

YOUR PAVEMENT MANAGEMENT BLUEPRINT & FIVE YEAR PLAN

How Data-Driven Decisions Today,
Lead to Better Roadway Networks Tomorrow

James Golden, CEO of Pavement Management Group



ABOUT PMG

- Mission Driven Professional Services Firm
- Serving Public Works & Engineering Industry
- Nationwide Services Available
- Serviced over 50 agencies in 2022 alone!



WHAT IS PAVEMENT MANAGEMENT

/ˈpāvmənt manijmənt/

A *systematic* approach
to the annual maintenance
and repair of your roadway network

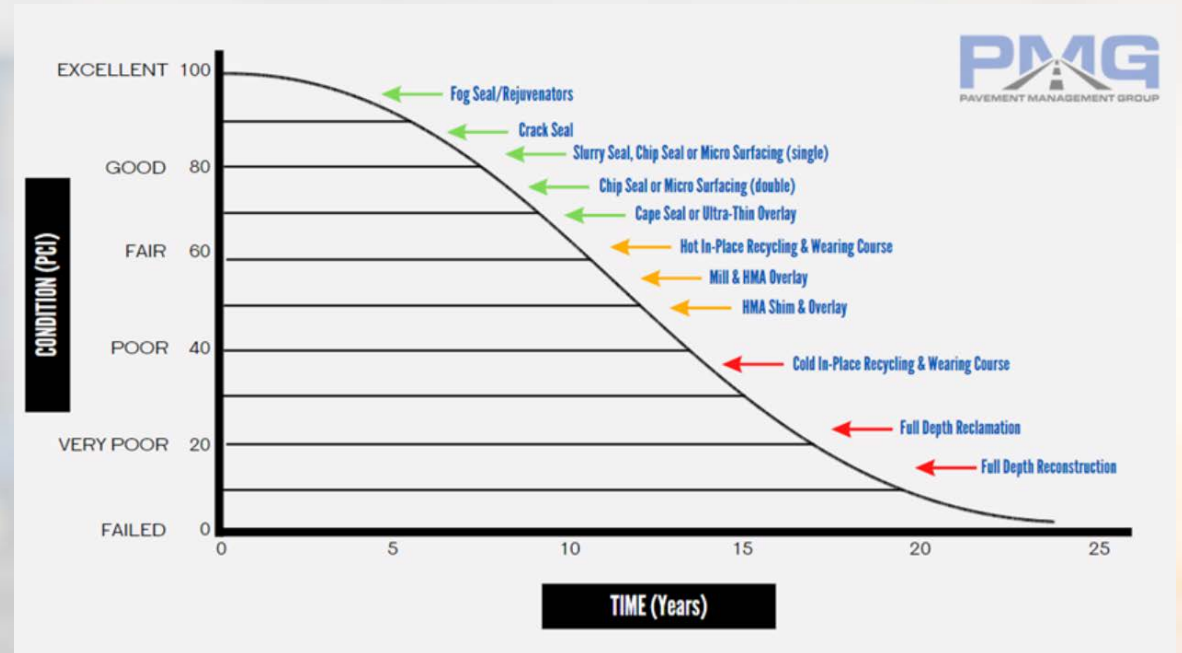


PAVEMENT MANAGEMENT

THE SIMPLIFIED APPROACH

Apply...

- The Right Treatment
- To the Right Pavement
- At the Right Time



PAVEMENT MANAGEMENT

THE PROGRAM GOALS

- **MAXIMIZE** current funding efforts
- **EXTEND** the life of your roadways
- **OPTIMIZE** roadway network conditions
- **DATA-DRIVEN** decision making
- **COMPLETE TRANSPARENCY**



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THE WHY

**“What Gets Measured,
Gets Improved”**



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THE BLUEPRINT & PLAN

- Accurate Inventory
- Video or Imagery
- Condition Assessment
- GIS Integration
- Reports/Charts/Graphs
- Key Performance Indicator
- Budget/Target Driven Analysis
- Preventive Maintenance + Preservation + Recycling
- 5 Year CIP Against Network Needs, Current Funding and Existing Planned Projects

