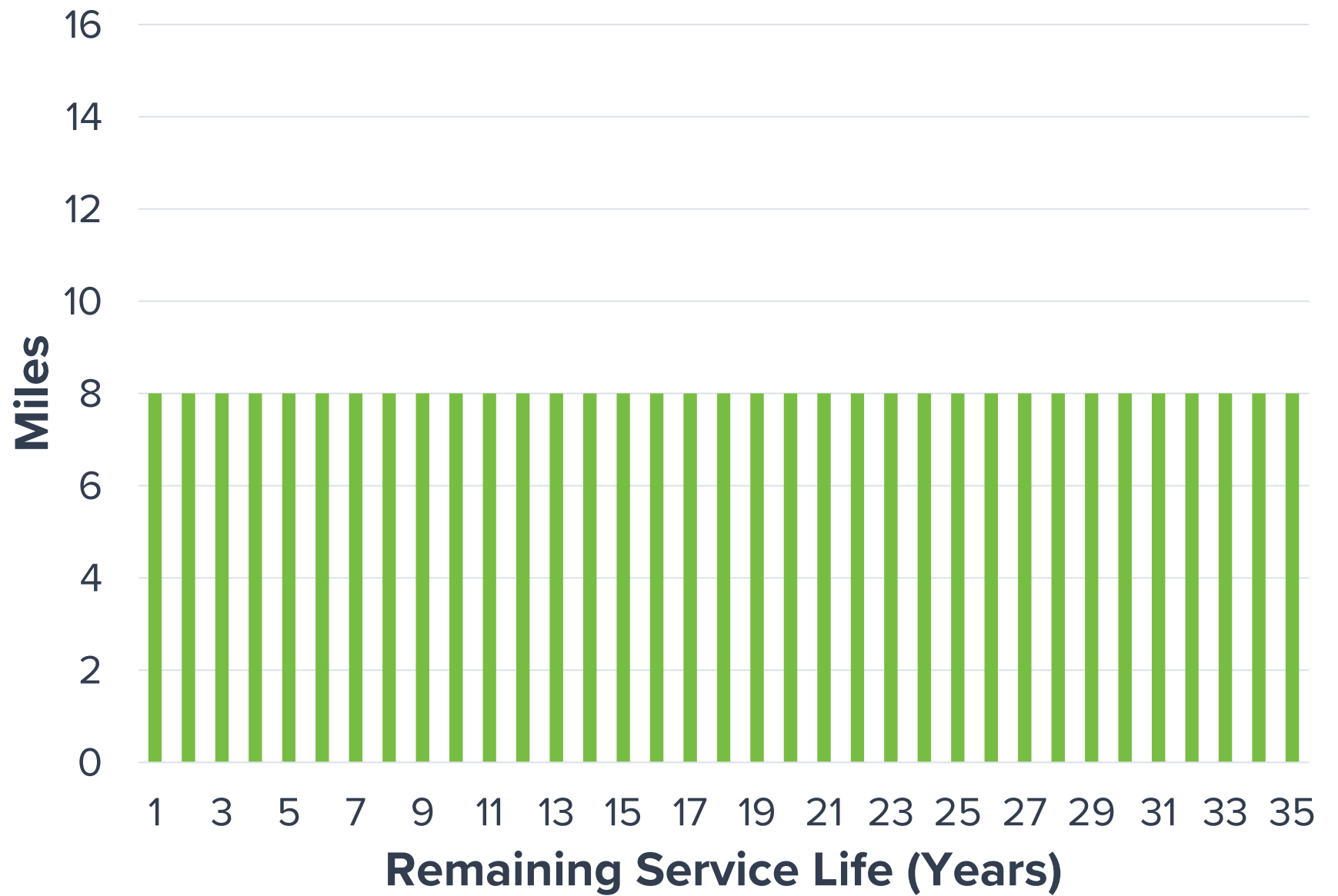
Remaining Service Life

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Remaining Service Life

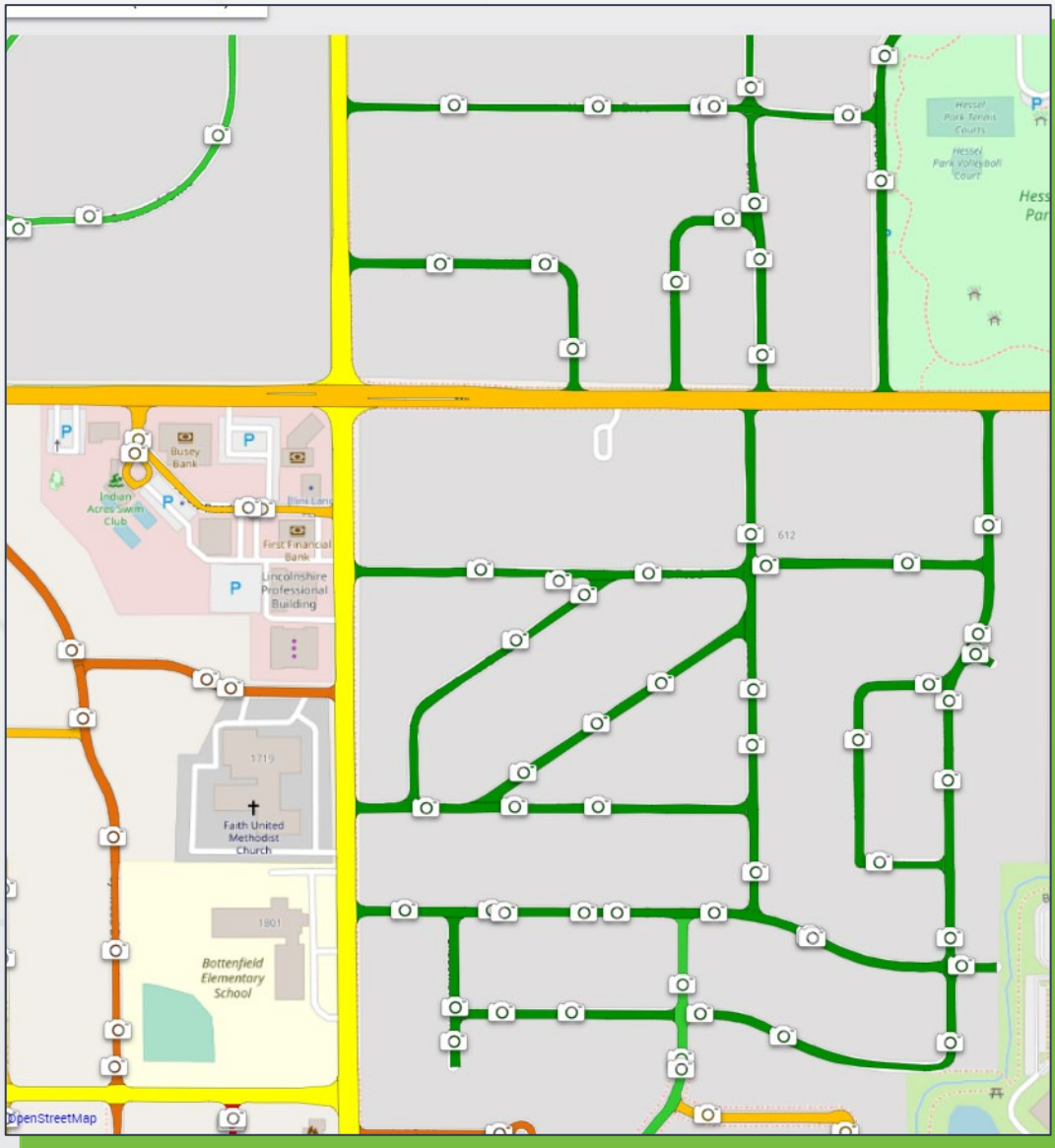
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Measuring Pavement Condition

Provides pavement managers the ability to:

- Define measures - good/fair/poor
- Set performance-based targets
- Track historical performance
- Estimate funding needs
- Develop strategies to achieve realistic goals



How Is Data Collected?

WINDSHIELD



MANUAL

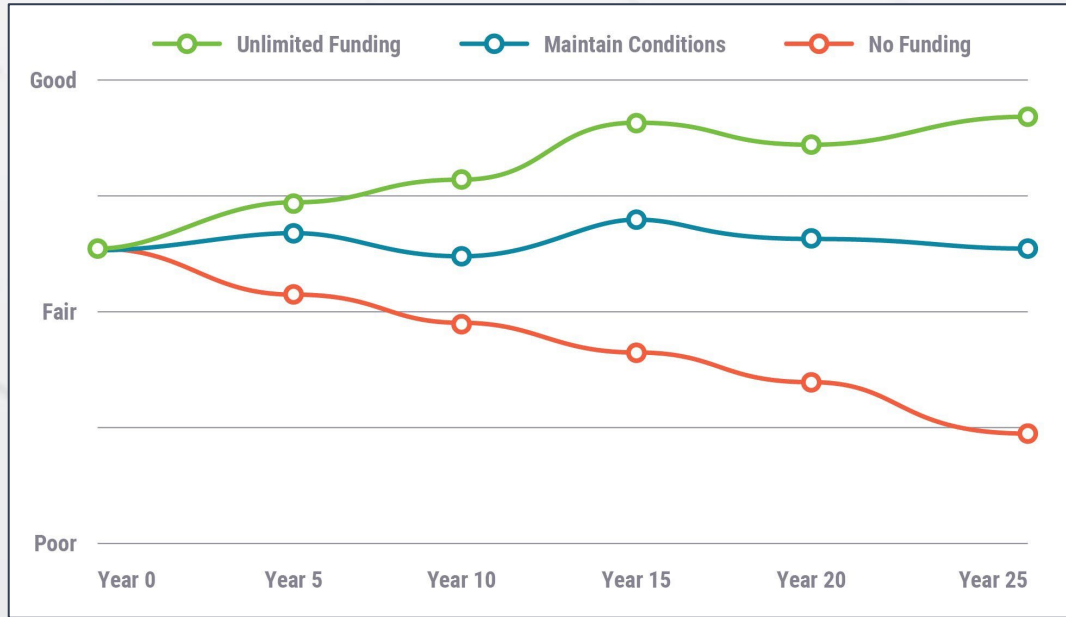


AUTOMATED



Pavement Management Software

- Automated reporting
 - Past, current, or future condition
- Project selection support
 - Draft paving lists
 - Specific project assessment data
- Funding needs assessment
- Support trade-off decisions





Geographic Information System (GIS) Capable

- Many pavement management software programs include GIS-mapping capability
- Mapping can support project-level decision making
- Lines of data in a spreadsheet don't highlight roads that pass through downtown, near schools, or adjacent to new developments





Limitations of Pavement Management Systems

- ▶ Not an engineering design tool
- ▶ Cannot develop detailed estimates
- ▶ Treatment recommendations are limited based on available data
 - ◆ Pavement surface data not enough for rehab project recommendations
 - ◆ Paving lists must be reviewed
- ▶ PMS is a financial planning and strategy development tool



Conclusion

- A small amount of data can provide a good snapshot of need
- A little more can significantly improve estimates for funding need, including setting targets and establishing long-term strategies
- Software programs have some costs but improve reporting, help establish long term strategies, provide GIS mapping capabilities, and support daily project operations.



Thank You!

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