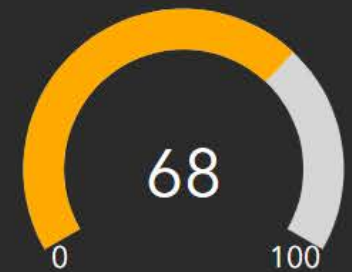


PAVEMENT MANAGEMENT

2022 NETWORK SUMMARY



Average PCI



Average PCI

Total Miles

Condition



1-VERY GOOD 19%
OR EXCELLENT

2-GOOD 31%

3-FAIR 46%

4-POOR 4%

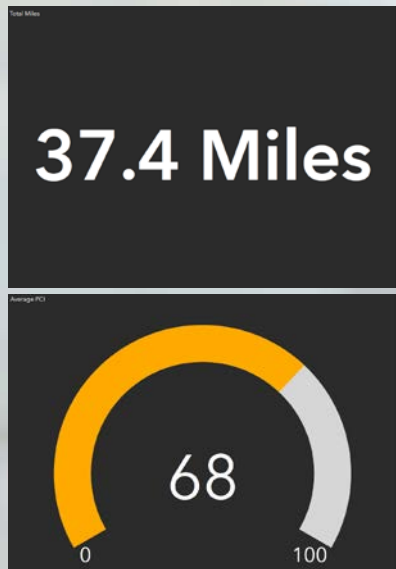
5-VERY POOR 0%

Condition

Classification

PAVEMENT MANAGEMENT

2022 NETWORK SUMMARY



CONDITION CATEGORY	SECTIONS	PAVEMENT AREA (SF)	LANE MILES	PERCENT AREA	AVERAGE CONDITION
EXCELLENT	27	594,326.03	9.38	11.84%	97
VERY GOOD	30	501,450.53	7.91	9.99%	87
GOOD	126	1,603,415.32	25.31	31.93%	74
FAIR	198	2,096,374.00	33.09	41.75%	60
POOR	17	197,276.91	3.11	3.93%	45
VERY POOR	3	28,346.46	0.45	0.56%	30
FAILED	0	0.00	0.00	0.00%	0

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THE Capital Improvement Program

- The blueprint for planning roadway capital expenditures
- Outlines the most cost effective process for maximizing available funding
- Avoids “Worst to First” and Stop Gap Repair approach
- Opportunity to coordinate with other departments/planned projects
- Provides for communication and transparency with the public
- An on-going, data-driven approach for optimizing roadway conditions



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PMG's CIP METHODOLOGY

- Forecasted predicted future PCI based on the predicted deterioration
- Identify Preventive, Preservation, Major maintenance and repair activities available
- Qualify each pavement segment an optimal repair based on the predicted PCI
- Assigned each section a Benefit Value

Rank x Expected Life

PCI x Unit Cost

- Group projects logically & geographically based upon upcoming projects & cost benefit analysis.



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THE BUDGET

PAST YEAR	BUDGET
2021	\$0
2022	\$55,000
PROPOSED CIP	BUDGET
2023	\$280,000
2024	\$150,000
2025	\$150,000
2026	\$150,000
2027	\$150,000



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THE CIP TREATMENTS



MICROSURFACING

- A polymer modified surface treatment made from fine graded crushed aggregate to extend roadway life approximately 7 years.
- Protects existing asphalt showing signs of climate related distress by sealing the surface, preventing oxidation, while improving skid resistance and ride quality.
- Process typically applied to “Good” Roadways



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MICROSURFACING **CANDIDATE**



10th Court - Section 01

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THE CIP TREATMENTS



CAPE SEAL (CHIP SEAL + MICROSURFACE)

- A Chip Seal is first applied to the existing asphalt surface to serve as an interlayer and reflective crack deterrent
- Protects existing asphalt showing signs of climate related distress by sealing the surface, preventing oxidation, while improving skid resistance and ride quality.
- Process typically applied to “Fair” Roadways

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CAPE SEAL CANDIDATE



5th Street - Section 02

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THE CIP TREATMENTS



ASPHALT MILL & OVERLAY

- Milling of the existing asphalt surface to remove surface-based distress (typically 2")
- Full depth/partial depth repairs of load associated failures.
- Asphalt overlay (typically 2") to provide improved structure and smooth surface course.
- Process typically applied to Poor Roadways
- Provides 12 years of life extension

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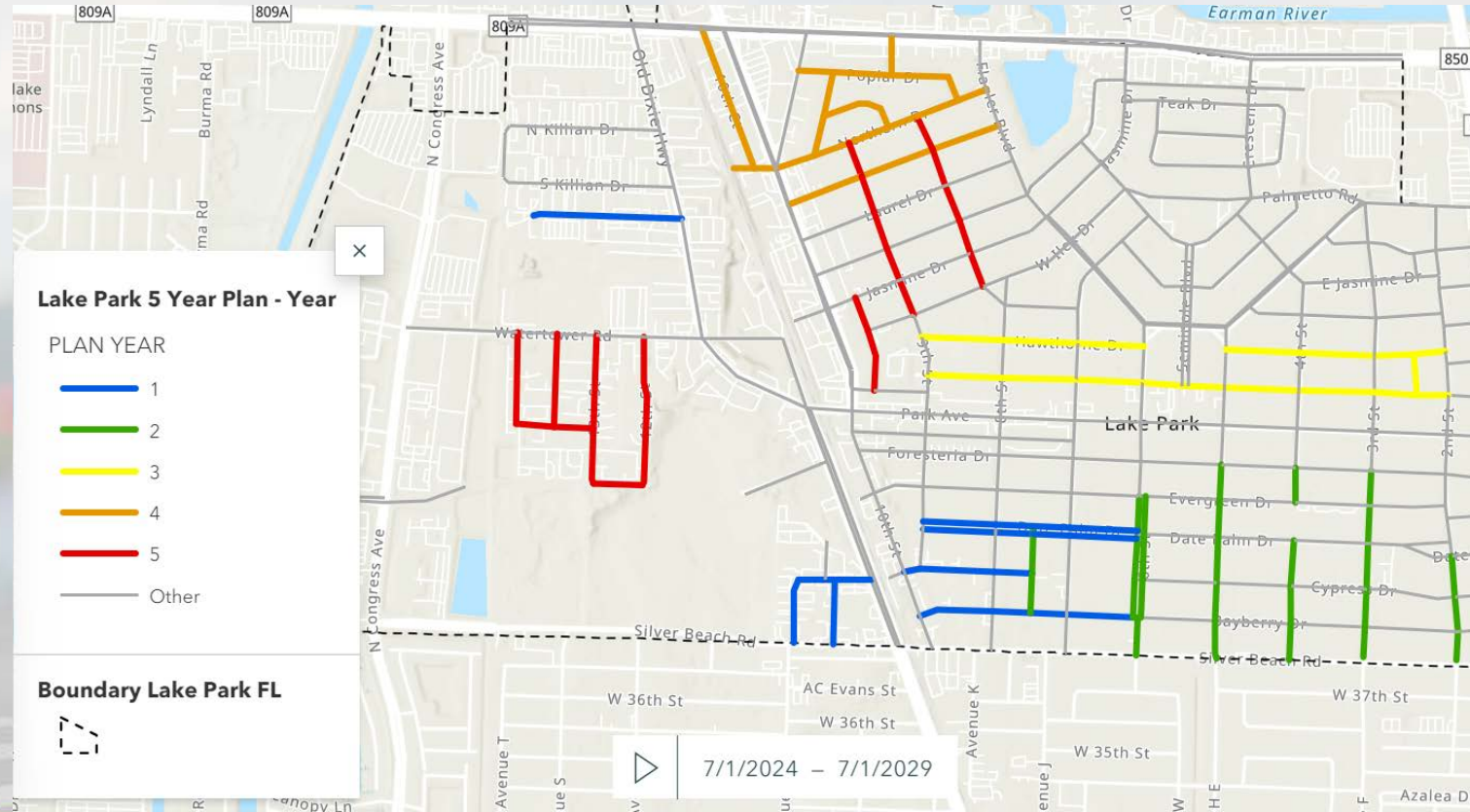
MILL & OVERLAY CANDIDATE



Gateway Road - Section 01

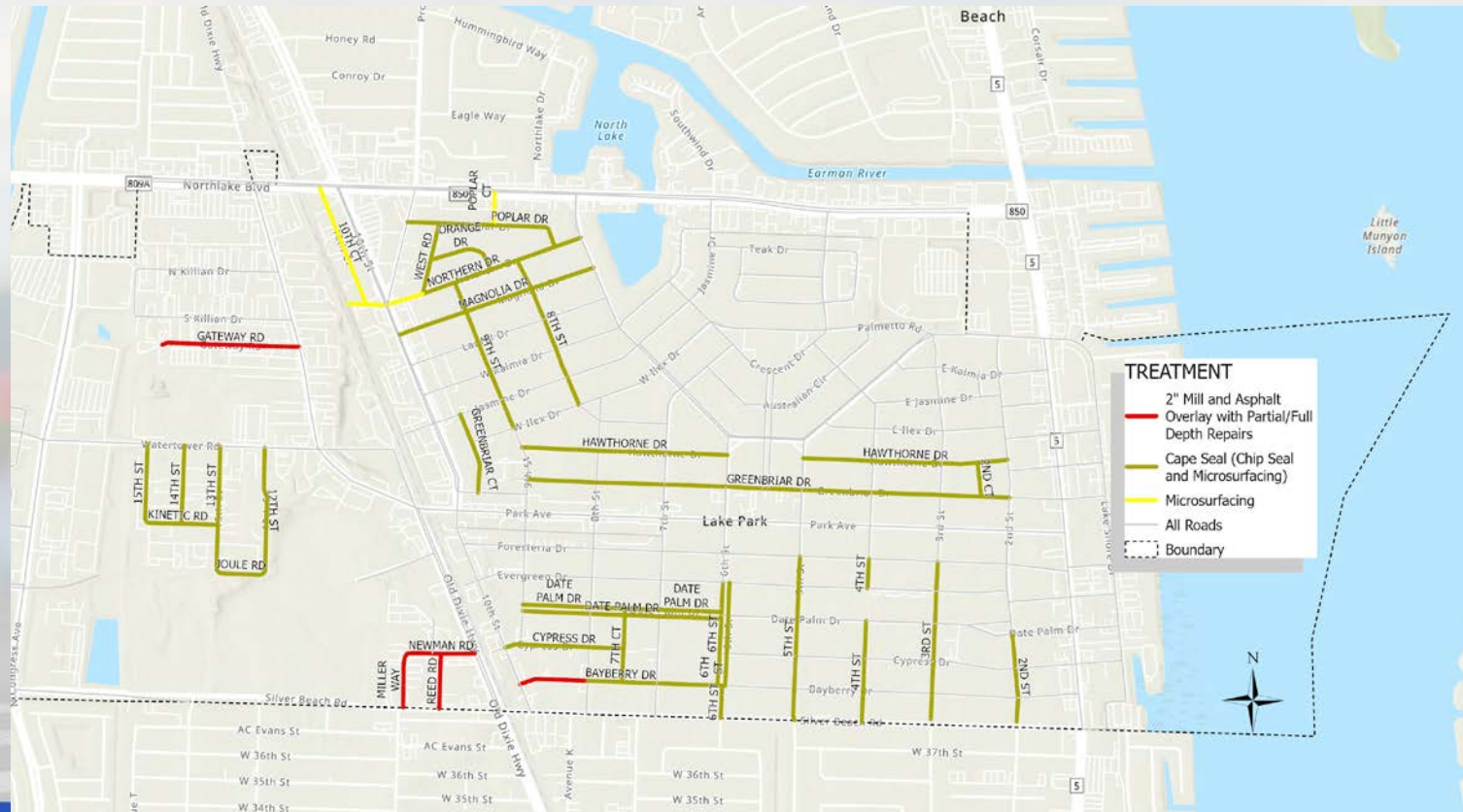
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THE FIVE-YEAR PLAN – BY YEAR



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THE FIVE-YEAR PLAN – BY TREATMENT



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THE FIVE-YEAR PLAN – EXCLUSIONS

- Funds appropriated for planned projects in 2023 & 2024
- FDOT and County maintained roadways

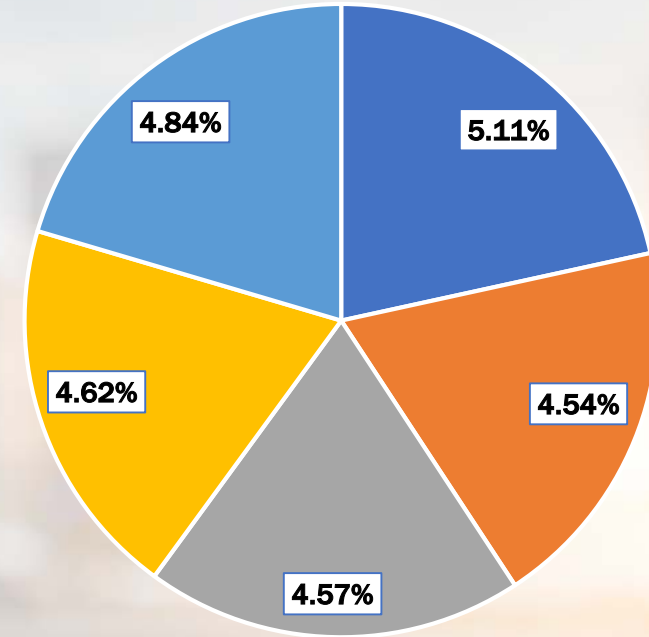
Excluded

- 2023 CIP
- Complete Street Project Planned
- County Maintained
- FDOT Maintained
- Boundary

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THE FIVE-YEAR PLAN – THE IMPACT

YEAR	COST	SECTIONS	MILES	% IMPACT
2023	280K	21	1.89	5.11%
2024	150K	26	1.68	4.54%
2025	150K	17	1.69	4.57%
2026	150K	19	1.71	4.62%
2027	150K	20	1.79	4.84%
Totals	\$880K	103	8.76	23.68%

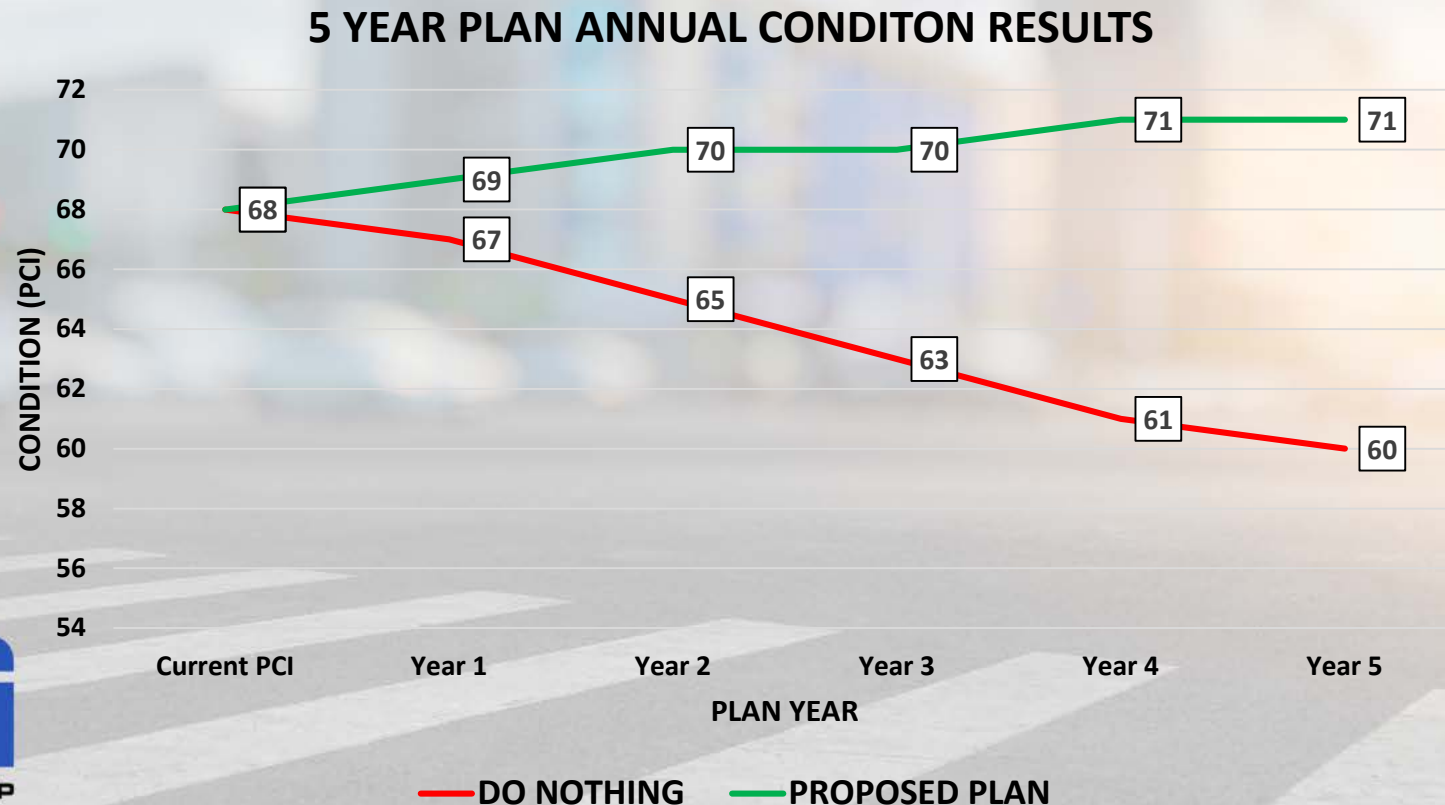


■ Year 1 ■ Year 2 ■ Year 3 ■ Year 4 ■ Year 5

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THE FIVE-YEAR PLAN – THE ROI

STRATEGY	CURRENT PCI	2023 PCI	2024 PCI	2025 PCI	2026 PCI	2027 PCI
DO NOTHING	68	67	65	63	61	60
PROPOSED PLAN	68	69	70	70	71	71



QUESTIONS

